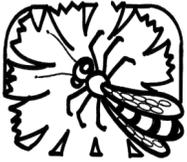


From the Ground Up

A Gardening and Native Plants Quarterly

Colorado State University Extension-Pueblo County

701 Court Street • Suite C • Pueblo, CO 81003 • 719-583-6566 •



INTERESTING INSECTS

THE JAPANESE HAVE ATTACKED!

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

We are under attack! No, this is not a repeat of Pearl Harbor, in this case it is the Japanese beetles, *Popillia japonica*, that have invaded. They were introduced into New Jersey in 1913 from Asia. Since then, they have been slowly spreading westward across the country. A few years back, they arrived here in Pueblo. I know the beetles have been found on the Northside, Aberdeen, and Mesa Junction. They seem to be heading south and east. It won’t be long before they are in the agricultural crops in the eastern part of Pueblo County and in your gardens- if they are not already there. So, organize your home guard and prepare for the enemy.

What does the enemy look like? The Japanese beetle is an oval scarab-like beetle that is generally metallic green with copper colored elytra (hard wing covers). It has patches of white hairs on its sides. The adult beetles are around ½ inch in length. The insect’s antennae are clubbed at the end and may spread out like a fan.

Japanese beetles are beautiful, but deadly. The adults are not picky eaters, they feed on over 300 different species of plants! Rose petals are a particular favorite as are Virginia creeper, American linden, elm and ash trees, horse chestnut, raspberry, grape, crabapple, apple, Norway maple, and green beans. They can be very destructive, skeletonizing leaves and eating flower buds and petals. Japanese beetles will often feed in groups, being attracted to the floral smells, and pheromones they produce themselves.

It is important to know the life cycle of the Japanese beetle, because methods of control vary depending on the stage of development. Female beetles lay white eggs in small groups 2-4 inches deep in moist soil. The female beetle will lay as many as 40-60 eggs over her short life span of 4-6 weeks! Most eggs are laid by early August, but they can continue to lay eggs well into September. The eggs hatch into larvae that are C-shaped grayish white grubs with brown heads. They grow to ¾ inch in length by early September. Japanese beetle grubs are much smaller than other white grubs. (For more information on distinguishing the white grubs, please see the CSU Extension website, Japanese Beetle Fact Sheet No. 5.601 and No. 5.516 on White Grubs.) Grubs will feed on the roots of grass until the



Close up of a Japanese Beetle

Continued on page 2

INDEX

Interesting Insects.....	1-3	Microgreens	8
Grasshoppers	3-4	Digging Deeper.....	9-10
Wicked Weeds.....	5-6	Know Your Natives ..	10-11
Perennial People	6-7	Garden Walks.....	11-12
Rain Barrel Law.....	7-8		



soil temperature drops to 60 degrees Fahrenheit. Then the mature grubs will overwinter deep in the soil below the frost line. The following spring, as the soil warms up, the grubs will move upwards in the soil to feed on the roots of the grass and other nearby plants for 4-6 weeks. They will be found in the top one to three feet of soil. The grub then forms an earthen cell to pupate in for a couple of weeks. After metamorphosis, the adult beetles emerge from the soil in early June. The adult beetles are most numerous from late June through early August, however, some can survive into September. In colder regions, the life cycle of the Japanese beetle will extend to 2 years, otherwise most Japanese beetles life cycle occurs within 1 year.

Control of the Japanese beetle depends on the life stage, and season, and other factors such as soil temperature. During the early period of development (egg and early larvae stages) the Japanese beetle can be killed by allowing the soils to temporarily dry out. Limit watering of your lawn late-June through July, and you will kill many Japanese beetle eggs and larvae in your soil. Unfortunately, it will future stress your lawn which is already under attack.

The grubs may be controlled by a bacterial disease known as Milky Disease. You treat by dusting the soil with milky spore (*Bacillus popilliae*). The effectiveness of this type of control is varied. Make sure to read the directions and follow them closely. If you treat too soon, the grubs may be too deep to be effected. If you treat to late, the adult beetles may have already departed. Keep in mind that the directions on the box are general for most of the United States. Because of our warm temperatures, the grubs may move up in the soil earlier than anticipated by the instructions. If you suspect grubs, you can always dig into the soil to see if you have grubs and if so, how deep they are before you treat. In his book, [The Ultimate Guide to Backyard Bugs: Garden Insects of North America](#), pages 34-35, Whitney Cranshaw, a noted entomologist in Colorado, states, "Optimal timing for larval treatments is just after the majority of eggs have been laid, which typically occurs in early August." Also know that to be effective, large areas must be treated or re-infestation will likely occur.



Japanese Beetles skeletonizing leaves

There are some control methods to chose from. You can always try handpicking the beetles off of your plants, especially in the early morning. There are a few biological controls for Japanese beetles. Parasitic wasps and flies that predate the Japanese beetle are the fall tiphia (*Tiphia popiliavora*), spring tiphia wasp (*Tiphia vernalis*) and the tachinid flies (*Hyperecteina aldrichi* and *Prosema siberita*). Nematodes in the genus *Heterorhabditis* can be effective for grub control.

Some insecticide are effective on Japanese beetles. For specific information on insecticide controls for Japanese beetles and larvae, please see Fact sheet 5.601. Please note that many of the insecticides also can kill pollinating insects, and maybe illegal to use if they can kill honey bees. Read the fact sheet and any information on the product itself carefully, and act wisely.

Bait traps are effective in catching adult beetles but read on before you decide to use one. Last summer I found one Japanese beetle in The McClelland School Outdoor Classroom Garden. I debated what to do having only seen one beetle. If I only had one, I didn't want to send out an invitation for lunch for others. Eventually I decided to put out a bait trap to see what would happen. I did not even have the trap out of my car, when I was literally being dive bombed by a Japanese beetle. When I opened the lure cartridge, I could hardly put it in the trap because three additional Japanese beetles were trying to get at the bait. The next morning when I checked the trap and there was around a hundred Japanese beetles; and all told I trapped and killed around 500 Japanese beetles! Whitney Cranshaw, writes, "Although traps can capture Japanese beetles, they are ineffective for control of plant damage as they usually draw more beetles into the vicinity." Surely, I found this to be true. *Continued on page 3*



Whitney also writes, “Unfortunately use of the traps has no effect on the incidence of adult beetles in the vicinity. Instead, increased problems with Japanese beetles around traps are reported since many beetles are drawn into the area of the floral lure but are not trapped.” Obviously I did not read Whitney’s book or the fact sheet beforehand. I don’t know how to advise you if you face this same dilemma. I placed the trap as far away from the school garden in a place barren of other vegetation, hoping to mitigate the open invitation to other Japanese beetles. I can tell you after being a little grossed out, it felt good knowing that the 500 or so beetles I trapped would no longer be a menace to plants everywhere. I also figure the beetles were already close enough to smell the lure and thus, were a threat to the garden. I did not see any other Japanese beetles in the school’s outdoor classroom garden, but I was not there on a daily basis as school was out for summer. I look forward to doing battle with these deadly beauties this coming growing season.

All I can say is we are under attack so stay alert, and take action when you see these beautiful but deadly insects 🦋

Garden Tip: “Bee” Kind

When using insecticides, please remember to “bee” kind to our native pollinators, who are also insects!



Grasshopper Control By Tom Laca, CSU Extension-Pueblo County Agriculture and Natural Resources Agent

It is looking to be the year of the grasshopper for many of us here in Pueblo County. It would seem that most parts of the county are experiencing higher than usual grasshopper populations. So, the question is what can we do to control this population explosion of garden destroying insects?

I hate to be the bearer of bad news but I doubt we will ever fully control grasshoppers. They are one of the most difficult insects to manage and their migratory behavior can bring in more following the eradication of your current problem. As we eliminate the first assault, there is another wave waiting to take their place in your yard.

Cultural Control:

One way to help keep them from attacking is to provide a habitat and food source away from your garden and ornamental plants. A green border of tall, lush grass will help to keep the grasshoppers occupied and away from your plants. The problem here lies in the fact that when that does dry out or is mowed guess where they are headed next. Using screens or other covers to protect plants can be beneficial as well, but remember grasshoppers can and will chew through most of these materials.



Two striped Grasshopper

Natural Control:

Natural controls for grasshoppers include predators, such as birds, nematodes, mites, and disease. One grasshopper parasite has been made available commercially for organic control of grasshoppers. *Nosema Locustae* is a protozoa that infects the digestive system of grasshoppers leading to a suppressed appetite and eventually death. Evidence of the effectiveness of control using this will take several weeks. It is available as a bran bait that is placed in areas where grasshoppers feed. The grasshopper must consume the bait to become infected and not all species are effected the same. Adult grasshoppers are not as susceptible to *Nosema* as nymphs, thus, this product is best utilized when grasshoppers first hatch. This bait is also perishable and should be kept refrigerated and expiration dates checked. One advantage of the *Nosema locustae* is that it only targets grasshoppers and does not harm other insects. It is safe for pollinators and its use is allowed in organic production. *Continued on page 4*



Continued from page 3

Chemical Control:

There are several chemicals available labeled for use in grasshopper control. Chemical control can be done through liquid sprays or applied on baits. In general, sprays are more effective than baits but baits are safer for other non-target insects. Baits are formulated by mixing the insecticide with a carrier, such as bran, and kill the insects as they feed on the bait. The grasshopper must eat the bait for it to be effective and baits must be reapplied after a rain or heavy dew.

Carbaryl is a common insecticide used for grasshopper control. It is available as a spray, bait, or dust and is usually safe for use on fruits and vegetables. Acephate will work systemically in the plant and persist longer than other chemicals in the environment. Because of this it is not to be used on edible crops. Malathion is another broad spectrum insecticide that is effective on grasshoppers.

As always be sure to read and follow label directions for any and all chemicals you are using. For more information on control measures and strategies, check out CSU Extension fact sheet #5.536, Grasshopper Control in Gardens and Small Acreages. 



Grasshopper damage on Irises

CSU Extension/Pueblo County

Pollination Maker Workshop Series

Session 1: Going Batty

- What do bats eat?
- Where do they sleep?
- Why are they important?

Register for this class to learn the answers while building a bat box you can take home!

Saturday, August 13, 2016
 9:00 am – 1:00 pm
 Pueblo Zoo, Classroom, 3455 Nuckolls Ave.
 \$35 per person, \$5 for each additional family member (bat box materials included)
 Limit 30 people/20 projects
 Registration deadline: August 5, 2016

Colorado State University Extension
Pueblo Zoo
 CSU Extension/Pueblo County
 701 Grant Street, Suite C
 Pueblo, CO 81008
 719.248.4556
 Email: Val.donlon@pueblo.co.us
 Website: Pueblo.co.us/extension

- Families and children age 8 and up. All children under 18 must be accompanied by a supervising adult.
- Registration/Payment options: cash, check (payable to Extension Program Fund) or Eventbrite using your credit or debit card.
- Payment due at time of registration.

Extension programs are available to all without discrimination. If you have a disability for which you seek an accommodation, please notify CSU Extension at 719-580-6895 at least five (5) business days in advance of the event. Colorado State University Extension, U.S. Department of Agriculture and Colorado counties cooperating.

LISA Colorado State University EXTENSION

Lawn Irrigation Self Audit (LISA)

A Smarter Way to Irrigate Your Lawn 2016

How can LISA help you?

LISA has been designed by a statewide team of CSU Horticulture, Atmospheric Science, and Water Resource experts with the goals of:

- Maximizing wise use of urban water
- Improving lawn health
- Less time and money invested in lawn maintenance

"Looking forward to having this resource in our county."
— Evelyn User

Where can I check out a LISA kit?

LISA is a small kit of tools available from your local Extension office. If Colorado is to accommodate another 3 million people over the next 25 years – most of them in towns and cities – the demand for urban water conservation and the cost to water a lawn can only increase. A diagnostic kit like LISA allows for a quick and effective assessment of lawn irrigation and the means to optimize it. The optimal operation of a lawn sprinkler system eliminates unnecessary watering that leads to time consuming weed problems and inflated water bills.

"LISA will provide us with an educational tool, not only for homeowners, but for kids as well."
— Environmental Educator

Visit our Website
www.lisa-audit.colostate.edu

LISA Advantages

- Decrease runoff to storm drains
- Improve lawn health
- Eliminate unnecessary over-watering
- Possibly save money
- Improve understanding of lawn irrigation

A **B**
 A homeowner performing a LISA audit, measuring specimens (A) and a catch can test (B)





THE GOOD THE BAD THAT #@## BINDWEED

By Greg Nolan, Native Plant Master, 2010

Is there anything better than mingling with Pueblo natives? To know your natives and their families is to love them. It is easy to have a love/hate relationship with the Convolvulaceae family. I love bush morning glories. In Pueblo I have seen beautiful morning-glory bushes growing in vacant lots and on the sides of the road. However, for some reason I associate them more with farm land and picture them in my mind lavishing the day away in the corner of forgotten quarter sections, having a love affair with a barbed wire fence and a couple old fence posts. On the other hand, I am not so fond of another member of the Convolvulaceae family, bindweed, which is a noxious weed in Colorado. Bindweed will not be tamed, contained, or otherwise banished from the garden. For some reason I associate it with chemical warfare, weapons of mass destruction, flame throwers, and trench warfare.



Bindweed climbing a fence

Bindweed was brought to America by Europeans more than two centuries ago. Considered a noxious weed in Colorado, it is not considered a nuisance in Europe as there it has a nemesis, gall mites, which keep it in check. The mites feed on the plant's tip slowly killing it, then they winter over in the soil where they feed on its roots causing more damage. Gall mites can kill and eradicate bindweed. Recently, gall mites have been used in Colorado in an effort to control bindweed. Although I did not research this, gall mites may be available for free by the Department of Agriculture through the State Insectary in Palisade. They may also have a moth available that feeds on the leaves. I have found that a herbicide from a local ranch supply does a pretty good job of eradicating bindweed, as well as every other living thing in my yard.

Bush morning glory is thought to be a native and Native Americans have a long history of using the plant and found it particularly useful for gastrointestinal ailments. The bush morning glory has one of the most extensive root systems of any forb penetrating the soil beyond a depth of four feet and out as far as 25 feet. The tap root can be several inches across up to two feet. It is a good xeric plant and attracts pollinators such as butterflies, moths, bees, and hummingbirds.

Bindweed is easily recognized as a creeping plant that extends its reach via a vine. It has small white to pinkish flowers that are about one to one and half inches across, five sepals and five petals generally fused to form a star shaped bell, funnel, or cornucopia.

Bush morning glory is a more erect plant and less a creeper compared to bindweed. It looks like a small bush, is herbaceous, and grows up to four feet tall. The leaves, also heart shaped are one inch to the size of your hand. There is generally one to three flowers on a cyme. The colors range from pink to purple red. The reason I associate them more with farm land is there range is generally below 5400 feet, that puts Pueblo at the edge of their range and Colorado's eastern plains squarely in the middle of it.

The problem with bindweed is it is so very hard to control or eradicate. If it is dug out, the left over roots make several more plants creating an even bigger problem. It seems to like weed killer. If it is covered, it seems to just lay in wait. If it is burned out, the roots sprout a new plant. Its seed are viable up to 60 years. When left to its own devices, it quickly engulfs other plants as it winds itself around and through them. Then a person is left with a decision to kill a valued plant in a feeble effort to get rid of the bindweed. *Continued on page 6*



Unlike bindweed, bush morning glory is desirable for xeric gardeners. Bush morning glory makes a hearty and long lived plant in a xeric garden. Because of the extensive root system it will need little to no additional water beyond normal rainfall, will live up to 50 years and is fairly well contained.

Some popular non-natives in the family is Creeping Jenny, also called Moneywort, is popular with many gardeners. Unlike bindweed, Creeping Jenny does not wind and bind, it creeps and cascades and looks like a string of green pennies. Many gardeners like it because it looks awesome as it cascades over a pot or stone wall and fills in rock gardens. Cooks everywhere appreciate yams and sweet potatoes, also members of the family.

Hiking, biking and looking for flowers and birds in the pinon junipers of Pueblo County is one of the best kept secrets in Colorado. With our long beautiful springs and falls it always does my heart good to be hiking in a protected canon and see a flower blooming in late November or in February. The best of Pueblo is just a short hike away. Get out there and mingle with the natives. 🌿

Garden tip: Cool season turf grasses such as Kentucky blue and fescue often slow down during hot weather. Maintain your lawn with proper irrigation and mowing and watch for increased signs of stress. Brown spots in the lawn may be a sign of poor irrigation coverage, disease, insects, or even dog urine. For more information on lawn care, see the CSU Turfgrass website at <http://csuturf.colostate.edu/Pages/homelawncare.htm>



PERENNIAL PEOPLE

RICH RHOADES

By Marge Vorndam, Colorado Master Gardener, 1997, Native Plant Master, 2007

“Our existence depends on six inches of topsoil and the fact that it rains.”

– Quote attributed to a 1500 BC Sanskrit document or 2500 years ago to Confucius (per various sources)

Rich Rhoades has dedicated his professional life to the health of our soils. He realizes the essence of the above quote, and has pursued soil and rangeland environmental health throughout his career. With his degree from CSU in Range and Forest Management and a minor degree in Soils, Rhoades has served the Natural Resources Conservation Service (NRCS) for over 40 years in Colorado. Now, recently retired, he is looking forward to consulting on land re-vegetation projects, which will carry his personal mission forward into the future.

At an early age, Rhoades was inspired to care for the environment by his grandfather, who ranched in Kit Carson. His grandfather instilled in him an appreciation of the short grass prairie and the need for proper management of the grasslands to perpetuate their traditional role in the Western landscape. As NRCS District Conservationist, Rhoades was able to do just that – assisting rangeland landowners to implement conservation practices to decrease soil erosion and improve conservation of water on their lands. In addition, Rhoades served in the Soil and Water Conservation Society as Colorado Past President and Fellow of the Society, and as Chairman of the 1996 International Meeting. *Continued on page 7*



Rich Rhoades

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



Rhoades' projects of personal note included the 1985 Farm Bill Conservation Reserve Program which enabled grass seeding and re-vegetation of many damaged Colorado acres to reestablish prairie, the Fountain Creek Flooding Rehabilitation Program in 1999, and the Mason Gulch Fire land rehabilitation in 2005. He has enjoyed the opportunity to interact with new rural ranchette landowners, educating them about resource management and about just how fragile eastern Colorado ecosystems are. His time is now also invested, along with the irrigators, and the City and County of Pueblo, in seeing Bessemer Ditch Water preserved for agricultural irrigation, rather than converted to urban use.

Much of Rhoades' expertise has shone through in his teaching experiences—he has conducted innumerable grassland and id workshops and rangeland tours, including programs for CSU Extension. Additionally, the NRCS, under his tutelage, has trained new conservationists on the diversity of land uses appropriate to preservation of the Colorado ecosystem.

His “take” on the environmental issue of our time? – Invasive species – nationally AND internationally. Movement of plants and animals, both intentionally and unintentionally, is changing the face of world ecosystems.

Why such interest in grasses and their preservation? Rhoades says, “They provide a diversity of shape, sizes and adaptations. They are economically important.” In addition, he adds that “Grass communities are dynamic—they have a corporate life which is responsive to climate change and grazing pressures from year to year.” Favorite grasses include Indian ricegrass (*Achnatherum hymenoides*) and the Colorado State Grass, Blue grama (*Bouteloua gracilis*), due to their attractiveness and economic importance to our region.

When not concentrating on preservation of the short-grass prairie environment, one can find Rhoades on a golf course, mountain biking, or singing in his favorite barbershop quartet, “Unexpected Pleasure”. 

Colorado's New Rainwater Law By Blake Osborn, CSU Extension Regional Water Resources Specialist

A new law will go into effect in August, 2016 that will make the collection and use of rainwater in Colorado legal. With this new law, homeowners will be able to collect and store up to 110 gallons of rain water in two 55-gallon containers. The legislative bill allowing rain water collection did not slide through easily. On the contrary, the bill was tabled at the end of the 2015 legislative session over concerns that it had the possibility of injuring senior water rights users, something forbidden and completely against the doctrine of prior appropriation. However, a study conducted by CSU led some campus faculty to testify in the halls of the legislatures. This study found rain barrels would have a negligible effect on the prior appropriation system for a number of reasons. This year, legislators were able to strike a compromise that will allow homeowners to collect and store rainwater.



An example of a rain barrel

The compromises come in the form of conditions and limits. Rain barrels can only be installed on single and multi-family households with four or fewer units. The water can only be collected from the rooftop of the residential unit, or dwelling, and must be limited to 2 collection vessels that do not exceed a combined capacity of 110 gallons. The water *must* be used for outdoor purposes only, which includes watering a lawn or garden. If you're worried about the effects of breeding mosquitoes, the language of House Bill 16-1005 specifically addresses this concern. *Continued on page 8*

If you need any special accommodation(s) to participate in any Colorado State University Extension event, please contact CSU Extension-Pueblo County at 719-583-6566. Your request must be submitted at least five (5) business days in advance of the event. Colorado State University, U.S. Department of Agriculture and Pueblo County cooperating. Extension programs are available to all without discrimination.



Under the law, the containers must have a sealable lid. But as we all know, tiny mosquitoes can make their way into otherwise isolated spaces. For this reason, the authors of CSU fact sheet #6.707 suggest completely emptying the rain barrels at least once a month.

The authors of the fact sheet, and House Bill 16-1005 itself, are clear in stating that the collection of rainwater does not, in any way, constitute a water right. Therefore, the use of the rain barrels can be controlled by the State of Colorado and the State Engineer has the authority to curtail the collection of rainwater if senior water rights are not satisfied. Under the new law, homeowners will not need to obtain a permit to collect rain water from their downspouts. However, homeowners must be aware of the limitations to rainwater harvesting and how to properly store the water to reduce mosquitoes and ensure water quality. Please see page 12 of this newsletter for information on an upcoming rain barrel workshop being offered in Pueblo County. 📄

Microgreens By Maureen Van Ness, Colorado Master Gardener, 2015

Would you like to pick and eat fresh salad ingredients without going out in the summer heat? Are your spring-grown lettuces and spinach threatening to bolt? Perhaps it is time to think of microgreens.

Microgreens are grown for their condensed powerhouse of nutrients, and their quick harvest. I have peas and a mild seed mix (beet, cabbage, kohlrabi, Pak Choi and chard) growing. The peas are in an inexpensive cake pan, the mix in an old plastic storage container. Nothing fancy. You can buy a microgreens tray that has a clear lid and a wood box the growing tray sits in – it is pretty, but not necessary. Because they won't be producing a tall plant, a shallow container is perfect. Mine sit in a sunny window that gets lots of bright afternoon light. A grow light would be ideal, but (honestly), I didn't want to set that up yet and wanted to see how well they would grow in window light. Success!

Microgreen peas are clipped at the base when they are three to four inches tall, and can be added to salads, pesto, topping on a sandwich, or stir fried. They taste like edible pea pods and are packed with “high amounts of A, C, E, K and B-6, along with fiber... and antioxidants.” (from the seed packet, Botanical Interests) Have you cooked with, or eaten sprouts before? Microgreens are a similar use, but are grown in dirt instead of sprouted in water, then clipped at the base to harvest.

The Microgreen Mild Mix is recommended for soups, salads, sandwiches and cracker toppings. The Mild Mix can be clipped and harvested after the true leaves appear, an inch or two tall.

Best of all, they are quick and easy. Plant, and harvest in ten days, or even less if you can't wait. This is a great project for kids, as the waiting time is much shorter from planting to eating. After harvest, I dump the layer of soil and roots into the compost bin, but you could re-use the soil, I suppose. My containers do not have drainage holes – that would be preferable, but I didn't want a mess of potential drips in the guest room. Soil should be kept moist, but not soggy, so I am careful not to over water.

For the seeds, you could use regular seeds of peas, or whatever mix you choose, but several companies have refined the mixes and perfected the varieties that do best for microgreens:

Botanical Interests has a good variety and sells the growing tray. Johnny's Seeds offers seventy-six varieties! In addition to the ones I use, there are spicy mixes, sunflower, cress, herbs, radish, mustard, and more. Does your culinary imagination go wild?

Microgreens can be grown year round, a way to eat fresh and local all year. Have you eaten your microgreens today? 📄



Microgreens, photos courtesy of M. Van Ness





NAVIGATING THE CSU EXTENSION WEBSITE

By Sherie Caffey, Horticulture Coordinator, CSU Extension-Pueblo County

How many times a day do you think to yourself, "I should Google that...?" With the availability of the internet these days, it seems like you can find information on just about any topic in less than a second. There is a bit of a conundrum with general internet searches however, and that is that most search results are from blogs, magazines, forums, and open content encyclopedias that are not monitored for accuracy. Wouldn't it be great to have a website that only provided proven, research-based information dealing with a variety of subject areas? If your answer is yes, then you are in luck, the CSU Extension website does just that!

The CSU Extension website can help you help yourself when it comes to yard and garden, agriculture, nutrition and health, natural resources, insects, and much more. All of the information provided by CSU Extension is researched based, so you can be confident that you are getting high quality facts. Here are some tips on navigating the CSU Extension website, so you can find the resources you need when you need them.

The web address to the CSU Extension home site is extension.colostate.edu, this is where we will begin our tour of knowledge. Near the top of the page you will see some tabs that run horizontally, one of them is called Topic Areas. Hovering over this tab with your mouse pointer will show you all of the different subject areas you can find more information on. Clicking on one of the topic areas will take you to a page where you can find publications, hot topics, programs, newsletters, and other useful website suggestions.

Another one of the tabs near the top of the page is called Publications. This is where you will go to find a list of CSU published fact sheets. The fact sheets are terrific resources, and there are sheets on almost anything you can imagine. Clicking the Publications tab from the home page will bring you to the same place as if you first go to the Topic Areas tab, choose an area, and then click the Publications tab from there.

The Ask an Expert tab at the top of the home page is also a great tool to be aware of. If you are looking for information on a specific question, and you are not finding it in any of the fact sheets, you can use this feature to ask your question to an Extension Agent, and get a customized response.

Seeing as how I am the Horticulture Coordinator in Pueblo County, the Yard and Garden topic area is of special interest to me. The list of publications under the Yard and Garden > Publications tab are great of course, but I prefer to browse the Publications through the Colorado Master Gardener site (cmg.colostate.edu/pubs.html). The reason I prefer this site is that it not only gives you links to the CSU fact sheets, but it also includes *Planttalk* scripts, and *CMG GardenNotes*, all together and conveniently organized by topic. To get to this page from the home page, click on Yard and Garden under the Topic Areas tab on the home page, and then choose Programs. From there, click on the link that says Colorado Master Gardener program. On the left you will see a link that says On-Line Yard and Garden Publications. I use this list of publications every day. There is virtually nothing yard and garden related that you can't find information on here.

You also may want to be familiar with the Pueblo County Extension website, which is located at pueblo.colostate.edu. Here you can find information on what is going on here in Pueblo County specifically. The program areas are listed along the top of the page. Clicking on a program area will bring you to that program's page. On the left you will see links to all of the different projects and programs going on, as well as links to fact sheets and other publications. You can also sign up to be on the mailing lists of the different program areas, this will either be on the right side or at the bottom of the program area's page. Most of our program areas have Facebook pages as well, which you can get to through the Pueblo County Extension website. Liking our various Facebook pages is a great way to stay connected with your local County Extension Office.

So, next time you need some real good information real fast, visit the CSU Extension website and save yourself the hassle of sorting through cyber junk! 



Garden tip: Fertilizing Plants in Containers

Container grown plants need regular fertilization to offset the nutrients lost to leaching from frequent irrigation. Time release fertilizers mixed into the soil at planting time are often insufficient for containers with large numbers of plants. Supplement with water soluble products containing all 3 macronutrients (nitrogen-phosphorus-potassium) can be used full strength every week or two, or dilute mixtures can be used at every watering.



KNOW YOUR NATIVES

COMMON MILKWEED-BEAUTY OR BEAST?

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

Common milkweed (*Asclepias syriaca*) is an erect perennial that reproduces by seeds, underground stems, and roots. This plant, that can be deadly to all classes of livestock, is the only source of nutrition for the Monarch Butterfly larva. Monarch and Queen Butterflies utilize milkweeds, including western whorled milkweed as larval host plants. Recent publicity focusing on conservation of these beautiful insects has encouraged planting of milkweeds as a food source for migrating butterflies. Caution should be taken when planting potentially poisonous weeds too close to pastures, hay fields, or other sites where it can cause problems from ingestion by animals. This usually occurs when animals consume the plant because of lack of other forage, this is termed over grazing.

Common milkweed seedlings are spindly and fragile. The stem below the seed leaves (hypocotyl) is light green and smooth. Seed leaves (cotyledons) are oval, about ½ inch (12 mm) long, dull green, and have rounded tips. The true leaves are oblong, dark waxy green, and have pointed tips and a prominent white midvein. When broken all parts of the seedlings exude a milky sap. The sticky "milk" that oozes from the plant may be irritating to the skin.

Common milkweed blooms in early summer, its flowers arranged in nearly spherical clusters (umbels) at the tip of the stem and in the axils of the upper leaves. Clusters are 2 to 4 inches (5 to 10 cm) in diameter, usually a soft lavender-pink color, but sometimes various shades of yellow or green. Individual flowers are about ½ inch long. Each has a crown of five hooded petals on top and five sepals below that curve back along the flower stalk.

Even though the flowers are perfect (i.e., they have male and female parts), they must be cross-pollinated by insects for seeds to form. The sweet nectar attracts bees, wasps and other flying insects, which enter the crown of the flower and walk along the petals toward the source of food. Their feet slip in to a narrow opening between the petals where specialized pollen containers called pollinia are hidden.

According to Colorado State University, the most common milkweed for our area is the Western Whorled Milkweed. However, William A. Weber in Colorado Flora (Eastern Slope), only mentions *A. speciosa* Torrey (showy), and *A. latifolia* (Torrey) Rafinesque most common in the Arkansas River Drainage on clay soils. The flowers on *A. speciosa* Torrey (showy) are pink to purple, and greenish white on the *A. latifolia* (Torrey) Rafinesque.

It is interesting to note that old names for common milkweed include wild cotton, Virginia silk, and silkweed. These names refer to the uses people have found for the fluffy contents of the seed pods. The early settlers stuffed mattresses and pillows with it, and during World Wars I and II the downy filling went into life preservers and flight jackets. *Continued on page 11*



Butterfly on Butterfly weed, courtesy of NWF



Intensifying agriculture, development of rural lands and the use of mowing and herbicides to control vegetation have all reduced the abundance of naturally occurring milkweeds. This has resulted in a substantial loss of critical resources available for Monarchs throughout much of the eastern United States.



Common Milkweed

As a result, the North American Monarch Conservation Plan recommends planting native milkweed species to help restore breeding habitat. Sites of any size or location can help, from urban parks, schools and home gardens to commercial developments, municipalities and rural roadsides.

In addition to providing a food source for monarch larvae, the showy flowers of milkweeds offer abundant, high quality nectar to many pollinators including bees, butterflies and hummingbirds. This attractive plant can also add interest and beauty to any landscape. Milkweeds contain alkaloids and cardenolides, complex chemicals that make the plants unpalatable to most animals. Monarch butterflies also become unpalatable due to consumption of the Milkweed plant by the larva. The chemicals carry over in to the butterfly adult form and feeders have associated the “bad taste” with both the larval and adult form.

While native milkweeds are crucial for Monarchs, commercial sources of plants and seeds remain limited. The Florida Museum of Natural History, the Xerces Society for Invertebrate Conservation, Butterfly Conservation Initiative and the Monarch Joint Venture are working to help raise awareness and produce reliable sources of native milkweed. Inventory is expected to increase steadily over the next several years, to meet demand for home gardens and habitat restoration projects across the region. 🌱



GARDEN WALKS

PARADISE MEMORIAL GARDEN

By Edith Brideau, Colorado Master Gardener, 2007-2014

Hundreds of local residents recently had an opportunity to visit the Paradise Memorial Garden during the Pueblo West Xeriscape Tour. This charming garden is located at the corner of Spaulding and Conquistador, adjacent to the Ecumenical Church of Pueblo West.

The Garden is maintained by Shirley Stanell and her team of volunteers, who are charmingly known as the Gardenin’ Angels. I found Shirley in the garden on July 1, helping a staff member diagnose and repair the irrigation system. Although Shirley describes herself as “seasoned,” she remains a dynamo and a very effective garden ambassador. One of the volunteers confided to me that Shirley can be found in the garden nearly every day.

When I first entered the garden from the public lot, I noticed dozens of books in an unlocked kiosk. The garden belongs to an organization called Little Free Library. Visitors are invited to “Take a Book – Return a Book.” This is an especially nice amenity because the garden is a perfect place to sit quietly and read.

First-time visitors to the garden, especially Pueblo West residents, may be surprised to find what this garden has in abundance – shade! Mature trees are found throughout the garden, creating numerous shady rest areas. Trees include American Redbud, Apple, Chanticleer Pear, Flowering Cherry, Hawthorn, Flowering Cherry, Patmore Ash and Spring Snow Crabapple. Visitors are encouraged to relax in shady nooks featuring brightly colored park benches. *Continued on page 12*



An especially intriguing spot in the garden is found near a small bridge spanning a drainage area. An impressive stand of Prickly Pear Cactus fills the foreground, while dozens of succulents, annuals and other tiny beauties form the background, each little plant residing in its own cylindrical terra cotta home (repurposed sewer pipe!). Additional cactus and native plants are found throughout the garden. Shrubs include Apache Plume, Blue Mist Spirea, Fernbush, Nine Bark, Purple Smoke Bush, Pyracantha and Russian Sage. Perennials and grasses are too numerous to mention, but include many local favorites (Blue Grama Grass, Feather Reed Grass, Golden Yarrow, Goldenrod, Jupiter’s Beard, Texas Red Yucca, Poppy Mallow, Mexican Hat and Coneflower).



Paradise Memorial Garden, courtesy of E. Brideau

The garden houses numerous birdbaths and water features, which add to its serenity. Paved and gravel pathways guide visitors from one colorful area to another. Most paths are wheelchair-accessible, except for a few clearly marked “foot paths.” A classical labyrinth is available for visitors who want to walk and meditate. The Gardenin’ Angels are currently planting natural vegetation around the perimeter of the labyrinth to make it even more inviting.

The garden has been growing since 2000, when it was first designed as an area where friends and family members could place memorials for their loved ones. Over the years, it has evolved into an impressive garden in its own right, open to the public every day of the year and at any time of day. Strolling through the garden, reading tributes to past lives, surrounded by lovingly nurtured growing things, creates a feeling of timelessness and respite from the cares of our modern world. 🍃



CSU Extension Classes and Events

County Fair: Saturday, July 23 through Sunday, July 31

Open class horticulture competition: Monday July 25. Check in from 8 a.m. to 12 p.m. in the Colorado State Fair Southwest Motors Event Center

Native Plant Master Wildflower Walk: Wednesday, September 14 at CSU-Pueblo. Free! Time TBA.

Rain Barrel Workshop: Tuesday, August 2 from 9 a.m. to 12 p.m. at the Southeastern Colorado Water Conservancy District, 31717 E. United Ave., Pueblo, CO 81001

For more information or to register for classes, contact CSU Extension-Pueblo County at 719-583-6566. Or visit us on the web at <http://pueblo.colostate.edu/> or at CSU Extension/Pueblo County Horticulture Program on Facebook.

