

From the Ground Up



A Gardening and Native Plants Quarterly

Colorado State University Extension-Pueblo County

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WICKED WEEDS

THISTLES By Marge Vorndam, Colorado Master Gardener, 1997, Colorado Native Plant Master, 2008

A few years ago, I was working the CMG Desk when I received a call from a Salida woman. She said that her neighbor was planning on spraying thistles along his roadside, and wanted to know if there were more benign ways to control the infestation. I told her that thistles are annuals, and that he could just cut them down to control them. I was mostly wrong. Some thistles can also be biennial or perennial or can reproduce from rhizomes, facts that are important in determining control methods. This year, I am making a concerted effort to learn about the various noxious thistles that infest Colorado counties. (There are also native thistles that rarely cause problems, so knowing the differences are important.)

Thistles belong to the *Asteraceae* family—those plants that have multiple ray and disk flowers held on the same receptacle. As with the cacti, thistle spines likely evolved as protection from herbivores, since thistles are non-poisonous and edible. Pueblo County’s Weed List includes four members of the *Cardueae* tribe –*Carduus nuttans* or Musk thistle, *Cirsium arvense* or Canada thistle, *Cirsium vulgare* or Bull thistle and *Onopordum acanthium* Scotch thistle (Scotch thistle is the native flower of Scotland).

Of these thistles, Canada thistle and Musk thistle are on Colorado Department of Agriculture’s “Ten Most Wanted” list, but the other two can be very damaging when locally numerous. While noxious thistles cause economic and agricultural damage, they do provide food and habitat for wildlife, notably butterflies, bees and goldfinches. As a side note for the birders among us, “thistle seed” is not used in bird feed. Instead, the seed is Nyger, *Guizotia abyssinica*, which is sterilized before use per http://www.ebirdseed.com/nyjer_niger_thistle_birdseed.html, retr. 6/6/01.

Identification of thistles focuses on the presence/absence of leafy appendages called wings, along the stem, leaf shape and size, shape of flower bracts, and the seed structure (not covered here).

All noxious thistles should be controlled before seed production occurs. Since thistles store carbohydrates in their fleshy stems and roots, cut flower heads should be bagged and disposed of to prevent further development and dispersal of seeds. Best control practices are to not overgraze rangelands and to reseed disturbed or bare soils with native plant species that can out-compete thistle seed. There are insect predators for heavy infestations available from the Colorado Department of Agriculture, 303-239-4100. Herbicides labeled for thistle control can be particularly useful on the root-spreading Canada thistle.





Continued on page

INDEX



Wicked Weeds.....	1-2	Heat on Veggies.....	7	Japanese Beetles.....	10
Yellowjackets.....	3	Fabulous Families.....	7	Firewood Warning.....	11
Native Plant Master.....	3	Hardscapes.....	8	Event Ads.....	12
Tulips & Bulbs.....	4	Farmers Market.....	9		
Perennial People.....	5	Reservoir Garden.....	9		
Know Your Natives.....	6	Grubs.....	10		

Comparison of spiny-leaved thistles: flowers pink, purple, or white, except where noted.

Name	Image	Reproduction	Stem Wings	Leaves	Flowers
<i>Carduus nutans</i> ¹ Musk thistle, nodding thistle 3-6'		biennial from seed	conspicuous to ~ 1 cm wide	leaves with light green ribs, white margins with white or yellowish spine, leaves coarsely-deeply lobed, slightly wavy, leaves at plant base to 15" long	May-June, many nodding down at terminal and later from axillary shoots, large to 3" in diameter, bracts glabrous (smooth) often tinged purple and triangular
<i>Cirsium arvense</i> Canada thistle 2-4'		perennial, rhizome-forming resulting in large stands, dioecious, vegetative reproduction from roots	none	To 6" long, oblong, bright green, slightly hairy on undersurface, yellow spines along leaf edges, lower leaves deeply lobed with spine at tip, upper leaves more toothed	April-May, flowers are size of finger tip, bracts flat with slight peeling back of tip from involucre at in small clusters at ends of branches
<i>Cirsium vulgare</i> Bull thistle 2-5'		biennial, annual or short-lived perennial	conspicuous to 1 cm wide between nodes	leaf top with coarse prickly spiny hairs, leaf bottom woolly or cottony, juvenile leaves round to spatulate with three or more narrow lobes with 0.5" spine at end of each lobe	2" in diameter, flower heads cobwebby-pubescent, one to few at stem ends, bracts spreading and tipped with short spines
<i>Onopordum acanthium</i> or <i>Onopordum tauricum</i> Scotch thistle 8-12'		biennial, forming dense stands from seed, rosettes 1-2' in diameter, moist soils	conspicuous, mostly 1-4 cm wide, stem hairy	leaves broad to 12" long and with distinct mid-rib, not deeply serrate, rosette to 2' diameter or more. <i>O. acanthium</i> : grayish-green from dense woolly hair covering. <i>O. tauricum</i> : bright green with no hair.	June-September, receptacle fleshy with thick spreading spine-tipped bracts

¹ Plumeless thistle, *Carduus acanthoides*, has been found in Pueblo County, is not common as yet and is a species of concern.

Information Sources:

K. Chayka. 2010. Minnesota Wildflowers. <http://www.minnesotawildflowers.info>, retr 6/6/10

W.A. Weber and R.C. Whittman. 2001. Colorado Flora, Eastern Slope. U. CO Press.

Colorado Dept. of Agriculture. Noxious Weed Management Program. <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1167928159176>, retr 6/6/10

Garden Tip: Irrigation system adjustment

Adjust your sprinkler system for the needs of turfgrass during the heat of summer. According to the Lawn Watering Guide from SECWCD, bluegrass needs 1.5 inches of moisture during the month of July, 1.4 inches in August and about an inch in September.



Trap Those Pesky Yellowjackets by Linda McMulkin, CSU Extension-Horticulture

Western yellowjackets (*Vespula pensylvanica*) are those annoying yellow and black wasps that interfere with summer picnics, hanging around soft drink cans, fried chicken platters and potato salad bowls. This insect species is more aggressive than bees and most other wasps and is responsible for most of the “bee” stings people receive each summer.

Wasps can be distinguished from bees by their body hair and feeding habits. Wasps have smooth, shiny bodies while the bodies and legs of bees are covered with hair. Wasps tend to be carnivores and bees feed on nectar and pollen.

Western yellowjackets are scavengers who feed their young on dead insects and scraps of garbage. A new colony is formed each spring, most commonly in underground nests, by a fertilized queen that survives the winter as an adult. The new population grows slowly and reaches its highest numbers during late summer

Yellowjackets can be controlled by destroying underground nesting sites, reducing food (garbage cans, hummingbird feeders, pet food) and water sources, and traps containing the chemical heptyl butyrate. Yellowjacket traps will not impact populations of other nuisance wasps such as the non-native European paper wasp (*Polistes dominulus*). Traps are especially effective if placed in the landscape early in the spring. For more information on bees and wasps, see CSU Extension Fact Sheet 5.525 (<http://www.ext.colostate.edu/pubs/insect/05525.pdf>).



Photo: Whitney Cranshaw, Colorado State University, Bugwood.org

For information on more than 1,060 native and non-native plants in our state, visit the recently updated Colorado Plant Database at <http://coloradoplant.jeffco.us>.

NATIVE PLANT MASTER PROGRAM

Want to learn about the native and non-native plant species of southern Pueblo County? Join Linda McMulkin and Ed Roland for the final Native Plant Master course for 2010. This three Saturday course will be held in the Colorado City area, which is known for its beautiful natives and troublesome weeds. Classes will be held on August 14, 21 and 28, from 8:00 a.m. to noon. The cost of the course is \$90 or at a reduced price of \$50 for those who report public contacts (those you talk to about natives, weeds, sustainable landscaping, etc). Applications are available at the CSU Extension office at 701 Court Street, Suite C, or online at <http://pueblo.colostate.edu>



COLORADO MASTER GARDENERS' BOOK SALE	
Aspen	\$5.00
Best Perennials for The Rocky Mtns	\$16.00
Colorado Wildscapes	\$12.00
Colorado Gardener's Companion	\$13.00
Field Guide to Colorado Insects	\$15.00
Growing Roses in Colorado	\$10.00
Growing Small Fruit	\$12.00
Handbook on Troughs	\$8.00
Plants for the Natural Gardens	\$24.00
Rocky Mtn Plant Guide/Annual & Perennial Plant Guide	\$4.00 or 2 for \$7.00
Xeriscape Colorado	\$24.00
<i>Check with the CSU Extension office for availability</i>	



Spring Flowering Bulbs by Pat Myers, Colorado Master Gardener, 2001

Now is a great time to start planning for fall gardening. Look for areas in your yard where spring bulbs would make a statement. I like to think planting bulbs is somewhat like painting a picture. Go wild. Nothing says spring is on its way more than a patch of varied crocus blooming near your front door in February. Add some dwarf species of daffodil, *cyclamineus* hybrid and a few blue and white wind flowers. What a pretty picture!

During the fall, catalogs and big box stores offer bags of mixed bulbs such as muscari, tulips, jonquils and daffodils. These assortments are outstanding. Tuck them away in different areas of your yard and enjoy your spring display next year.

The proper time to plant spring bulbs, of course, is in the fall; however, when thinning, it's much easier to find the bulb when the dry leaves are still visible. Plant the bulbs immediately after digging. If you prefer to plant them in the fall, make sure bulbs are cleaned of all loose soil, and store in paper sacks in a cool, dry place. Always make sure your bulbs have naturally lost their leaves because this is the food source for bulbs.

When choosing bulbs, don't forget bulbs for the fall. Nothing brighten the day more than walking thru your spent garden in late October, early November thinking you're so glad this is about over for the year. There, right in plain sight, a perfect patch of multi-colored fall crocus with their perfect little flowers, looking at you, as if to say, "boo, you forgot about me, didn't you?" Once again you're recharged and ready for more gardening.

Spring and tulips; it doesn't get any better! This year was exceptional for tulips, daffodils and all our favorite spring bulbs. The deep freeze and wet spring was just the perfect weather for spring bulbs.

Now that their season is passing, questions are being asked. Why did bulbs fail to bloom? Dig where you plant the bulbs; perhaps squirrels, gophers or ground squirrels dug them up and could be the culprits. Established bulbs can become overcrowded and quit blooming. Easy remedy—wait until their leaves have dried, dig and replant healthy bulbs. Have too many? Share with friends and relatives.

Plants that make great companions for spring bulbs are: candytuft, creeping phlox, Johnson Blue Hardy geranium, Lily of the Valley and Spanish bluebells, just to name a few. Choose plants that bloom late spring and early summer. They hide the unsightly drying leaves. Planting among roses and lillies also adds to your season of continued color in your garden.

There are so many bulb varieties available, it's really difficult to choose. Think color when you are selecting. Bulbs will grow just about any place. They like sun but do well in partial shade and medium water, because they don't like soggy soil and won't bloom in dense shade. My favorite source, *High Country Gardens*, 800-925-9387 or www.highcountrygardens.com.

A garden that I've had for 25 years on the south side of our home contains peony, daylilies, trumpet lilies, tall phlox and many varieties and color of bulbs. Bulbs that I had forgotten about bloomed this year and created quite a picture. I've also added roses, Shasta daisies and mums with a background of forsythia and a flowering plum tree. This garden has given me so much joy over the years; I never tire of it. 🌱



Garden tip: How to choose produce at a Farmers Market

For tips on shopping at Farmers' Markets, see CSU Extension fact sheet 9.379, <http://www.ext.colostate.edu/pubs/foodnut/09379.pdf>. This publication includes information on how to safely transport and store fresh produce.

For tips on choosing produce, pick up a copy of the Colorado Department of Agriculture's Colorado Farm Fresh 2010 at local CSU Extension offices or farmers' markets.



Garden Tip: Managing hail damage on landscape plants

Plants damaged by recent storms may recover depending on the species and the level of damage. Broken limbs of trees and shrubs should be properly removed, using good pruning techniques. On some woody species, lateral buds will produce new leaves, but the plant needs a good carbohydrate reserve and adequate water (about 1 inch per week). Monitor the water needs of each plant and avoid trying to force new growth by applying fertilizer. Give the plants some time to recover and evaluate health in a few weeks.



PERENNIAL PEOPLE

SHIRLEY STANELLE by Georgi Lipich, Colorado Master Gardener, 2007

Noting it was time to take her dog for a walk, Shirley Stanelle headed for the Nature Center. Strolling along, attached by a leash to her furry friend, Shirley heard a voice inside her head. The voice said, “Build a garden!” In that instant, the seed of inspiration for Pueblo West Ecumenical Church’s Paradise Memorial Garden started germinating.

Shirley was born into a gardening family. Her parents always had a huge vegetable garden, so Shirley, of course, was expected to work that garden alongside her parents. As a young woman, Shirley married Ken Stanelle, a law enforcement officer. They started their own family (including a daughter known to most of us as Penn Parmenter, a talented and knowledgeable gardener in her own right). Shirley was too busy being a wife and mother to spend time gardening and the years passed by quickly. When her husband was seriously injured in the line of duty, he retired and they moved from Milwaukee to Pueblo. Since Ken was also a talented potter, it was just natural for them to open Earth ‘n Art on Union Avenue, a much-frequented and well-known business. Sadly, the art community of Southern Colorado suffered a great loss when Ken passed away in 1994.

Not one to just sit around, Shirley tried to stay busy and upbeat after she lost Ken. Her gardening roots began nudging through the soil again and she attended Master Gardener classes in 2000. Her visit to the Nature Center, and the insistent “voice”, occurred during that time period. Shirley couldn’t stop thinking about that “voice” and began visualizing a garden, thinking that it might be a nice tribute to her husband. But where? As a member of Pueblo West Ecumenical Church, she knew there was an ideal space on church property. She began meeting with her pastor and other church members, designing flower beds and making irrigation plans. The first bed was planted in the fall of 2001. Today, the garden has expanded to nearly a third of an acre. Near its center, a large chunk of granite bears Ken’s name and his favorite saying, “Pick Up the Clay”.

Shirley’s hard work and devotion have given Pueblo County’s nature lovers a source of inspiring beauty and peace. On Sunday mornings, its meandering paths offer exciting adventures to restless children as their young mothers stroll with them, taking in the sweet scents of the garden. Its peaceful beauty provides encouragement to grieving spouses who have planted growing “memorials” in its rich soil.

She continues to work in the Garden on a regular basis. Friday mornings find her side by side with other local gardeners, dividing plants for the church’s plant sale and pulling stubborn weeds. Her enthusiasm has brought others into the fold, many of whom have donated labor, time and expensive materials to enhance the Garden’s beauty.

If you have the opportunity to meet Shirley, you’ll find she is like a deep, refreshing well full of life stories, imagination and creative intelligence. I plan to, rather selfishly, volunteer some time in “her garden”, with the hope that some of her knowledge and creativity rubs off on me!

A heartfelt thanks goes out to Shirley Stanelle (and to that demanding voice inside her head!) for brilliant inspiration and for an amazing gift. 🍀





KNOW YOUR NATIVES

SHRUBBY NATIVE ASTERS by Mary Knorr, Colorado Master Gardener and Colorado Native Plant Master, 2009

The Asteraceae family is the largest plant family. Their single large flower is really a “composite” of many small flowers. Fossil pollen data dates the Asteraceae in South America to the Eocene period approximately about 56 to 34 million years ago. The Sunflower family contributes many products for the human diet: sunflower seeds, cooking oils, artichokes, endive and lettuce; and its marigolds, chrysanthemums, dahlias and zinnias are very popular in American flower gardens.

Most of the Asteraceae families are herbaceous perennials. As a result, we don’t usually associate the Asteraceae family with shrubs. A majority of Asteraceae family shrubs are from temperate zones in the North America; therefore, most aren’t cold hardy. Sagebrush (*Artemisia tridentata*), California Brickellbush (*Brickellia californica*) and Rabbitbrush (*Ericameria nauseosa*) are hardy perennial Colorado natives.

The Big Sagebrush (*Artemisia tridentata*) is a common shrub throughout the Rocky Mountains and the Great Basin. Early European settlers and Native Americans believed the Sagebrush had many fertility powers. The *Artemisia* is a very xeric, wind pollinated and silver-gray evergreen plant. It is browsed by Goats, Sheep, Deer, Elk, Moose, Antelope and Bighorn Sheep. The Absinth wormwood (*Artemisia absinthium L.*) is on the Colorado B Noxious Weed list, as well as the North Dakota and Washington state lists. In addition, the Big Sagebrush is classified as a severe allergen.

Another little known Colorado native is the California Brickellbush (*Brickellia californica*). It is a fast growing, very xeric, silver-green shrub. *Brickellia* is found in sandy or clay soils up to 8,000 feet and has a wonderful fall-blooming, fragrant, yellow flower. Animals will browse the Brickellbush and it is a larval plant for Tiger Moths. An extract from *Brickellia* produces a significant drop in blood sugar for insulin and non-insulin dependent diabetics.

A very common native is the Rubber Rabbitbrush (*Ericameria nauseosa* or *Chrysothamnus nauseosa*). It is adaptable to poor soils, a fast grower when watered, and prefers full sun. The Rabbitbrush will start flowering at higher elevations and then work their way down to the lower slopes. Also, butterflies descend on the fall deep yellow *Ericameria* blooms. Before new growth appears in the spring, severely prune the Rabbitbrush back to prevent it from getting droopy. The plant causes livestock poisoning and mild airborne allergen, and can cause hives if cut branches are exposed to bare skin. Native Americans used their roots as chewing gum. *Ericameria* near Los Alamos rooted into radioactive waste and the shrubs set-off a Geiger counter!

Many of the shrubs in the Asteraceae family can be referenced as “weeds”, but planted in the right place, they can bring native authenticity and beauty into your garden. 🌿

Garden tip: Maples in Home Landscapes

With few exceptions, the maples used in local landscapes are native to regions with very different conditions than those found in Colorado. They originated in eastern North America, and Europe and Asia, in areas with higher precipitation and humidity, stable winter conditions (it gets cold and stays cold), and acid soil with high levels of organic matter. Transferring non-native maples to eastern Colorado landscapes can result in high stress conditions for the plants, which may exhibit signs of poor winter hardiness, insufficient moisture (edges of leaves scorched) and nutrient deficiency (iron chlorosis-yellow leaves with green veins).



The Effect of Heat on Vegetable Gardens

by Paul Hoffman, Colorado Master Gardener, 2008, and Burt Carney, Colorado Master Gardener, 2009

For those crops direct seeded into the garden, soil temperature at time of sowing is important. According to CSU Extension, “Plant when soils reach specified minimum temperature measured at 8 a.m., 4 inches deep.” For example, cool season crops such as beets, carrots, peas, and spinach must have a minimum soil temperature of 40 degrees. All members of the melon family such as zucchini, cantaloupe, and cucumbers need a soil temperature of 60 degrees.

Just as the temperature of the soil was important for germination, the air temperature will dictate the watering needs of your garden. As temperatures rise, watering must be increased in both quantity and frequency. Mulching your garden will reduce water consumption.

Tomatoes—A full-size tomato plant loaded with fruit will use up to two gallons of water per day in the heat of summer. If you are using a Topsy-Turvy-style hanging, growing container, high summer temperatures may require twice-a-day watering to produce healthy plants with lots of tomatoes. Failure to provide that water will result in fewer and smaller tomatoes that are less juicy. Tomato blossoms that open on a day in which temperatures reach 90 degrees by 10 a.m. will abort. Conversely, tomato blossoms will not set pollen when the nighttime temperatures fall below 55 degrees. Also provision of regular, adequate watering will help prevent blossom end-rot during the heat of summer. Avoid wetting the plant during watering.

Beans—Beans are one of the heaviest water-users in the garden especially in the heat of summer. They will drop blossoms and may develop stunted, misshapen pods when insufficient water is provided. According to CSU Extension, “Water use during fruiting will be ¼” to over ½” water per day, depending upon temperature and wind. Frequent watering in the right amount is essential for bean production.”

Cole Crops—Hot weather reduces sweetness in cole crops such as broccoli, brussel sprouts, cabbage, and cauliflower. This is why early spring or mid-summer plantings are recommended. Additionally, these crops may tolerate some light frost.

Cucurbits—These crops are intolerant of frost and cool spring winds. A week of daytime temperatures below 55 degrees may stunt the crop. This is why melons, cucumbers, and squash are typically planted two plus weeks after the average last spring frost date.

As you can see, heat is a mixed blessing in the garden. 🍂



FABULOUS FAMILIES

ACERACEAE, the Maples by Linda McMulkin, CSU Extension/Pueblo County

The well-known maple family, Aceraceae, is composed of over 100 species of deciduous trees and shrubs with opposite (in pairs at the nodes) leaves and two-winged fruits called samara. Most maple (*Acer*) species have simple, palmately lobed (like a hand) leaves, often with 3 to 5 lobes. The exception is the Box-elder (*Acer negundo*), which has pinnately compound leaves (divided into leaflets along a main axis, feather-like). Flower types vary, but are generally small and inconspicuous, opening early in the growing season; the flower may be wind or insect pollinated.



Only two maples are native to the eastern part of Colorado, the above mentioned *Acer negundo* and *Acer glabrum* or Mountain maple, which is commonly found along streams in the foothills and mountains. Colorado Aceraceae species are dioecious, with male and female flowers on separate plants.

Due to research into the genetic makeup of plant species and their evolutionary relationships, many plant families are being broken up or moved into other family groups. The Aceraceae members have been moved into the Sapindaceae family, and the group is now referred to as the subfamily Aceroideae. For most of us, this change will have little impact, as it takes years for new nomenclature to make it into commercial use and plant identification manuals. 🍂



AVOID CREATING HEAT ISLANDS by Liz Catt, CSU Extension/Pueblo County

Inviting and comfortable landscapes, whether public or personal, always strike a balance between hardscape and “softscape”. Hardscapes provide the means for us to move around and function within a landscape. Public hardscapes include sidewalks, streets, parking areas and any structures built into the landscape. Our personal, private landscapes contain these same hard features as driveways, pathways, seating areas, and walls or fences. Hardscapes should always be considered first in any garden design because we need to be able to move through our property and live in our gardens.

Hardscape materials tend to be inorganic by nature or design and often include the use of asphalt, concrete, stone or gravel; all these materials collect and radiate heat. Along with walls and roofs, they heat up the air and surfaces around us, and in our hot, semi-arid climate, can create an inhospitable environment. Hardscapes are typically built rather than planted. They may be mitigated, however, such as a flagstone path planted with thyme or some other low creeping plants.



Softscapes, the planted areas of our landscapes, can mediate and soften the harsh effects of our built environments. There are real benefits to planting well chosen, water-wise plants in the landscape. Planting trees and other vegetation can have many positive consequences such as: lowering energy use, cleaning the air we breathe, protecting us from harmful UV rays, decreasing stormwater runoff, extending the longevity of paved surfaces, and increasing property values. Trees are one of the best “investments” in a landscape and can reduce energy costs from 10-25%! A car parked under a tree can be 45° cooler than one on open, exposed pavement. Common sense would entail planting trees to shade driveways. A deciduous shade tree can, if planted in the correct location (typically on the west, east, or southwest side of a house), ***lower cooling costs in the summer and heating costs in the winter.***

By shading windows, walls and roofs, trees eliminate 70-90% of solar radiation beneath their canopy, radically reducing heat gain. A window in direct sunlight radiates heat ***into*** a building, but if it is shaded on the outside it does not heat to the inside. (Curtains, drapes and blinds might look nice but they really do nothing to cool a home.)

Shade trees perform this same cooling magic on the paving around a house. Carefully placing trees to overhang pathways invites strolling through and enjoying a garden. Outdoor seating areas in hot direct sunlight actually become heat islands, so plant trees to create a cool oasis and possibly frame a view of the garden.

Planting any vegetation will assist in cooling the surrounding area. Turf areas, even native grass species, can lower air temperatures 2-4°. We need vegetation to cool our environment and create gardens that are sustaining and inviting, so it is crucial to balance the built and the planted in our landscape designs. 🌿

Garden Tip: Fertilizing Woody Plants

In natural settings, trees and shrubs recycle nutrients through the breakdown of the leaves they drop. In urban settings, woody plants may need fertilization now and then. Studies at CSU indicate that unless nutrient deficiencies are obvious (reduced growth, smaller than normal leaves, off-color), deciduous trees and shrubs need fertilizer every 3 years and evergreens every 5 years. Don’t fertilize woody plants after August 1, as high nutrients and irrigation slow their entry into dormancy.



Farmers Market Pueblo, 2010, by Jerry Stimpfl, President, Farmers' Market, CMG 2009

2010 is expected to be a very good year for the Farmers' Market at Midtown Shopping Center. The market might be slow at the front end due to the late planting and adverse weather in May but I am sure it will bounce back.

The market will open on Tuesday, July 6, 2010 and will be held rain or shine on Tuesdays and Fridays from 7:00 am to 12:00 pm until early October.

This year all board members will have a special I.D. tag. I hope this will enable new volunteers, vendors, and customers find the right person to ask questions and voice opinions.

A board member will try to visit all the vendors and issue them a certificate verifying they are a Colorado grower. This action resulted from a request by the vendors.

Please come to the market. This will help the hard working growers and their participation generates funds for our youth scholarship program! 🍃



GARDEN WALKS

PUEBLO RESERVOIR NATIVE PLANT GARDEN by Georgi Lipich,
Colorado Master Gardener, 2007

State Park Ranger Darcy Mount couldn't stop talking about "the kids", a group of Pueblo West and Rye High School students who designed and installed a local native plant garden. Ranger Mount was there, watering hose in hand, on her day off, at the Colorado State Parks Visitor Center located near the south entrance to Pueblo Reservoir.

Ranger Mount explained to me that the project began in November 2009 as a school club project at Pueblo West High and expanded to include students from Rye High School. She met with the students and Pueblo Master Gardeners several times before beginning the actual labor of putting in the xeric garden.

The garden now fills a space formerly occupied by a large pond. Ranger Mount explained that the pond and its drainage pipes had been removed because the department felt it didn't represent the area's natural resources or the four ecosystems of the park. Visitors to the center are now greeted by a naturally shaped garden gradually filling up with carefully chosen native plants and ground covers. Most of the plants were locally gathered or donated. A fascinating boulder sits at one corner, its half-round shape and sparkling core reminding one of a cut geode.

A winding pathway greets visitors as it guides them past piñon, junipers, natural grasses and cacti. After changing the path design several times, the students carefully laid each pathway edging stone themselves. Heavy work was done by the Pueblo County inmate crew. Front Range Aggregates donated pea gravel to be used as mulch. Southwest Sod Farms provided native grasses, the US Forest Service contributed blooming shrubs, while the Colorado Division of Wildlife came through with larger rocks. Many of the plants are now established with hints of color emerging on their tips. The irrigation design by the students allows usage of rain run-off and reduces the amount of watering the garden will need once it is established.

Ranger Mount stated that groups of students show up nearly every day to tend and enjoy "their garden". She estimated that over 1,000 volunteer hours have been put into this project. Ranger Mount said the students created such a great garden that a new project for next year is in the planning stages. It will be located on an approximately one acre site in front of the Division of Wildlife offices. I'm looking forward to seeing what their imaginations and diligent enthusiasm can do with a whole acre! 🍃



Summer Lawn Problems – Grubs by Edith Brideau, Colorado Master Gardener, 2007

While we may be enjoying this weather, our bluegrass lawn isn't quite so happy. We continue to install it because it is readily available and relatively inexpensive, stands up well to heavy traffic, and looks great under the right conditions. But bluegrass is susceptible to many diseases and insect infestations, such as white grubs.

According to CSU Extension Fact Sheet 5.516, white grubs are the most damaging lawn insects in our region. The larval or grub stage of masked chafers, May and June beetles, and Japanese beetle feed on grass roots, causing serious injury.

White grubs are among the most difficult soil insect pests to control. Large grubs are highly resistant to insecticides. A thick layer of thatch will block all insecticides from penetrating to the critical root zone, so treatments should be combined with soil aeration for optimal effectiveness. Proper watering can improve performance of certain insecticides. However, excessive watering can decrease the effectiveness of insecticides for soil insect control.

Products containing imidacloprid should be applied when young stages of white grubs are present in the upper soil layer - around August 1 for the masked chafers; during July for young May/June beetle grubs. Treating older grubs is usually ineffective.

Use of appropriate parasitic nematodes can be a very effective biological control for white grubs. (See fact sheet 5.573, [Insect Parasitic Nematodes](#)).

After reading the CSU fact sheets mentioned, I read an article posted by Ohio State University Extension. According to Parwinder Grewal, an entomologist with the Ohio Agricultural Research and Development Center, some (not all) insecticides are harmless to nematodes and even increase the effectiveness of nematodes to control white grubs. Together with colleagues from Rutgers University and the University of California at Davis, Grewal discovered that imidacloprid and the nematodes *Heterorhabditis bacteriophora* and *Steinernema glaseri* interact synergistically against white grubs. The article even suggests applying a super-killer mixture of imidacloprid and nematodes.

To assist recovery in damaged areas, provide additional water to help grass tolerate root loss and apply fertilizers (not high nitrogen) to promote root regrowth. Adjust mower height to 2 1/2 to 3 inches. After grubs move into the soil in fall, bluegrass often will repair much of the earlier damage. The most important means of limiting grub injury is to grow a vigorous lawn. Healthy, well-watered lawns can tolerate grub feeding more easily than weakly growing lawns. 📌



Tenlined June beetle larva in the soil. The body is cream colored with a brown head. Photo: Whitney Cranshaw, Colorado State University, bugwood.org

Japanese Beetles by Linda McMulkin

We have a new insect pest in our area, the Japanese beetle (*Popillia japonica*), which was confirmed in Pueblo last year. This pest can cause damage in the landscape as larvae and as adults. It also impacts homeowners due to the quarantine that was implemented by the Colorado Department of Agriculture in January, 2010.

The adult beetles are about 1/2 inch long with a metallic green body, copper-colored wings, and five tufts of hair on each side of the abdomen. The adults feed on a wide range of plants, including grapes, hollyhocks, lindens, mountain ash, Lombardy poplar, and a wide range of fruit and ornamental plants in the Rose family. The larvae, a white grub, feed on the roots of turf and ornamental grasses.

Quarantines are designed to limit the spread of insect and disease problems from one area to another. Japanese beetles have been confirmed in thirty-five states, primarily east of Colorado, and are moved primarily in nursery stock and soil. The current regulations require that businesses who transport plant materials into, out of, or within Colorado certify that their products are free of Japanese beetle. 📌



Don't Move Firewood by Christi Lightcap, Colorado Department of Agriculture

Many people will be packing up the tent and sleeping bags to enjoy all of Colorado's great camping locations this summer, but the Colorado Department of Agriculture (CDA) reminds outdoor enthusiasts to leave their firewood at home.

"Moving firewood across the state can contribute to tree mortality," said John Kaltenbach, CDA's cooperative agricultural pest survey coordinator. "Insects and diseases can be transported with the wood and can hurt or even kill Colorado's forests."



Native and non-native insects and diseases can have devastating effects on Colorado's trees:

The mountain pine beetle has impacted almost 3 million acres of forests in Colorado. This pest has established populations in mountain areas, so people are encouraged to not bring firewood down from the mountains, to keep the beetle from spreading to urban areas.

The emerald ash borer is a beetle that has killed over 50 million ash trees in the Midwest. At this time, it has not been discovered in Colorado but CDA is working in cooperation with other state and federal agencies to prevent the spread of this beetle to Colorado. Traps are set annually across the state as a tool for early detection.

Thousand Cankers, a disease carried by the walnut twig beetle, has caused the death of black walnut trees in Boulder and the Denver Metro area. You can help prevent the spread of the walnut twig beetle into areas where it does not yet occur. The primary method by which the beetle reaches new locations is the movement of infested wood including logs, firewood, lumber and even wood chips.

One easy tip to help protect Colorado's forests is to *Buy It Where You Burn It*. Campers are urged to buy their firewood at their destination, thus preventing the spread of any insects or diseases that can be found in or on the wood.

The Cooperative Agricultural Pest Survey program is involved in early detection of exotic pests that threaten Colorado's agriculture and environment. Activities include annual surveys for targeted pests, outreach, and education.

Editor's note: Christi Lightcap can be reached at 303-239-4190 or Christi.lightcap@ag.state.co.us. 



2010 Pueblo County Building Farmers and Ranchers Program

Building Capacity - Building Community

Applications Due October 11, 2010

Classes Every Monday Beginning

October 25, 2010 to December 13, 2010

All Classes held at Pueblo County Extension Office,
701 Court St., Suite C

For more information or questions call

Emily Lockard (719) 583-6566

Check the Pueblo County Website for more info

<http://pueblocolostate.edu>

CSU Extension/Pueblo County Yard and Garden Classes

September 14, 2010

Prepare for Spring in the Fall

- ◆ Improving the soil
- ◆ Fall clean up
- ◆ Lawn fertilization
- ◆ Winter water

October 5, 2010

How Green is Your Compost?

- ◆ Backyard composting
- ◆ Worm composting
- ◆ Environmental impacts



GOING TO SEED

SUMMER REVIVAL TOUR 2010

Seeds Trust owner Bill McDorman has been inspiring and teaching gardeners to save seeds for over 30 years. He is the founder of High Altitude Gardens and cofounder of Garden City Seeds. Eloquent, articulate and passionate beyond belief, Bill brings both experience and a new perspective to the gardening world.

With a degree in philosophy and years spent getting his hands dirty, Bill frames his lectures around the hard-hitting questions that companies like Seeds Trust are asked.

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IS IT HARD TO SAVE TOMATO SEEDS?

“ Bill McDorman is one of the greats of the seed-saving, seed-selling world. ”
 --Mike McGrath
Host of Public Radio's You Bet Your Garden, former Editor in Chief of Organic Gardening magazine

Thursday, August 5th
 7:00 p.m. - 9:00 p.m.
 200 S. Main Street, Pueblo
 Municipal Justice Ctr., Community Rm.
 Seeds and Seed-Saving Book Available

Meet & Greet with Bill McDorman at 6pm!

\$10 Paid in Advance Only by August 4th
 Send payments to:
 CSU Extension/Seed Saving
 701 Court Street, Suite C, Pueblo
 719.583.6566,
<http://pueblo.colostate.edu>

 **Seeds Trust**
 Contact: Belle Starr, 928.649.3315, 928.300.7989
belle@seedsave.org www.seedstrust.com

 Co sponsored by Pueblo County & CSU Extension

Garden Tip: When to Irrigate Your Garden

Does it matter what time of day you irrigate your landscape or vegetable garden? A recent study, reported in the online version of *Horticulture* magazine (full article in *New Phytologist*) indicates that our grandmothers were partly correct when they advised us that water droplets focus sunlight like a magnifying glass, burning plant tissues. Apparently, hairy leaf plants are more likely than smooth leaf plants to be damaged, mostly because hair holds the water droplets in place longer. So, keep irrigating in the morning or evening and give the leaves a mid-day break.

Subscribe to this newsletter by contacting Carolyn at 583-6574

For the most up-to-date gardening information in Colorado, visit CSUE at www.ext.colostate.edu

