

From the Ground Up

A Gardening and Native Plants Quarterly

Colorado State University Extension-Pueblo County

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KNOW YOUR NATIVES

2019 AUDUBON GRANT GARDEN

by Linda McMulkin, Horticulture Educator

In May, 2018, a fellow member of the Colorado Native Plant Society sent me an email that started me on an eighteen-month project to increase pollinator habitat at three locations in southern Colorado. The Arkansas Valley Audubon Society (AVAS) applied for and received a grant to add new pollinator gardens at Lake Pueblo and the Nature and Wildlife Discovery Center (NWDC) in 2019. Later in 2018, a garden at John Martin Reservoir visitor center was added to the grant recipients.

Because native plant/pollinator gardens are a passion of mine and I help maintain the native plant garden at Lake Pueblo, I offered to assist with the project. I first offered to grow some native plants for the various gardens. I probably should have stopped there, but I kept offering suggestions that became additional tasks. But, it had been years since I took on such a big project, and it was mostly fun. I had a chance to learn more about native plants and their pollinators, get reacquainted with and meet staff and volunteers at the various locations, create new gardens, and, the most fun, shop with someone else's money!

In 2018, garden sites were selected at the three locations. At Lake Pueblo, a couple of sites were considered and would have been fun to develop. But, the final decision to increase the beds at the visitor center was based on availability for educational programs and easy access for visitors and the volunteers who maintain the garden. The NWDC decided to renovate the gardens at the Raptor Center while John Martin wanted to beautify the grounds in front of the visitor center. Once the sites were determined, I started researching native species for each site.

Using the USDA Plant Database and Jennifer Ackerfield's *Colorado Flora*, I developed a list of plants that fit the criteria of native to Pueblo and/or Bent counties, valuable to pollinators, and pretty enough to justify putting them in a garden. Then the real challenge began-finding sources for these often hard to find species.



New garden bed in late summer

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Bed before planting

I grew some from seed, ordered some from the Colorado State Forest Service and the Colorado Native Plant Society, and purchased some from Perennial Favorites. But the best source for plants native to the Colorado plains was Jeff Ottersburg at Wild Things in Pueblo, who not only provided suggestions and fabulous plants, but shared information about growing natives in containers and helped me figure out a problem I was having with plants in my cold frames.


Plants were delivered to the Raptor Center and John Martin State Park in early May and their volunteers installed them over the next couple of weeks. Additional plants were installed at the Raptor Center in September. In early April at Lake Pueblo, a team of 7 outstanding volunteers removed the existing pea gravel and river rock, tore up the 25+ year old landscape fabric, removed the roots of dead yucca and three-leaf sumac, marked the location of cottonwood roots, loosened the soil between the roots, and added a small amount of compost to improve the soil. Then we planted 165 woody and herbaceous plants over a three-day period from April 28 to May 6.

Over the next few weeks, the volunteers hand watered the new plantings, spread new pea gravel, and pulled weeds. In June, we divided some of the warm season grass clumps from the old gardens and planted them in pots. Those grasses were part of the additional 55 plants that were installed mid-September. A total of 50 locally native species were installed at Lake Pueblo and 3 woody species native to Colorado but not Pueblo County were added due to their pollinator value.

While we lost a few plants, the cool, damp weather in May and early June was ideal for establishing the garden. As the weather warmed, the volunteers continued to hand irrigate the garden 2 to 3 times per week through August and once a week until mid-October.

I was excited to learn in August that there was money remaining in the grant, which has been used to purchase trees for the campgrounds at Lake Pueblo and John Martin. Some of the trees were purchased locally and planted this fall, while others will be delivered from the Colorado State Forest Service and planted next spring. In addition, seed for hard to find species of pollinator friendly native plants was ordered and will be used to fill empty spaces in the gardens at both state parks.

I want to take this opportunity to thank the Audubon Society for letting me help with this project. And, a huge thank you to the volunteers who helped with this project. Lee, Bonnie, Cheri, Eunice, Janet, Sylvia and Chris all joined the Colorado Parks and Wildlife volunteer team and have performed nearly 300 hours of service to the park this year. I've had so much fun with this group of fellow native plant gardeners and appreciate their hard work and friendship.

So, what comes next? We plan to redefine the temporary pathways we laid out in the spring, plant seed of an additional 25 species, and start clearing space for another garden behind the visitor center, which will support the new honeybee hive exhibit expected in 2020. The fun continues. 



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Preparing for Spring

By Penelope Hyland, Colorado Master Gardener, 2018

Hopefully, with all the unfall-like weather we've been having, everyone has been able to put their gardens to bed. Now it's time to start planning for next year! With the leaves gone, it is a good time to walk around and observe the state of your landscape, yard and garden areas. If you don't already keep a garden journal, this is a good time to start while the past season is still fresh in your mind. As you walk around, take note of what worked well and what plants didn't thrive. It will be easier to see dead branches in shrubs and trees that need to be pruned. (You can prune dead out at any time of year and this is a good time to get the dead out before new growth in the spring.) Look at the overall big picture of your landscape so that you can determine your short-term goals and long-term goals. This will include the overall layout of the landscaping of trees, shrubs, turf, flower beds, garden areas and hard-scaping. What improvements or changes would you like to make in each of these areas? Your outdoor space should reflect your personality and your needs. It should be in harmony with you and your home and reflect a unity with the interior of your home. It is always best to start with hard-scaping even if you aren't ready to have those items installed, you can set aside that area. Hard-scaping includes: sidewalks, walkways and paths, patio, deck, pergola, outside kitchen area and sheds. As much as possible, try to have those areas completed first as construction will compact the ground and access to those areas might damage turf or beds. As you are making decisions, ask yourself what your goals are.

- How much time do you want to spend outside?
- Are you interested in having more space to relax outdoors?
- Do you and your family want to grill and eat outside more often?
- Do you want more or less turf?
- Do you need more shade to protect the house and reduce cooling costs?
- How does the overall layout of your space work for you and your family?
- Do you need play areas for children?
- Do you want more privacy?
- Do you want to improve the habitat of your property?
- Do you want to add more trees and shrubs?
- Do you want to start or increase perennial flower beds?
- Are you interested in pollinator gardens?
- Do you want water features?
- Do you want herbs for culinary or decorative use?
- What are your garden needs: do you need only a few tomatoes, are you feeding a family, do you want to be self-sufficient?
- Do you want to add containers, vertical or raised garden beds?
- Are you interested in year-round gardening and want to add cold frames?
- Do you have a problem with pests or animals?
- Does your soil need help?
- Do you want to start composting and build/buy a compost bin?



Plan out your garden area now!

Some other issues to consider are: how much time do you have to devote to your garden, are you able to preserve your food at harvest time, and what finances can you devote to new projects?

As you can see, there is a lot that goes into setting goals and making decisions. It also helps to look at books, magazines or drive around town and look at other yards and gardens for ideas. Once you have a better idea of both short and long-term goals, then you can start planning.

As you begin to formulate your goals and develop plans, take some time to watch the path of the sun across your property. Of course, it will be higher in the sky during the summer months, but you want an idea of how it hits the different areas. You might recall areas in the summer that seemed to need more water and dried out quicker or the areas that stay in shade. This will help you determine where to place your garden or different flowers according to their needs for sunlight and shade. You may have some plants that will do better in a different spot and you can make a note to transplant them later.

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This is a good time to do a soil test if you haven't already done so and make amendments. Ideally, it is best to amend your soil before planting, but especially in this area with heavy clay we need to amend our soil on an annual basis. A mix of peat and compost sprinkled around the base of plants and out to their drip line will help to increase the organic levels. It's not necessary to turn it into the ground at this time, as the winter months of rain and snow will allow it to be absorbed into the soil. You can also mix in some leaf mulch if you desire. Crumble or mow over your leaves so they are mulched into small pieces before mixing them in with the compost.

Perennial flowers are a wonderful addition to every landscape. They can encompass everything from a single row in front of the porch to flower beds designed for different colors to huge wildflower fields. Garden catalogs are a helpful source to make decisions. You can select flowers you like by looking at the pictures and then reading the information regarding zone hardiness and sunlight and soil needs to determine if they might work in your yard. Not only do you want to think about what flowers you like the best, but also consider if you want cut flowers to bring into the home during the summer. Do you want flowers to attract butterflies and hummingbirds, do you want flowers blooming from spring to fall, do you want only perennials or a mix of perennials and annuals? Start to make a list of what you want and then check the location of your existing flower beds or where you want to add a flower bed to see if it might work well with the plants you have selected. You might even decide to add additional flower beds by removing some turf or simply enlarging an existing bed.



Arrange flowers by height

Before selecting a spot, check how much sunlight the area receives and look to see if any surrounding trees will be shading the area in the summer. After you have determined a good spot, you can decide what shape you would like for your flower bed. Thinking about the flowers you have selected can help determine the shape. If you have lots of tall flowers planned, they might be placed in the center of a circular area or in the back against a fence or wall. Even a bed placed against a fence can have a curvy front. Kidney shapes are also very appealing.

Next, determine what type of edging you would like and consider how it will look with the plants you have selected. Some flower beds are just separated from the turf with a small trench; you can also use bricks or stone either in a single layer or with a small wall. Others use metal edging. Looking at pictures can help you select the style you desire. Once you have decided on the shape, plants and edging, draw the flower bed on paper and see how much room each plant will need for growth. Arrange them by height and fullness. Some flower beds have a variety of colors and height, along with different leaf shapes and shades of green. Others are all the same color or maybe have a focal point; some are created with a theme. You can also personalize your flower bed by adding a birdbath, wind chimes, hanging baskets or other items of your choice that reflect your personality.


Location in garden planning is crucial in Southern Colorado. While most vegetables do need 6-8 hours of sunlight when the temperatures rise to over 90 and go to over 100, they can lose their sweetness and robust taste. You also want to orient your taller crops to the north side so they don't shade smaller crops and rotate crop families every year. This can make it difficult to decide on placement. Other issues to consider are: dealing with pests and animals, spacing to allow for enough air flow, and providing support for plants as needed. Using trellises or other supports will also block the sunlight from other plants so they also need to be located on the north end of the garden. In deciding what crops to grow and how many, look at your family needs and what vegetables they like. There are many different needs: growing just enough for a salad; providing for a large family; only growing a few vegetables that everyone likes; a single person wanting to be self-sufficient. List the vegetables that your family likes and how often you want to be able to go to your garden for your needs. Also consider preserving food at harvest time. Do you have the time and the desire to can or freeze vegetables? Do you have the time to care for a large garden during the summer or is a smaller garden better suited to your needs.



If you only want a few fresh tomatoes, perhaps a container is best. Not only do you need to consider the location, but also what type of garden you want. There are a lot of advantages to raised garden beds including a controlled environment where you can provide the best soil and also cover as needed. Raised beds also make it easier on the gardener and there is less maintenance. Raised beds can be built to any size or shape and can be placed wherever is best. If planting directly in the ground, soil amendments will most likely be needed. If you are feeding a large family or wanting to be self-sufficient, succession planting might be useful – starting quick growing greens early, followed by a summer planting and then a fall planting. Cold frames can extend the season and provide an environment for gardening throughout the winter. Vertical gardening is a space saver and very useful combined with containers. Plotting your garden on paper beforehand is very helpful. List the plants you want to grow, sunlight needs, time to germination and harvest, then plan the spot in the garden for each plant. Determine a planting schedule according to which plants can tolerate cooler temps and also if you are starting from seed inside and then transplanting; planting seed directly into the soil; or putting a young plant in the soil. If you are going to be planting in the ground, you can start warming the soil using black plastic in late winter.



Cold Frame

Whatever your needs or desires with landscape, flower and garden beds planning helps to make it happen so that your gardens will succeed and look their best! 



DIGGING DEEPER

DOUBLE DIGGING YOUR GARDEN

By Deric Stowell, Colorado Master Gardener, 2014

What exactly is double-digging you ask?

From Wikipedia - Aeration (also called aerification) is the process by which air is circulated through, mixed with or dissolved in a liquid or substance.

It is the process of loosening soil -- aerating -- to help make the ground loose enough for your plant roots to easily grow and expand. It adds air deep down into the soil and really enables the root system to grow. The fact is, beets, carrots, potatoes and other root crops need the soil they grow in to be loose so that their roots can grow deep and expand. This is also a perfect time to add peat moss or compost in there to make sure your plants have lots of organic material. If the soil where you want your garden is very dense or hard-packed, making the effort to do this will pay you back handsomely as your garden grows.



New garden bed in late summer

The best time of year to do your double dig will be as soon as you can work the soil in the spring, and before you plant your crops.

Here's a simple way to do it.

Start At One End- Starting at one end of your garden, dig a 1-foot x 1-foot-deep trench across the garden bed's width. Using a garden fork or similar tool with tines, go along the trench and loosen the dirt. Really make sure it's loose and fluffy.

Dig a Second Trench- Now, enlarge your trench by digging a second trench just like the first, right next to the first one. However, take the soil you remove and place it into the first part of your trench. This is also when you can incorporate your organic material, alternating between the soil and peat moss, compost, or other amendment. Keep going until you reach the end of the garden bed. Of course, depending on the size of your garden this can take a few hours, or a few days.

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Last Print Issue!


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WHEW! ALL DONE!

Now, go sit in the shade and cool off. This is also a good time to plan and mark out your crop rows. And, maybe have a nice cold lemonade.

How Deep Should I Dig?

Some people go down the length of a shovel head, some people go down twice that. In our rocky and clay soil you may only be able to go down a foot or so before you will need to break out the dynamite or a pick, if this is your first time doing a double dig. If you have done your double digging before, or if you have a well-established garden space you should not have any problems. 



WICKED WEEDS

Pre-emergence Herbicides

By Emily Lockard, previous CSU Extension-Pueblo County Agriculture Agent

Want to get a jump start on preventing weeds? Then it is time to think about the best pre-emergence herbicide (PEH) for your weed needs. First, identify the weed species and think about your prevention options to determine the best product to use. Is this a lawn or a garden? Are you comfortable with traditional products or interested in more organic options?

There are a variety of pre-emergence products that can be purchased locally, including an organic option, corn gluten meal (CGM). Keep in mind this is different than the corn meal you will find in a grocery store! One advantage to CGM is that it releases nitrogen, but when used incorrectly it will fertilize the weeds you are trying to eliminate.

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No matter what type of PEH you use, timing is critical! No PEH product works as a postemergence herbicide because they inhibit root formation, killing young weeds shortly after they germinate. Another point to keep in mind is that different weeds germinate at different times during the year so multiple applications will be necessary if you want to continue targeting young weeds or are targeting different weeds.

General tips for the use of PEHs:

- Apply uniformly! If there are spots on the soil surface that you miss with the PEH, weed growth will not be inhibited.
- Disturbance of the soil surface will reduce the effectiveness of the PEH.
- If the targeted weed is already growing, you should use a post-emergence herbicide.
- Make sure your soil isn't too wet as weeds can recover better from a PEH application unless you have a drying period after application. At the same time if your soil is too dry it can also decrease the effectiveness of a pre-emergent herbicide.
- Be careful if you are seeding or re-seeding as a PEH will also work on young desirable plants.
- Typically, you should apply a PEH in Southern Colorado 2-4 weeks before the desired weed germinates. In the case of crabgrass you should apply in late March-April.

Tips specifically for Corn Gluten Meal:

- You should apply 20 lbs. per 1000 ft², but 10-80 lbs. per 1000 ft² can be effective for different weeds and environments.
- If it does not rain within 5 days, water at a rate of .25 inches of water.
- CGM will work for about 5-6 weeks at which point you will need to reapply if you wish to continue to inhibit weed growth.
- The nitrogen in CGM is 10% by weight and will be released for about 3-4 weeks after application. No matter what you use as a pre-emergence herbicide, read all directions carefully and follow the instructions on the label! 📖





FABULOUS FAMILIES

Euonymus kiautschovicus “Manhattan”

By Marcia Weaver, Colorado Master Gardener, 2005, Native Plant Master, 2007

As winter approaches, we start looking at our landscapes and think how dreary they are. It would be easy to imagine some greens, other than narrowleaved evergreens, and maybe a touch of pink/red, and something to attract our feathered friends.

The *Euonymus kiautschovicus* ‘Manhattan’ is one of several *Euonymus* varieties that can add color and interest to the landscape around your home. *Euonymus kiautschovicus* ‘Manhattan’ is of the “Fabulous Family” Celastraceae. This family (the staff vine or bittersweet family) includes 96 genera and 1,350 species of herbs, vines, shrubs and small trees. A great majority of the genera are tropical, with only *Celastrus* (the staff vines), *Euonymus* (the spindles) and *Maytenus*, widespread in temperate climates, and *Parnassia* (bog-stars) found in alpine and arctic climates. The *Euonymus kiautschovicus* ‘Manhattan’, sometimes commonly called spreading euonymus, is a native to Japan. It is a broadleaf evergreen to semi-evergreen shrub that typically matures in a round form reaching 4-6’ tall. The greenish-white flowers bloom in summer (July-August). The bee attracting flowers are in 2-4” wide cymes, a flat-topped inflorescence in which the central flowers open first followed by the peripheral flowers. Pink/red fruit capsules with red seeds mature in November. Birds that over-winter rely on plants that bear fruit late in the year.



Euonymus kiautschovicus
“Manhattan”

‘Manhattan’ is a cultivar that was discovered in Manhattan, Kansas. Problems encountered with Manhattan *Euonymus* could be Anthracnose, crown gall, leaf spot, mildew and aphids. This cultivar reportedly has good resistance to *Euonymus* scale. Our drier climate will mitigate many of these problems. It prefers full sun, however in Colorado it thrives best with morning sun and afternoon shade. This means an east to northeast location in the yard. This *Euonymus* does best in well-drained soil, dislikes excessive moisture, and prefers to grow in average to dry locations. It is not particular as to soil type or pH. Manhattan *Euonymus* is highly tolerant of urban pollution and will even thrive in inner city environments and will benefit from being planted in a relatively sheltered location. As with all shrubs, winter watering will keep this plant happy and growing.

Manhattan *Euonymus* is a very versatile plant. It can be used as a hedge, border, ground cover or a stand-alone mounded specimen. As an upright shrub, it tends to fill out right to the ground and doesn’t necessarily require facer plants in front, and is suitable for planting under power lines. It grows at a fast rate, and under ideal conditions can be expected to live for approximately 30 years.

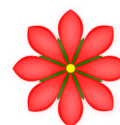
So, next spring, when making your wish list for plants, include *Euonymus*, especially ‘Manhattan’. Pick a semi shady spot, plant and enjoy. 🌱



Up close of the leaves

Garden Tip: Winter Watering

Don’t forget to water perennials including trees, flowers, and turf during the winter. When we haven’t had adequate precipitation, water about every month when we are going to have a few days in the 50’s.





GARDEN WALKS

A HUNTING WE WILL GO!

By Tom Laca, CSU Extension–Pueblo County Small Acreage/Range/Natural Resource Agent

Do you enjoy the thrill of the hunt? Searching for the perfect specimen, stalking your prey until at last it is time for the harvest? Then to load it, take it home, trim the waste and finally mount it inside your home to show off to all your holiday visitors. Nothing beats the aroma of fresh cut evergreen in your house. With the proper tags and preparation, you too can cut your own Christmas tree.

Every year the US Forest Service offers tags or permits which the public can purchase in order to cut your own tree. The harvest of these trees assists the Forest Service in thinning areas of overgrowth, thereby reducing the fuels in fire prone areas. Tree permits are available for purchase Nov. 25—Dec. 24 at the San Isabel National Forest Offices in Pueblo, Canon City, Salida or Leadville. The Pueblo Office is located at 2840 Kachina Dr. and is open from 7:30 a.m. - 4:30 p.m. The cost for permits is \$10 per tree with a limit of two trees per household.

Now that you have your permit San Isabel National Forest is your playground. Permits purchased through the San Isabel office allow you to cut a tree throughout the Forest with few exceptions. Trees are not to be removed from wilderness areas, campgrounds, trailheads, ski areas or recreational areas such as Lake Isabel. Also, road hunting is not allowed and any tree cut should be at least 50 feet from roadways, waterways or trails.

Access to the Forest service is not guaranteed this time of year and weather may limit the areas in which you will be able to enter. Four-wheel drive vehicles are recommended due to the possibility of snowy and icy conditions. Be prepared for the worst case scenario and have your winter survival kit in the vehicle with you while tree hunting. Know where you are going and let someone at home know your plans in case you get stuck or lost while trekking the forest.



Successful tree cutting



Successful Christmas tree hunting

Trees up to six inches in diameter at the base may be cut. The permit also allows you to harvest a tree between 3 and 15 feet tall. Trees should be cut as low to the ground as possible, do not “top” trees. If you do choose to leave part of the tree you cut in the forest, scatter it around the area. One last rule, automatic weapons are not allowed in the taking of a Christmas tree. If you want to get a fresh cut tree from the forest, you will need to use traditional means such as a hand saw or ax, chainsaws are not allowed.

Cutting your own Christmas tree can be a fun and affordable way to spend the holidays. Remember anytime you head out, be prepared for the conditions and have a plan. If you would like more information, you can go to the following website: [https://](https://www.fs.usda.gov/detail/psicc/about-forest/districts/?cid=FSEPRD675363)

www.fs.usda.gov/detail/psicc/about-forest/districts/?cid=FSEPRD675363

Garden Tip: Wait to cut back perennials

Waiting until spring leaves shelter and forage for beneficial insects, birds, and other wildlife.





INTERESTING INSECTS

THE EMERALD ASH BORER (*Agrilus planipennis*) SMALL BUT DEADLY!

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

The Emerald Ash Borer (hereinafter EAB) is a small emerald green beetle that is native to Asia. It was first discovered in the U.S. in 2002, in Michigan. It probably hitched a ride from Asia in infected wooden shipping or packing materials. Since 2002, it has spread from Michigan to 22 states. As of September of 2013, the EAB has been in Colorado, having been first discovered in Boulder. A federal quarantine area was established to try and prevent human spread of EAB from Boulder County and surrounding areas. The quarantine zone efforts have slowed the spread of EAB to neighboring communities, giving them more time to plan and protect their urban ash trees. Within the quarantine zone, later EAB infestations have occurred in Longmont, Lafayette, Lyons and Superior. Unfortunately as of August 2019, the presence of EAB beetles has been confirmed in Broomfield and Westminster, which are outside the current quarantine zone.



Emerald Ash Borer

So why am I so sad that the EAB is in Colorado? The EAB is a tiny but deadly insect. It kills all species of ash (*Fraxinus spp.*) – white, green, black, blue and purple ash and their cultivars. The EAB larvae feed under the bark of ash trees causing S-shaped tunnels. Damaged trees usually die within 2 to 4 years after the first appearance of symptoms. EAB can infest all ash trees whether they are young (including saplings) or mature, healthy or stressed. By the time you notice the symptoms of the larvae feeding, it's often too late to save the tree. Because EAB is an alien (non-native) insect, our ash trees have little to no natural resistance against their damage, and there are no native predators of EAB. EABs are hard to detect, the larvae are under the bark, and the adult beetles are tiny and only active from May through July.

So, how big is the EAB problem? It is huge. After the Dutch elm disease killed so many elm trees in the 1960s, they were often replaced with ash trees. It is estimated that ash trees make up 15% or more of urban trees in Colorado, most of which are on private property. EAB infestations will have a great economic impact. As an example, there are an estimated 1.45 million ash trees in the Denver Metro area. The estimated costs of removal and replacement of those trees is over \$1 billion. The cost of treating ash trees of high value in Metro Denver is unknown, but could cost as much as \$36 million a year for the life of the trees.

So what should you do about the EAB?

1. Don't freak out.

I know that seems difficult given all I have told you thus far. It is important to remember that EAB only move about a half a mile per year without help from humans. Hopefully, they will take a while to move from the currently infected Colorado cities to Pueblo. Ongoing research is leading to some effective treatments. We as individuals and as a City-County have time to plan for EAB. According to Mike Tate, of the City of Pueblo Parks and Recreation, they have inventoried the ash trees in our parks, and found around 700 ash trees. They have assessed their size and health to determine if, or when, to start EAB treatment. Mineral Palace Park has some prized ash trees that he says may be 130 or more years old.

2. Identify whether or not you have any ash trees on your property.

Ash trees have compound leaves with 5 to 9 leaflets. The branches, buds and leaflets grow directly opposite of each other. Mature ash trees have diamond-shaped bark ridges.

3. If you do have ash trees on your property, you should make a plan of action - NOW.

Think about such issues as: Is the ash tree worth saving? If so, how and when do I protect it? People who apply EAB pesticide treatments must be licensed by the State as Commercial Pesticide Applicators. Contact local arborists to determine who is licensed. If you determine your ash is not worth saving, decide when to get rid of it and decide what to replace it with. If you are removing your ash trees, you may want to do that before the EAB reaches Pueblo.

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It will likely be cheaper and easier, and it gives more time for its replacement to grow. Think about planting native trees and shrubs that are suited to our climate. There is a good EAB decision guide on the Colorado State Forest Service website: <https://csfs.colostate.edu/>

4. Learn how to Identify EAB.

The adult EAB beetle is very small at only 1/8" to 1/2" in length. It has a slim body that is metallic emerald green. Note that the Japanese beetle is also emerald green, but it's bigger and has a rounder body shape. There are also other beetles that are similarly sized and shaped as EAB but they are not emerald green.

5. Learn to identify the signs and symptoms of EAB.

An ash tree can be infested with EAB for up to four years before visible signs of the infestation occur. Watch for thinning leaves in the upper canopy of your ash trees, and 1/8" D-shaped emersion holes in the bark. Look for vertical cracks or splits in the bark with S-shaped tunneling in the wood below. Note there are other borers, like the lilac-ash borer, that may look like EAB or cause similar signs or symptoms as EAB. If you have identified the tree as an ash and see signs of EAB infestation, report it to the Colorado Department of Agriculture at 1-888-248-5535. If you are not sure, the Extension office can help.

You should never carry firewood or wooden packing materials, including palettes, outside of, or into the state, or from the EAB affected areas. Buy firewood in the area where you are going to burn it, and don't transport it outside that area.

The EAB probably arrived in Colorado in infested firewood. Pueblo may be at higher risk of EAB being introduced in firewood. Lessons learned from other states with EAB, is that infected firewood is sometimes transported in horse or livestock trailers. Given that we host the State Fair, we may be at a higher risk than other communities to have EAB introduced from firewood.

I hope now that you know about EAB, you will help look out for it. The sooner we detect EAB, the better we can respond to save our ash trees.

For more information about EAB, check out the Colorado State Forest Service website above. It has excellent photos to help you identify ash trees, the EAB and the symptoms of EAB infestation.

Sources: Colorado State University Extension (<https://extension.colostate.edu/>) and the Colorado State Forest Service website (listed above).



**All Pueblo
GROWS**
Seed Lending Library

**Join us on the last Saturday of January through
October for a free educational seminar, and to
help prepare seed for the library. The fun starts at
9:30 a.m. on the first floor of the Rawlings Library.
All seed donations welcome!**





PERENNIAL PEOPLE


MORRILL AND KAREN WORCESTER AND WREATHS ACROSS AMERICA

By Orla O'Callaghan, Colorado Master Gardener, 2005, Native Plant Master, 2009, proud Mainer (or Mainiac)

Wreaths Across America is a non-profit organization, based in Maine, whose mission is to remember fallen soldiers, honor veterans and teach about freedom, by placing wreaths at the graves of veterans in Arlington National Cemetery and thousands of other national and state cemeteries throughout all 50 states, and beyond. Thanks to the fundraising efforts of local Colorado groups, Wreaths Across America will be providing wreaths for veterans buried in 47 cemeteries throughout the state, including Roselawn Cemetery here in Pueblo. If you want to help sponsor a wreath, or honor a veteran in your family interned there, contact Roselawn for more information. There will be a wreath laying ceremony at Roselawn Cemetery on December 14, 2019, at noon, so bring the family to help honor our local veterans. Then check out the stories of veterans at Wreath Across America's website.

So how did this tribute start? Why is a group in Maine honoring veterans in Colorado and throughout the U.S. and beyond? It all started with one man's idea. In 1992, Worcester Wreath Company of Harrington, Maine, had about 5,000 balsam wreaths left over toward the end of holiday season and its owners, Morrill and Karen Worcester, did not want to throw them away. Remembering a moving trip to Arlington National Cemetery that he had won in a contest when he was 12, Morrill Worcester contacted his senator about having the wreaths laid in an older section of Arlington National Cemetery that was seldom visited. The Worcesters wanted to honor the veterans who served and who made the ultimate sacrifice for their country. With the help of many other individuals and organizations, he made it happen.

From 1992 to 2005, they repeated this annual tribute relatively quietly. That changed when a photo of the wreath adorned graves covered in snow was posted on the internet along with a moving poem. The photograph went viral, and brought national attention to the efforts of the Worcesters and their friends. Thousands of requests for wreaths at other national and state cemeteries poured in, as did offers to help with honoring our nation's heroes. Since then, it has become a national movement to remember our fallen soldiers and honor those who served their country. It has grown to the point that this year they are providing wreaths for Arlington National Cemetery, and more than 1,600 other sites, to be laid on National Wreaths Across America Day, December 14.

Their goal is not only to remember the fallen, and honor veterans, but also to teach children about the sacrifice and service of veterans and about the value of freedom that these veterans fought to preserve and protect. This is why I am proud to raise Wreaths Across America and its founders, Morrill and Karen Worcester, as Perennial People. Having grown up in Maine, I can say to you with pride, "Wicked good job!" 



Graves adorned with wreaths

Garden Tip: Winterizing garden tools

- ♦ Clean dirt and debris off and dry tools
- ♦ Sharpen dull tools
- ♦ Sand off rusty spots and coat with vegetable oil
- ♦ Wipe linseed oil on wooden handles
- ♦ Bring hoses inside and make sure they are properly drained
- ♦ Clean and sharpen mower blades
- ♦ Don't store gasoline in your mower

