

THE GARDENGOER



ST. TAMMANY MASTER GARDENER ASSOCIATION

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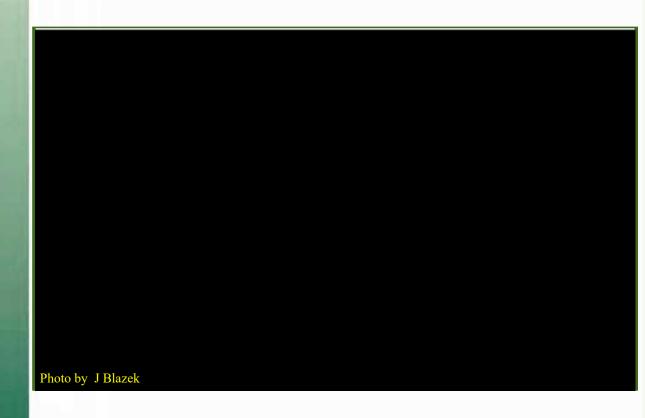
Website: stmastergardener.org

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I had an inheritance from my father, It was the moon and the sun. And though I roam all over the world, The spending of it is never done.

Ernest Hemingway, For Whom The Bell Tolls



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Plant Diseases

" CUCKTO

On August 8, 2024, Barry Pierce presented a lecture to the Vegucators entitled "Plant Diseases." The following is a summary of that lecture.

Early Blight

Caused by a fungus
Treatable if caught early
Since it is caused by a fungus it is important
to change out the soil.

Dark brown spots encircled with rings causing foliage to shrink.

Lesions develop on fruit and the defoliation causes sun scald.

Management of early blight

Remove lower leaves.

Apply a tomato fungicide.

Do not compost affected plants.

Water at soil level. Avoid watering leaves.





Late Blight

Caused by a water mold.
Caused the potato famine in Ireland.
Greasy-looking irregular dark brown blotches.
A ring of white mold appears around the spots.
Can lead to secondary bacterial infection.

Management of late blight

Copper sprays offer some control.

Late blight can overwinter in soil, potato debris and seeds.

Remove and destroy debris.



Plant Diseases, continued





Southern Blight

Caused by a fungus. Attacks below soil causing cankers. Acidic soils with wet alternating with dry periods.

Management of Southern blight

Can last in soil for years.

Long term rotation of crops. Since it affects over 500 species, that is hard.

Deep plowing Calcium nitrate



Blossom End Rot

Not technically a disease.
Calcium deficiency.
Fruit must be removed and discarded.
Dark brown or black spots at end of fruit.

Management of blossom end rot

Remove affected fruit.

Add garden lime.

Use a fertilizer low in nitrogen and high in phosphorus.



Powdery Mildew

A fungal disease.

Caused by water underneath the leaves.

Yellow spots appear on leaves turning to white powdery mildew covering leaves.

Management of powdery mildew

Treat the entire crop with sulfur dust, fungicides, and horticultural oil.

Avoid wetting leaves.

Allow adequate space between plants.

Plant Diseases, continued



Root Rot

The spores are long lived and affect a variety of plants. Love water-logged soils. Avoid over watering. Dark spots surrounded by yellow. Starts with lower leaves and moves up. Plants die quickly.

Management of root rot

No effective fungicide. Remove infected plants and roots.

Spores can last for many years in the soil.

Do not compost.

Tobacco Mosaic Virus

Affects all nightshade family plants.
The virus can last up to 100 years in leaf litter.
Curling leaves.
Infected fruit is brown inside.
Can survive in plant debris for 50 years.

Management of tobacco mosaic virus

Difficult to control.

Do not smoke cigars while gardening.

Spotted Wilt Virus

A virus that affects massive range of vegetables and ornamentals.

Spreads by thrips.

Management of spotted wilt virus

Difficult to control.

Unfortunately it usually shows up after most of the work is done.

Pull the plant up and throw it away.

Look for resistant cultivars.







Plant Diseases, continued





Bacterial Wilt

Bacterial wilt is soil borne.

Spreads rapidly.

Best to get the plant out of the garden.

Symptoms start with wilting of leaves/rapidly drying out.

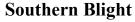
Management

Difficult to control.

Plant early.

No commercially available resistant plant

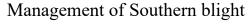






White fungus appears.

Once it takes hold of the plant, there is little you can do.



Maintain airflow.

Dispose of diseased plants.

Dry weather with alternating summer rains.

Ensure well drained soil.

Avoid overhead irrigation.

General Gardening Practices To Keep Your Plants Healthy:

Look at your garden regularly.

Pick off dead leaves, flowers, and bugs.

Be sure to look under the leaves.

If bugs are found, try to identify.

Before spraying, ask for help.

WWWD: What Would Will Do?

Send Will a picture.

Send Will a leaf or fruit.

Send him the plant including their roots.

Barry Pierce Master Gardener Vegucator

STMGA Field Trip To Turtle Cove Environmental Research Station

The St. Tammany Master Gardener Association had a field trip to Turtle Cove Environmental Research Station in the Galva Canal, near Akers/Manchac, LA on Wednesday, July 24, 2024. It was a hot but, thankfully, cloudy day. The temperature was in the high 90's so the overcast sky was a real blessing for all 30 members who attended. The day began at 8:30 a.m. with everyone bringing their Hold Harmless forms as required. A terrific group of master gardeners!!



Turtle Cove is under the direction of Dr. Robert Moreau of Southeastern Louisiana University, Biological Sciences, Outreach Team. The purpose of this project is to maintain a monitoring program in the Lake Maurepas ecosystem. It focuses on both the abiotic and biotic components of the lake and surrounding region. The mission of Turtle Cove is to facilitate a better understanding of the coastal wetland environments of southeast Louisiana through research, university education, teacher training, and public outreach. The following links will help you explore the complete website:

https://www.southeastern.edu/acad_research/program/turtle_cove/

https://www.manchacgreenway.org/9-slu-turtle-cove-gala-boatshead-classroom



The field trip included lecture, discussion, and visual observation of the natural history, the physical environment, the environmental history, the impacts of cypress deforestation, ecosystem restoration, and physical and socioeconomic impacts on wetland loss and coastal erosion.

Photos by E Jaste

Turtle Cove Environmental Research Station, continued

The Turtle Cove 40-foot pontoon boat took us down Pass Manchac to the Turtle Cove Environmental Research Station. The main guesthouse, "Turtle Cove", on Pass Manchac was constructed in 1908 by Mr. Edward Schlieder, a businessman, logger, and outdoorsman from New Orleans. After his death the estate was donated to the State of Louisiana's Department of Wildlife and Fisheries from whom Southeastern now leases the land and facilities. While visiting Turtle Cove we had firsthand experience of the wetland issues during a long walk on the extensive boardwalk tour.

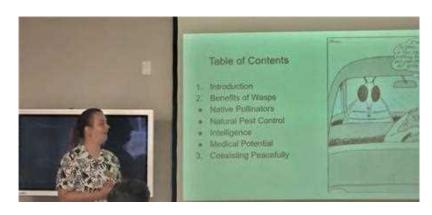


After the tour the group enjoyed lunch at Middendorf's.

Earlyn Jaster Master Gardener STMGA, Vice-President

Benefits Of Wasps





On September 9, 2024, Erin Wojtala, Master Gardener, presented a lecture to the Vegucators on the benefits of wasps. The following is a summary:

The order of Hymenoptera (ants, bees, sawflies and wasps) is made up of almost entirely of haplodiploid species. With haplodiploidy, unfertilized eggs become male (haploid) and have one set of chromosomes. Fertilized eggs become female (diploid) and have two sets of chromosomes.

Males of the order Hymenoptera cannot sting. The stinger is a modified part of the egg-laying ovipositor, an organ males lack. There are over 150,000 different species of

known wasps. Less than one percent of wasp species are capable of stinging.



Wasps will utilize whatever materials are found in their environment to construct their nests. Paper wasps use wood and plant fibers, including pigmented craft paper or blue shop towels.

Wasps are important native pollinators. Solitary species can be found pollinating during the entire blooming season, while social species tend to be found in flowers during early spring and late summer. Over 164 plant species are completely reliant on wasps for pollination.

Less sensitive to pesticides than non-native honeybees, wasps are a reliable, though mostly unnoticed pollinator. Also more resilient to changes in climate and habitat, wasps may become an increasingly important pollinator in the near future.



Photo by Amber Roth

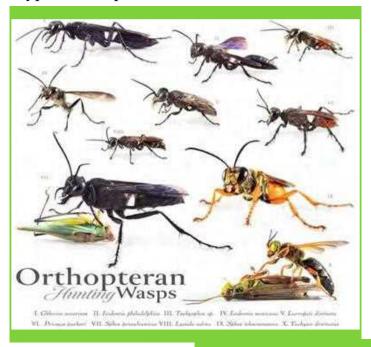


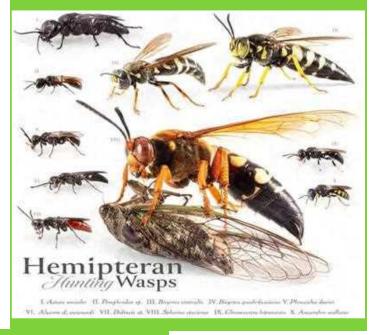
Wasps predate on insect larva, spiders, aphids, and other garden pests to feed their offspring, making them one of the most diverse natural pest control. While paper wasp larva eat meat, adult wasps exclusively eat sugars and often rely on plant nectar for energy, resulting in pollination. Many social wasps feed their young masticated insects and the larval wasps in turn excrete a sugary substance that the adults ingest. In early spring and late summer when the young are



too small or already grown, adults must forage for themselves to feed from flowers and fruit.

Types of wasps

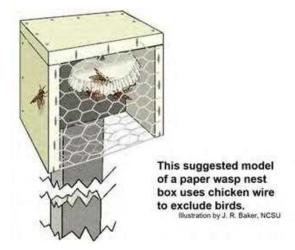






Charts by Sloan Tomlinson





Professional farmers have utilized "wasp boxes" to encourage nest building. Paper wasps predate on voracious pests like hornworms to sustain their young. One colony was estimated to have consumed about 4000 caterpillars over its life cycle.

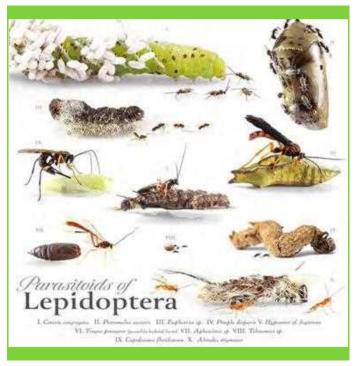
Various shapes of mud nests are created by potter wasps, also known as mud daubers. The adults fill the mud pods with paralyzed victims to provide fresh preserved meals for their larva to feed upon as they develop.



Cuckoo wasps lay their eggs in the mud nests of solitary wasps. The hatched cuckoo wasp larva goes on to consume the solitary wasps' young.



Types of parasitoid wasps (by Sloan Tomlinson)



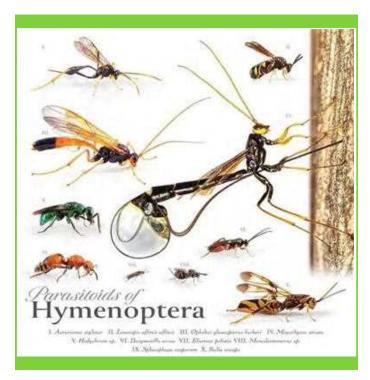
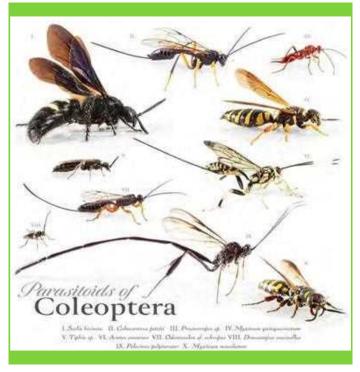
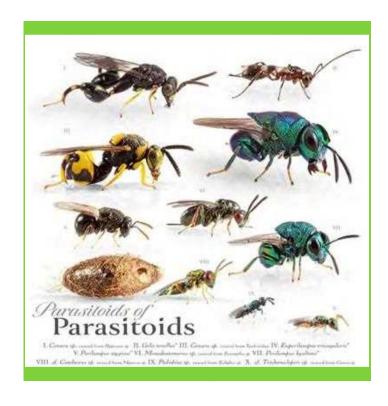


Photo by Donald Lind



Parasitoid wasps continued







Velvet ants are a solitary species of wingless wasps also known as "cow killers" for their painful (non-lethal) sting. Adult females sneak into the lairs of ground nesting wasps to lay their eggs inside. The velvet ant offspring consumes the ground wasp's young.

Velvet ants' exoskeletons are so hard entomologists pin around the wasp rather than directly through the abdomen which is the more typical way to display preserved insects.



Wasp venom has significant medicinal potential. Antimicrobial and anti-cancer properties are both found in wasp venom. Further research is needed to put the venom to applicable use.







Learning to live with wasps

Spring and early summer have the highest nest-building activity. Survey doorways and porches to remove nests promptly as they are being built. When the wasp has left the nest to forage, you can manually remove the nest. This allows wasps to rebuild elsewhere while discouraging them from high traffic areas. If possible, hose down bushes, beds, and tall weeds before gardening to ensure no

active wasp nests or hives are present.

Paper nests can be cut or knocked down at night with the wasps still on the nest. They cannot see in the dark and will

become sluggish. The adult wasps will abandon or relocate the nest when daylight returns. Allowing wasps to nest in remote areas ensures you get the best pest control and pollination without disturbing them or becoming envenomated. For those allergic to wasp venom, or those who have a particularly large hive, contact a professional for assistance in removal.



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Erin Wojtala Master Gardener

STMGA Project: Woodlake Elementary School Garden

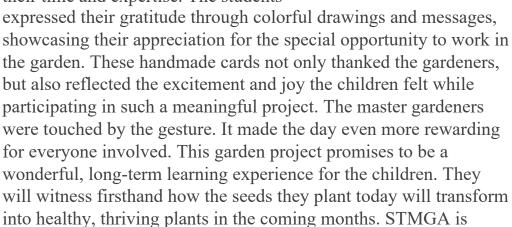
Kappy Goodwin led a group of STMGA master gardeners and students from Woodlake Elementary at a hands-on gardening session on September 25, 2024. The day began with an engaging lesson on the stages of seed growth. The master gardeners introduced the children to the basics of how plants grow and thrive. The group read a few plant-themed books from the school library to deepen their understanding and spark curiosity and excitement.



After the educational portion, it was time to get their hands dirty!

Together, they planted an array of vegetables and herbs, including cabbage, carrots, lettuce, turnips, peas, and a variety of fragrant herbs. The students were thrilled to participate. They learned not only about gardening, but also about patience and responsibility as they looked forward to watching their garden grow.

One class went above and beyond by creating heartfelt thank-you cards for the master gardeners who volunteered their time and expertise. The students



proud to partner with Woodlake Elementary, creating a greener

future for both the school and the community.



The Power And Science Of Plants



How pesticides on seeds affect earthworms. https://www.sciencedaily.com/

releases/2024/02/240214122620.htm

Fast growing ground covers.

https://thegardenmagazine.com/no-more-weeds-10-fast-growing-ground-covers-that-choke-out-weeds/



Why butterflies have colorful wings.

https://www.nature.com/articles/s41467-024-48060-3

History and health benefits of chocolate and cocoa. https://pubmed.ncbi.nlm.nih.gov/31817669/



Preventing negative encounters with snakes

https://edis.ifas.ufl.edu/publication/UW260? fbclid=IwY2xjawD05vdleHRuA2FlbQIxMQABHS8YO JtT6fHoaM-57kmxaE_MvPLE9d77DDSZIkgWYcOtW YreKXpxPCpqhQ aem 7ElBeKwlXN 2MINJ32jGWQ

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Street lights make leaves inedible to insects. https://www.theguardian.com/environment/

article/2024/aug/05/all-night-streetlights-make-leaves-inedible-to-insects-study-finds



The Power And Science Of Plants, continued



How leaf-eating insects impact forest carbon and nutrient cycling https://phys.org/news/2024-08-relationships-insects-forest-ecosystems.html

Helping monarch butterflies with milkweed https://phys.org/news/2024-07-monarch-butterflies-bit-milkweed.html



Studying photosynthesis on the space station https://phys.org/news/2024-08-photosynthesis-space-station-explore-effects.html

Vertical forests and architecture

https://www.christiaangvp.com/post/the-architectural-trend-of-the-vertical-forest-sustainable-science-or-an-aesthetic-fantasy



Do bees recognize human faces? https://www.futurity.org/bees-recognize-human-faces-3242472/

Curing your garden sweet potatoes for long term storage. https://www.bhg.com/how-to-cure-sweet-potatoes-8710587

Jamie Blazek
Master Gardener
Vegucator
Editor, *The Gardengoer*

STMGA Profiles: Will Afton

A Journey From Bemidji to Baton Rouge

Our debut STMGA profile series introduces a cherished member, Will Afton. Everyone knows Will is the beloved plant guru and LSU AgCenter Agriculture and Natural Resource (ANR) Extension Agent. Will is more than just a familiar face. He is a passionate horticulturist with deep roots in both agriculture and our local landscape.

Born in the small town of Bemidji, Minnesota, near the headwaters of the mighty Mississippi River, Will's connection



to the earth began early. His childhood memories are filled with road trips to Wichita, Kansas, to visit his grandparents, where he first encountered the magic of gardening. His grandmother's post-war victory garden, brimming with vegetables, served as the backdrop for some of his earliest horticultural experiences.

"I have fond memories of picking cucumbers and beans with my grandpa. But walking down those blackberry rows? Not so fun," Will fondly recalls. "Still, my grandmother's garden has always been a pleasant memory that I still recall to this day."

This early love for plants blossomed further under the guidance of Will's father, a natural resources expert and adjunct professor at LSU. His father's research on waterfowl took the family to some of the most breathtaking waterfowl breeding grounds across the United States and Canada, leaving Will with a lasting appreciation for the environment.

Relocating to Baton Rouge as a child, Will's career began in 2001 when he began working as a weekend laborer at Clegg's Nursery. There, his passion for plants deepened as he spent over a decade learning the ins and outs of the green industry. "I loved everything about working in a garden center," Will says. "The outdoor work, the customer interactions, and most importantly, the plants. Clegg's is where I built the foundation of my plant knowledge."

Life in Mandeville and His Role as an LSU AgCenter Agent

Since 2013, Will has called Mandeville home, where he enjoys the local lifestyle, frequenting spots like the Lakefront, Coffee Rani, and Pontchartrain Poboys. As LSU AgCenter's County Agent for St. Tammany Parish, he is responsible for providing educational programs and supporting agricultural initiatives in the area.

Will is also deeply committed to volunteer recruitment and development, recognizing the need for community involvement in a parish as large as St. Tammany. He also collaborates with various agencies to bolster local agricultural efforts.

STMGA Profiles: Will Afton, continued

One of the biggest gardening challenges in the area, according to Will, is compacted soil. "It's not the easiest concept to explain, so most folks end up learning the hard way by replanting several times before they realize that the physical condition of the soil is at fault," Will explains.

Additionally, Will has observed a growing interest in home gardening, especially since the COVID-19 pandemic. However, he notes that many novice gardeners underestimate the amount of planning and effort needed to produce a successful crop.

"Most lay people treat plants as disposable products," he says. "They expect the plants to thrive the minute after being planted into the ground. I think a lot of lay people forget that plants are living organisms and that they need water, nutrition, and time to grow." Will also warns against relying too heavily on social media for gardening advice. "There's a lot of misinformation being spread, and people often trust accounts with large followings, assuming they're experts ... but that is not always the case."

Champion of Native Plants and Trapshooting

Will is passionate about promoting the use of native plants, praising programs like the Wild Ones Pontchartrain Basin Chapter and the Louisiana Certified Habitat Program for raising awareness about local ecosystems.

"I love pointing out signs of native plant gardens when I'm with people who don't know about them. It's a great way to introduce them to the importance of using local species," he says.

While many know Will as a plant expert, few are aware of his impressive achievements in trapshooting. Will and his father started competing in shotgun sports while he was still in high school. In 2000, he became the youngest-ever winner of the Louisiana State Trapshooting Championships, breaking an impressive 98 out of 100 targets. Over the years, Will has represented Louisiana four times at the National Trapshooting Championship.

"I still love going to the gun range, but now that I'm working full time it's been tough to get back into competing," he admits.

STMGA Profiles: Will Afton, continued

A Passion for Land Stewardship

In addition to his horticultural and trapshooting pursuits, Will shares a passion for land management. He and his father own a 100-acre plot in Wilkinson County, Mississippi, which they use as a hunting and recreation camp. Recently, they undertook their first timber sale, selectively cutting older oaks to allow younger trees to grow, staying true to the native bottomland hardwood ecosystem.

"We want the land to remain as natural as possible," Will explains.

He found artifacts along an old logging road last year. "That kind of solidified our approach to land management," he says. "Keep it as natural as possible!"

Will's journey ... from his grandmother's garden to his work as an LSU AgCenter Agent and beyond ... is one of passion, dedication, and an enduring connection to the earth. Whether he is advising on soil health, promoting native plants, or sharing his love of trapshooting, Will Afton continues to inspire and enrich the STMGA community.

Lindsay Cox Master Gardener

Editor's note: This is the inaugural article highlighting STMGA members. Let us know about other members with whom you would like to become better acquainted. Let us know how you enjoyed learning more about Will. Contact me at jamieblazek@bellsouth.net or Lindsay at lindsaycroix@gmail.com with interview ideas.

Rust On Tomato Leaves



On August 7, 2024, Andre Olagues presented a lecture about leaf rust on tomatoes to the Vegucators.

Leaf rust on tomato plants is a fungal disease. Fungi are microscopic filamentous organisms that lack chlorophyll and derive their nutrition from living organisms or non-living organic matter.





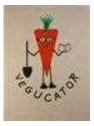
Rust on tomato plants appear as yellowing of leaves, leading to loss of the lush green appearance. Often leaves have brown spots. There are 8000 named species of rust diseases. Rust affects many economically important crops, including cereal crops, flowering plants, and ornamental plants.

Rust is a ancient fungus. The rust fungus can only survive on living plants. Rust does not usually kill the host plant. But it severely limits growth and production. On tomato plants rust is characteristic orange or brown spots on the leaves. It presents a problem that can spread throughout the entire plant. The best treatment is prevention.

Preventing and treating rust on tomatoes

- Do not overhead water. Use drip irrigation or other methods that do not wet the leaves. If you must water overhead, do so between 5 and 10 in the morning. That way leaves will dry before night fall. Avoid over-watering.
- Adding compost to garden beds increases drainage and adds beneficial organisms that can combat pathogens.
- Get a soil test: lack of nitrogen or magnesium could be the problem.
- Plant spacing is important. Plants should be a minimum of 24 inches apart to prevent disease spread and allow adequate air flow.
- Never compost plants with disease or pest problems. Put rust plants in plastic bags. Seal well and dispose in trash.
- Wash garden tools with a bleach solution: one part bleach to nine parts water.
- Wash garden shoes to avoid tracking fungi to other plants.
- Remove infected leaves or entire plant.
- Lastly: buy healthy plants

Rust On Tomato Leaves, continued





Treatment methods

- Organic Gardening Copper Fungicide.
- Organic use of baking soda and water.
- Neem oil has the dual action of both fungicide and insecticide.
- Carbamate fungicides, and those containing sulfur as an active ingredient are shown to be effective.

Rust on tomato plants is not toxic to humans, but it does affect taste of produce.

References

- LSU AgCenter Master Gardener text book
- Plant Natural Research Center
- Amazon Prime
- Mat Geldin Farmscapes Ca.
- Martha Stewart Gardens

Andre Olagues Master Gardener

In My Garden

This past spring I wanted to add more pollinator plants to my garden. I really wanted to see more butterflies. I was only able to find one native aquatic milkweed plant at the Northshore Garden And Plant Sale in April. My milkweed was planted in a large pot and placed on the side of my house. It gets full sun there. Many of my pollinator plants are doing well in that area. Other plants in my garden included Bee Balm, Pentas, Plumbago, Lantana, Shrimp plant, Salvias, Mint, Basil, Mexican petunia, Mealy Cup Sage. One thing I do before buying any new plants, is to check it is not going to be food for the deer!

At the end of June, I saw two monarchs all over the milkweed. About 10 days later monarch caterpillars were busy eating the milkweed plant. It took only two days for them to eat the entire plant. I was on a hunt for the chrysalis, but never found any.







By mid August, my milkweed plant was in full bloom again. Once again I saw the butterflies, then the caterpillars. In early October, I spotted one monarch on the same milkweed. I guess they are starting the migration to Mexico. I have seen many other butterflies in my garden. I have even purchased a book on butterflies, so now I can identify them.

In My Garden, continued

Along with butterflies, I am enjoying the birds, especially hummingbirds! I will try to propagate some of my perennials now that it is fall. Next year I will plant more milkweed. Hopefully I can enjoy even more of these beautiful butterflies. I am overcome with a peaceful feeling just watching them! After all the stress of the day, I go outside as soon as I get home everyday ... it is so relaxing!!



All photos by S. Leonard

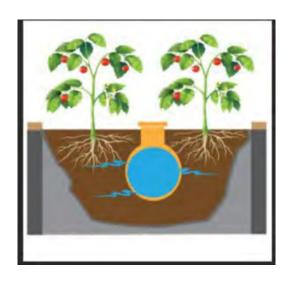
Olla Watering Systems



On September 9, 2024, Celie Bateman presented a lecture to the Vegucators on Olla Watering Systems. This watering system utilizes pots made of unglazed clay or terracotta.



Olla watering systems have been used for 4000 years as sustainable irrigation in arid regions, such as China, North Africa, Asia, Latin America, and Rome where water was scarce.



How olla pots work

- Water seeps through the porous clay into the soil to keep plants watered.
- Gardens are kept watered through soil moisture retention.
- The natural process pulls water through the porous walls of the container.
- Once the ground is wet the water will not transfer out of the olla.

Benefits of olla pots

• The roots of the plant will grow towards and sometimes on the olla's wall.

 Minimizes water loss due to evaporation and runoff.

• Delivers water directly to plant roots.



Olla Watering Systems, continued





How to use olla pots

- The olla pot is usually a round, unglazed, porous clay pot, with a narrow neck and wide belly.
- The olla is filled with water, either manually or via a connected water source.
- The pot may need to be refilled once or twice a week depending on temperatures.
- Ollas are buried in the ground up to the neck of pot about three to six inches from the plants.

Types of olla pots available on-line







Make you own olla pot

- Take an old terracotta pot. Plug up drain hole with a cork and waterproof silicone sealant.
- Let sit overnight to cure.
- Use a saucer or cover for the top of the pot to keep water from evaporating.
- Use a brick on top of the saucer to keep the cover in place.



Olla Watering Systems, continued



Types of terracotta

- Impruneta
 Durable & lasting quality
 Made in Florence, Italy
 Clay has iron oxide and is hand-made and fired at high temperatures slowly.
- Sienna
 Uses refined clay with some iron oxide from Tuscany
- Cheaply made terracotta
 Cracks & breaks easily
 Cannot handle drastic temperature changes.



To test your pot, flip it upside down. Cover drain hole. Tap side with a screwdriver. If a ringing sound is heard, it is high quality terracotta. If a dull thud sound is heard, it is cheap terracotta.

Olla pots can be used in-ground in vegetable garden beds and in potted plant containers. Plant the pots inground and put seedlings in a circle around the olla to give constant moisture. They are especially useful near tomato and pepper plants as an additional water source.



References

The Thirstyearth.com

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Photos from Amazon.com

Celie Bateman Master Gardener

The Gardens Of Asheville, North Carolina

I had the pleasure of visiting two gardens in North Carolina a few weeks before the area was devastated by Hurricane Helene. The Asheville Botanical Garden and the North Carolina Arboretum are both located in Asheville, North Carolina. The websites state that both are currently closed due to storm damage. Until the gardens are repaired and re-opened, here are

a few pictures to enjoy.

The Asheville Botanical garden is 10 acres dedicated to the study and promotion of native plants and habitats of the Southern Appalachian Mountains. It lies adjacent to the University of North Carolina whose students can be seen frequenting the gardens. The gravel trail is easy and mostly under a canopy of trees. It is a half-mile path that meanders through the gardens, around a log house, and along side a creek. The gardens display many native plants that are identified by small markers. There are over 70 plant species considered rare or endangered.









Botanical Garden, continued





The North Carolina Arboretum is 434 acres located within the Bent Creek Experimental Forest Of the Pisgah National Forest. The arboretum was influenced by and is dedicated to Frederick Law Olmsted, a landscape architect who designed the Biltmore gardens and Central Park in New York. The arboretum includes biking and hiking trails, water features, a fantastic bonsai collection, garden sculptures, and numerous formal and informal gardens, including a miniature railway garden. One garden is entirely composed of plants traditionally used for dying cloth.















All photos of both Asheville gardens taken by J Blazek

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