

# From the Ground Up

A Gardening and Native Plants Quarterly

Colorado State University Extension-Pueblo County

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## PERENNIAL PEOPLE

### INTRODUCING THE ELEVENTH ANNUAL WESTERN LANDSCAPE SYMPOSIUM KEYNOTE SPEAKER: DAVID SALMAN

By Maureen Van Ness, Colorado Master Gardener, 2015

Our keynote speaker for the Western Landscape Symposium on April 1, 2017 may be familiar to some of you, or if not, you are probably growing plants he cultivated. David Salman, Founder and Chief Horticulturist for High Country Gardens, is also influential with Plant Select, a program that develops and breeds plants with established success in our Colorado climate. His work has vastly impacted our landscapes here in the arid southwest.

A native of New Mexico, his interest in plants began as a young man when he tried to feed his collection of bugs and reptiles. In order to raise caterpillars, he needed to know which plants each one ate, and by observation, began to appreciate the role plants play in the cycle of nature. As a teen, he worked in several nurseries and learned the value of native plants.

David says,

Just planting for beauty is a luxury we can no longer afford. Gardeners and their landscapes need to play a vital role in mitigating climate change. A big part of these efforts is to plant native trees, shrubs and herbaceous species to protect our soils and water resources while providing habitat for the pollinators, small creatures and songbirds that are adversely affected by climate change. Done with this in mind, one garden makes a difference, and a million gardens start a movement.

Beyond feeding his animals, David discovered,

My interest in plants is multi-faceted. In the big picture, I'm fascinated by the role plants play in nature and how they are a reflection of the land and climate where they grow. Looking more closely, I'm very interested in seeing plants growing in habitat and learning how to translate that into plant placement in the landscape and practical gardening techniques that I can use to grow them successfully. I'm enamored with the insects and animals that interact with plants and am a dyed-in-the-wool hummingbird gardener. And, of course, I love the physical attributes of plants; brilliant colors, foliar textures, their shapes and how they can be combined in the landscape.



David Salman

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To me, a sustainable garden means:

- \* Using regionally suitable plants that thrive without intensive care,
- \* Designed to provide habitat for pollinators, small creatures and song birds (deer, rabbits and elk can take care of themselves!) and provide food and fruit for humans,
- \* Provide both beauty and comfort for occupants of the site's buildings (windbreaks, shade trees for cooling, groundcovers to hold down the soil and minimize dust, etc).

As we improve our own gardens, we become part of a movement to build a better world. No small task, but, as we value our small part in improving the habitat of plants and animals, we improve our own habitat as well. In the High Country Gardens website, they share their mission: “to improve the earth one garden at a time.” It may not seem like much, but our garden choices and work do make a difference.

Through his work and love of plants, David shows us how to make smart plant choices, how to care for them, and he provides us with sources for the plants that will improve not only our yards, but our world as well. I'm looking forward to hearing him speak – see you there? 🌱

**Save  
the  
Date!**

## Upcoming CSU Extension classes and Events

**Saturday, March 4:** How to Grow Western Native Plants from Seeds and Cuttings, Rawlings Library, 10:00 a.m. to 1:00 p.m.

**Monday, March 27:** Growing Veggies, CSU Extension-Pueblo County, 6:00 p.m. to 8:30 p.m.

**Tuesday, April 25 and Wednesday, April 26:**  
Advanced Vegetable Troubleshooting, Milagro  
Christian Church, 9:00 a.m. to 4:30 p.m.

**Wednesday, April 26: Noxious Weeds, CSU**  
Extension-Pueblo County, 6:30 p.m. to 8:00 p.m.

**Saturday, May 6:** Master Gardener Plant Sale,  
Colorado State Fairgrounds Colorado Building,  
9:00 a.m. to 3:00 p.m.

**Saturday, June 3 and Sunday, June 4:** Pueblo and Pueblo West Xeriscape Tours, Time TBA

## Multiple dates this summer: Pollination Maker Series

Contact the CSU Extension-Pueblo County office for details and to register.



**Eleventh Annual**

**western  
LANDSCAPE  
symposium**

**Keynote Speaker:**  
**David Salman**  
Chief Horticulturist, High County Gardens

**Other Sessions:**

- The Art and Science of Compost  
Dr. Jean Reader, Soil Ecologist
- Stress Gardens  
Miss Rene, Denver Botanic Gardens
- Edible Native  
Irene Shorke, CSU Extension - Golden County
- Rain Barrels: Their Design, Use and Legality in CO  
Glenn Gabor, Water Resource Specialist, CSUE
- What's Bugging You, Pueblo?  
Carol O'Neale, CSU Extension - Boulder County
- The Ten Best Trees for the Pueblo Area  
Vince Urbina, Colorado State Forest Service

**April 1, 2017**

**9:00 a.m. - 3:30 p.m.**

**Pueblo Community College  
Fortino Ballroom  
900 West Orman Ave.  
Pueblo, CO 81004**

**Advance Tickets**  
**\$20.00 each**  
**Available at:**  
[www.westernlandscape.org](http://www.westernlandscape.org)  
OR by cash or check only at  
CSU Extension-Pueblo County  
701 Court Street, Suite C  
719-583-6566  
Advanced tickets only.  
No tickets available at the door.



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The Western Landscape Symposium is  
a Collaborative Effort of City and  
County Agencies, Area Businesses and  
the Green Industry.



[www.westernlandscape.org](http://www.westernlandscape.org)



**Garden Tip:** *It's never too early to start thinking about Grasshoppers!*

As you know, last year was the year of the Grasshopper around here. NOLO bait is a good biological control that can be used to control these pesky pests. It is most effective on young grasshoppers, so plan to set out bait when they hatch, early to mid spring. More information and control options can be found on the CSU Extension website, [extension.colostate.edu](http://extension.colostate.edu).



## Expand Your Natives with Early Spring Cuttings

By Ed Roland, Native Plant Master, 2009

It's really not arguable that perennial herbaceous and woody western natives in our gardens offer many advantages. They support Colorado's bird, butterfly and other pollinator populations. They're almost universally xeric. And, many exceed the color, beauty, persistence and bloom periods of commercially developed cultivars.

But, if you want to "sectionalize" your garden with native plants by species and color -- as many garden designers suggest -- it's not just a matter of picking up a few "six packs" at Lowe's or even at your local nursery. Western natives can be hard to find.

The answer might be easy-to-do cuttings, especially if you already have (or someone you know has) existing viable plants.

Cuttings offer advantages: 1. You'll get a genetic "clone" with all the characteristics of the plant you know and love. 2. If a flowering plant cutting is made early in the season, the plant will likely act as a mature plant and bloom the first year. And, 3. You avoid seed propagation which -- for many natives -- involves cold stratification or techniques such as scarification, not to mention an often chancy transition from seedling to garden.

Another big advantage is that using cuttings to propagate native plants is usually quite easy to do. I can't cover all of the species I've done in this article, but what follows are some simple techniques you can try this spring.

### PENSTEMONS

These are excellent candidates for herbaceous cuttings in the early spring. Because most penstemon seeds require long (up to 2 months) cold stratification before they will germinate, cuttings can be a real time-saver.

Cut early stems and remove flower buds when green leaves appear, then drop these into a narrow vase or glass filled with water. Remove leaves at the node below the water line. It's best to place these on an inside window sill where it's sunny most of the day. Carefully change the water if algae start to green it up.

I generally plant these outside after roots develop at the nodes, placing a bit of potting soil mixed with sand/gravel around the delicate roots. I'll keep snipping off any flower buds that develop and lightly water the soil for two or three weeks until the plant gets established.

If your existing penstemons have formed "colonies" over time, divisions in early spring are another easy way to go.

### SALVIAS AND DELPHINIUMS

These are best accomplished with "basal stem" cuttings, where you actually cut along the new shoots through the "crown" of the plant and into and through the root system, preserving as much of it as possible. Do these when the first vertical, green shoots appear and move the cuttings to where you want them. Keep watered until established. Easy.

*Continued on page 4*





## TUBEROUS NATIVES SUCH AS WINECUPS AND BUSH MORNING GLORY (*Ipomea leptophylla*)

These can be expanded in late winter by simply digging down and removing the tubers that store the energy for the plant. For winecups, take every other approximately 1-inch round tuber. For the morning glory bush, each plant has a single large (up to 20 pound!) tuber, so cleanly section off up to a third or so. This can be further divided to 2 or 3 pieces to produce more plants. Plant the tubers the same depth as the original plant(s).

## WESTERN NATIVE DECIDUOUS TREES AND SHRUBS (Lilac, Alder, Buffalo Berry, etc. and many introduced xerics such as New Mexican Privets, Cottonasters, etc.)

Except for alders (*Betulaceae*), willows / cottonwoods (the *Salicaceae*) and other woodies that grow near and easily root in plain water, woody cuttings usually require an intermediate step. This means "growing out" the cutting in a "rooting medium" before it can be planted. A heated mat or other device at the base typically increases root growth 2X or 3X over the same time period vs. no heat, and also seems to increase the viability of the new plant.

Cuttings tend to be more successful when taken from small branches or "twigs" that developed from buds the previous year or two, variously termed "soft wood" or "green wood." Generally, if it's a terminal small branch that's bendable without breaking, it will make for a successful cutting.

Research has shown that woody plants have more of the meristematic cells that grow into root initials where these small branches join a larger branch. For that reason, I usually do a "heel cut" (see Illustration A).

For the rooting medium, I use a 50/50 Perlite (or Vermiculite) and white sand mix with good success. (Other sands can be used, but they should be sterile to avoid the introduction of fungi and other root-killing organisms. You can do this by heating the sand to 165 or > degrees F.)

This mix has the advantage of holding a large amount of water in suspension, and at the same time giving the cutting's new roots an easy medium to grow in.

When making the cutting in early spring, I wait until new leaves emerge, eliminate any flower buds (to preserve energy for root development), and then remove leaves at the node on the part of the cutting that will be inserted into the rooting medium. Also, I'll cut off every other intermediate leaf, but leave the apical group intact. Only then will I make the heel cut and quickly plunge the cutting into water.

Later on, I'll dust both the nodes and heel cut with a rooting hormone powder (a synthetic auxin available almost anywhere plants are sold), make a "tunnel" (so I don't knock off the hormone) in the previously watered and drained rooting medium, and insert the cutting.

Finally, to retain moisture, I'll cover the whole thing with a clear plastic bag (like a produce bag) and punch through 6 or 8 small holes to allow for transpiration. Discarded plastic milk/water jugs with holes for 5 cuttings -- including the center opening -- work for me (see Illustration B), but many other configurations are possible.

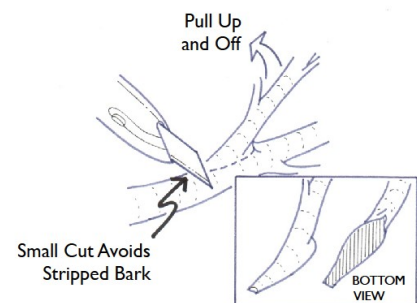


Illustration A

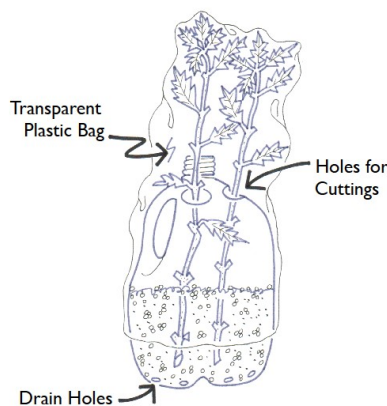


Illustration B



The only hard part is the waiting. Depending on the species, adequate root development can take 3 to 4 weeks with heat at the base (usually around 70 degrees F), or twice that long without heat. Cuttings should be kept out of direct sunlight . . . inside near a window, or in dappled shade outside. The 50/50 mix will generally retain adequate moisture for weeks, but it can be gently watered again if necessary.

My experience to date is, when properly planted, just over 80% of these cuttings survive to grow into new viable clones.

#### CACTI AND OTHER SUCCULENTS (like native stonecrops)

You probably don't need much help with these except for a couple of cautions I've learned the hard way:

1. When cutting a cactus blade or "branch" (eg., a cholla), wait a couple of days for the cut to callus over before sticking it into the soil. If the cut is raw, the cutting will pull water out of the soil and likely rot from within.
2. Colony cacti can be successfully cut into segments, but it can be a messy process. If you decide to go forward, allow all of the individual pieces to callus at the cuts for several days, then trim back smaller roots and plant at the original soil line.

Other succulents are generally easiest of all. Just cut off a section and insert it where you want a new plant. 🌱

#### Some References:

##### Reference Manual of Woody Plant Propagation

Dirr, Michael and Charles Heuser, Jr.

410 pp

Timber Press, 2006

##### American Horticultural Society Plant Propagation

Toogood, Alan

320 pp

DK Publishing, 1999

Several good general info sites on cuttings include:

[www.wikihow.com/Grow-Cuttings-from-Established-Plants](http://www.wikihow.com/Grow-Cuttings-from-Established-Plants)

[www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/visual-guides/propagating-plants-by-cuttings.aspx](http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/visual-guides/propagating-plants-by-cuttings.aspx)

## Spring Beauty-The Pretty Little Thing and First Blush of Spring

By Orla O'Callaghan, Colorado Master Gardener, 2005, Native Plant Master, 2009

A few days ago, my nine-year-old son squealed in joy when he saw our first crocus blooms. I, too, get that child-like sense of wonder and joy when I see the first flowers to bloom in the New Year. There is just something special about the first crocus or species iris that bravely comes up after a warm day in winter. These fragile blooms seem like a promise of good things to come. When it comes to native plants, usually it is the Spring Beauty (*Claytonia rosea*) that is the first bloom I see. When hiking in the foothills on sunny late winter or early spring days, I seek out this lovely little native flower. It gives me such delight when I finally find it. The dainty pink or white flowers almost seem out of place in the scrub oaks and pine forests where they grow. It is hard to imagine this delicate little flower is blooming while most other sturdier plants remain dormant. The pretty pink flowers are such a gift when so much of the vegetation is dead and brown. Because Spring Beauty is so small and it blooms so early, hikers can sadly miss it altogether. Hopefully after reading this article, you will not overlook this little gem of a flower.

Spring Beauty, also called Rocky Mountain Spring Beauty and Western Spring Beauty, is a member of the Montiaceae family. Formerly it was in the Portulacaceae (Purslane family). Look for Spring Beauty after the soil has had some moisture, either melting snow or rain, in open areas of scrub oak and pine forests in the foothills.



Spring Beauty Flower  
courtesy of L. McMulkin

Continued on page 6





Spring Beauty blooms courtesy of  
L. McMulkin

Locally, I enjoy seeing Spring Beauty at the Pueblo Mountain Park in Beulah. In his book, Plants of Pueblo Mountain Park, Dave Van Manen notes that Spring Beauty has bloomed at the Mountain Park as early as January 27. He also states that at the park, Spring Beauty first blooms in the shrub oak ecosystem, and later under the ponderosa pines.

The vegetative part of Spring Beauty is unimpressive. At six inches in height, the plant is small. The leaves are sparse and unimpressive. One pair of long (3/4" – 3 1/2") thin (lance-linear) leaves grow on opposite sides of the slender stem (cauline leaves). There are also one or more small leaves at the base of the plant (basal leaves). I don't remember seeing the basal leaves. Maybe they are buried in the oak leaves or pine needles, or dried up before the flower bloomed. Perhaps I was so enchanted by the pretty little blooms that I simply failed to notice the basal leaves. No matter, it is the

flowers that will steal your heart.

As the name implies, the flowers are quite beautiful. Beautiful and tiny. They measure only 1/4-3/4 of an inch in width. Three or more flowers bloom at the end of a slender stem. The flowers have five pink or white petals that are radially symmetrical (meaning, if the flower was cut in half, the halves would be mirror images of each other). Sometimes the flowers have notches at the top of the petals, but not always. The flowers contain five stamen (the pollen bearing male reproductive parts). The anthers (the part of the stamen that contains the pollen) are really unusual because they are dark pink in color. The pink anthers look so pretty against the white or light pink petals. The petals also have pretty pink or red veins. The veins act like landing strips for the relatively few early pollinating insects out this early in the season. Attracting the insects is crucial. The insects are desperate for food while the plant is desperate to be pollinated. Spring Beauty is not only an important food source for early pollinating insects, it is also an important early food source for deer and elk. They graze on the fleshy plant, at a time when there is little else growing. Historically, Native Americans ate the corms (enlarged fleshy base of the stem, think small roundish bulb), leaves and stem. Supposedly the corms taste like water-chestnuts when eaten raw, and like potatoes when boiled.

Now that you have been introduced to this beautiful little native flower, I hope that you will go on a hike in the foothills and see if you can find it for yourself. On a bright sunny day, look for them in the scrub oaks and pine forests of the foothills after the soil has had moisture and some warm sunny days. These pretty little flowers only open in sunshine or bright light, so plan your hike accordingly. Keep your eyes peeled for the precious Spring Beauty. If you find it, you will understand why it brings such joy to my heart each year. 🌱



Spring Beauty emerging courtesy of  
L. McMulkin

**How to Grow Western Native Plants from Seed and Cuttings**

**Saturday, March 4, 10 a.m.-1 p.m.**  
Rawlings Library, Ryals Room-4<sup>th</sup> Floor

Western Native Plants support Colorado's bird, butterfly and other threatened pollinator populations. They need little or no supplemental water and exceed the beauty, persistence and bloom periods of commercially developed plants.

Join Ed Roland, CSU Extension Native Plant Master and Past President of the SE Chapter, Colorado Native Plant Society to learn where to find seeds and:

- Successfully germinate a wide range of Western Native species
- Expand a garden with cuttings from a single "parent" plant
- Learn how a garden can benefit from the All Pueblo Grows Seed Library
- Learn how to help build this resource

**Registration required.** Space is limited. Call 562-5600 to register or visit [www.pueblolibrary.org](http://www.pueblolibrary.org).

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**GROWING VEGETABLES**

Yard & Garden Series  
Sponsored by CSU Extension-Pueblo County

**WHEN:** Monday, March 27, 2017  
**WHERE:** CSU Extension/Pueblo County  
701 Court Street, Ste C,  
Pueblo, CO 81001

**TIME:** 6:00-8:30 p.m.  
**COST:** \$25/person or \$25/couple sharing materials  
Pay with credit or debit card through Eventbrite only:  
<https://www.eventbrite.com/e/growing-vegetables-2017-tickets-32860281722>  
We still accept cash or checks through CSU Extension-Pueblo County

**REGISTER:** Payment due on or before March 17, 2016.  
Call 719-583-6566 for more information.

Learn tips and techniques for successful vegetable gardening in Pueblo.  
Topics include:

- straw bale gardening
- gardening in containers
- composting
- plant selection
- irrigation

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## YUCCA—A PLANT TO SPIKE YOUR INTEREST

by Marcia Weaber, Colorado Master Gardener, 2005, and Native Plant Master, 2007

*Yucca* is the only genus of the Agavaceae (Agave Family) we have here in our area. Two members of this genus are located in Southeastern Colorado, *Y. glauca* and *Y. baccata*. *Y. glauca* has slender, narrow, flexible leaves, with flowers erect or spreading, only drooping in age, in narrow panicles. The fruit is dehiscent and dry. This is an easy way to identify this plant in the fall, because the seed pods open at maturity. *Y. glauca* tends to form colonies or groups in an area. *Y. baccata* plants have thick, rigid, broad and curved leaves, the flowers are pendent in dense panicles and the fruit is indehiscent. Both *Yucca* prefer rocky areas that are populated with pinon and juniper stands. *Y. baccata*, also called Banana Yucca, is found south of the Arkansas River valley and is becoming rare due to collection for landscaping of new homes.

Before I enrolled in the Native Plant Master course, I was puzzled by the *Yucca* in our area. Some years there was an abundance of seed pods, other years, very few. With study during the course, and the help of William A. Weber and his guide, Colorado Flora, I learned that *Yucca* “is of consuming biological interest because it illustrates the phenomenon of symbiosis.” *Yucca* is visited by a night-flying pronuba moth, *Tegeticula yuccasella*. This little moth first stabs the ovary of the plant and lays an egg, then she mounts a stamen and collects a ball of pollen from the anther. The *Yucca* cannot be pollinated by accidentally brushing the stigma with pollen, as the stigmatic surface is deeply seated in the bottom of the funnel shaped style. The little moth proceeds to stuff the ball of pollen deep into the funnel, thus insuring pollination and the developing fruit as a food source for her larva. Now I wonder if pesticides have impacted that tiny pronuba moth?

This striking native plant has a long history of names and uses. *Y. glauca* has been known as small soapweed, soapweed yucca and Spanish



*Yucca glauca*



*Yucca baccata*

bayonet, while *Y. baccata* has been identified as Great Plains Yucca and beargrass. I grew up calling it soapweed and felt encouraged to remain on top of my horse while out riding. The native Americans used *Yucca* for fiber for shoes, ropes and clothing. The ripe fruit of *Y. baccata* was eaten sautéed, stewed or raw, as it has a sweet taste. The root, when pounded, releases a soapy sap that was used for washing and shampoo. The roots become food for animals too. In the 1980's we had a blizzard and could not get to the cattle to feed them for 3 days. When we trailed them out, they were fine; however, the *Yucca* population in that valley was markedly diminished as the cattle had pawed through the snow and eaten the roots, a good source of protein.

These are very striking plants, their flowers should be called the “prairie orchid”, because of their white waxy appearance. If you choose to use a *Yucca* native in your landscaped be aware that this is a truly xeric plant, it needs very little watering after establishment and prefers a gravelly bed. The down side of *Yucca* in the landscape is it can be a trash collector, especially of plastic bags, and can be dangerous if it is too close to the play areas of children. 🗑️

Subscribe to this quarterly horticulture newsletter by contacting Carolyn at 583-6574.  
Available in paper and electronic formats.





## FABULOUS FAMILIES

### THE MUSTARD FAMILY

By John Powell, Native Plant Master, 2008

The family Brassicaceae, commonly known as the Mustard family, is represented in Colorado by native plants, and the plants of flower and vegetable gardens. Plants in the Mustard family are also represented by plants listed on the Colorado Department of Agriculture's (CDA) Noxious Weed List, which identifies plants that in some way negatively impact agriculture, including toxicity to animals, and are not native to the state of Colorado. This diverse family of plants appears in dried flower arrangements, in foods like coleslaw and cheesy cauliflower pasta, and on lists of plants degrading agricultural lands.

Plants of the Mustard family generally have deeply lobed leaves. The perianth is made up of 4 sepals and 4 petals in a cruciform (cross-like) arrangement. Fruits are a special capsule; either a silique (longer than wide) or a silicle (wider than long). The Mustards have a peppery flavor in the plant parts. In a vegetable garden, the "crop" is usually gathered before flowering occurs. There are endless culinary uses for plants in the mustard family. Sometimes turnip leaves will be cooked with salt pork, broccoli might be accompanied by a cheese sauce, and we all know and love that yellow mustard served on a hot dog.

There are many naturally occurring native Mustard plants in Pueblo County. Wintercress (*Barbarea orthoceras*) is a native plant found in Colorado, as well as 14 other U.S. states and much of Canada. It blooms in spring to early fall. Also, Alpine Wallflower (*Erysimum capitatum*) is native to our state, and 26 other states including Alaska. It blooms in the spring and summer. Prince's Plume (*Stanleya pinnata*) is another native sometimes used in landscape plantings. It can grow up to 5 feet tall. It is found naturally in 15 states from Montana to Texas, in dry, stony, or sandy soils located in full sun.



Winter Cress



Hoary Cress

The flower characteristics of this family can assist in the detection of invasive agricultural plants such as Hoary cress (also known as Whitetop), Perennial Pepperweed (also known as Tall whitetop), Dyer's woad, and Elongated mustard. The presence of Elongated mustard in Fremont County, growing in the dimly lit entrance of an abandoned mine tunnel, is an example of the tenacity of these introduced non-native Mustards. Many of these noxious weeds appear in the dry, alkaline right-of-ways of local roads or highways in early Spring.

The Mustard or Brassicaceae family is well represented by delicious garden plants as well as four plants on the CDA's Noxious Weed List. Cabbage, kale, broccoli, cauliflower, and many other familiar table vegetables represent the Mustards found in many gardens around our area, while the noxious weeds Hoary cress and Perennial Pepperweed abound seasonally in Pueblo County in some of our open spaces. There are things that all of these plants share however, such as characteristics of the leaves, flowers, and seeds, allowing them to be identified more easily. 🌱

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