MISSISSIPPI STATE UNIVERSITY™ EXTENSION

County Gardeners Extension Express

MULTI COUNTY

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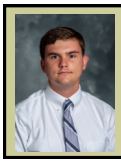
Orange Dog

The giant swallowtail butterfly is found across much of the United States, including Mississippi. With an adult forewing span of 5.5 inches for males and 5.8 inches for females, giant swallowtails are (as you might expect) large for a butterfly. The larva of a giant swallowtail is commonly called an orange dog. Orange dogs can grow to be 2 to 3 inches long. At first glance, they look like bird droppings due to their brown and white coloration. This imitation provides camouflage to would-be predators. Older orange dogs can also protrude defensive structures called osmeteria from the body when disturbed. Doing so mimics the tongue of a snake and releases a foul odor, both of which deter possible predators.

While swallowtail butterflies are a beautiful sight to behold, orange dogs can be a citrus pest. These caterpillars are a problem only on young trees, with one or two able to strip a young citrus tree completely of its foliage. If control is necessary, insecticides containing spinosad or zeta-cypermethrin are effective against small caterpillars.

Always read and follow current label directions. Hand removal of caterpillars is an additional option for control.

For more information on the orange dog caterpillar, see Bug's Eye View Vol. 10, No. 10, *Orange Dog*.



Camden Oglesby, Extension Agent
MSU-ES Hancock County
Phone: 228-467-5456 E-mail: cdo94@msstate.edu

INSIDE THIS ISSUE:

CONTACT INFORMATION

Forrest County
Phone: (601) 545-6083
Email: ext-forrest@lists.msstate.edu

George County
Phone: (601) 947-4223
Email: h.steede@msstate.edu

Greene County
Phone: (601) 394-2702
Email: mm3583@msstate.edu

Hancock County
Phone:(228) 467-5456
Email: cdo94@msstate.edu

Harrison County
Phone: (228) 865-4227
Email: tim.ray@msstate.edu

Jackson County
Phone: (228) 769-3047
Email: sls534@msstate.edu

Lamar County
Phone : (601) 794-3910
Email: rosso@msstate.edu

Perry County
Phone: (601) 964-3668
Email: b.odum@msstate.edu

Pearl River County
Phone: (601) 403-2280
Email: eddie.smith@msstate.edu

Stone County
Phone: (601) 928-5286
Email: hbj4@msstate.edu

Eddie Smith, Ph.D., C.A., Co. Coordinator & Extension Agent
MSU-ES Pearl River County
Phone: (601) 403-2280 E-mail: eddie.smith@msstate.edu

Fall Chores

As cooler weather approaches, it's time for gardeners to roll up their sleeves and get to work. Beautiful vegetable gardens, orchards, and landscapes don't happen by chance—they require effort and attention. Fertilizing, watering, pruning, weeding—the tasks are endless. Taking a proactive approach, especially in preventing diseases, is key to maintaining healthy plants. Gardeners often use a mix of common -sense strategies to manage issues like leaf spots, wilts, and root rots. The following steps can help preserve or improve your garden's health this fall.

To reduce leaf spot diseases such as rose black spot, photinia leaf blight, and holly tar spot in the upcoming season, remove fallen leaves before spring. In vegetable gardens, clear out the remains of this past season's crops. Many disease-causing microorganisms survive winter with ease, so proper cleanup can minimize issues like early blight and Septoria leaf spot in next year's tomato crop.

While you're in the garden, it's helpful to note where each vegetable was grown. This will aid in planning crop rotation for next spring, helping to avoid planting the same vegetables in the same spots, which can lead to disease buildup over time.

In orchards, pruning infected branches can help manage canker and dieback diseases like fire blight and black knot of plums. Be sure to cut at least six inches below the last visible signs of infection and disinfect pruning tools between cuts with a ten-percent bleach solution (one part bleach to nine parts water) to prevent the spread of disease. Remember to wash and oil your tools afterward to prevent rust.

Removing "mummies" (dried, leftover fruit) from beneath peach trees can help reduce brown rot, while clearing out diseased apples from trees or the ground can combat bitter and black rot in apples.

Fall is also an ideal time to collect soil samples to assess the fertility of gardens, orchards, and landscapes. Following a recommended fertility program can help strengthen plants, making them less vulnerable to disease and pests. While collecting soil samples, it's also wise to check for nematodes, as these tiny pests can quickly cause problems, particularly root knot nematodes.

Take advantage of the cooler weather to tidy up your garden and take a proactive stance against disease. Prevention is far more effective than dealing with problems once they've taken hold.

Garden Calendar: October

Plant

•Spring flowering bulbs should be planted this month, with the exception of tulips and hyacinths, which should be placed in the refrigerator for 6 weeks before being planted in late December or early January.

•Pot up Basil, Chives, Parsley, Rosemary, Sage, and Sweet Marjoram for that sunny kitchen window.

•Annuals to plant are Pansies, Violas, Pinks, Flowering Cabbage and Kale, English Daisy, Wildflower planting, Cornflowers, Larkspur, and Queen's Anne Lace.

•Perennials to plant include: Asters, Salvia, Hollyhock, Daylilies, Babies Breath, Iris, Shasta Daisy, Peonies, and Phlox.

•Many evergreens may be planted this month.

Fertilize

•Test soil in garden to monitor balance of minerals.

Prune

•Remove damaged and dead wood from trees.

•Pick blossom-like fruit of Golden Rain Trees and let dry for winter arrangements.

•Prune back annuals like Blue Salvia and Dianthus to the ground and mulch. They may go through the winter and bloom again.

Miscellaneous

•Dig up Caladiums now with foliage intact, allow to dry, remove dried foliage and store in peat moss in a cool dark place for replanting next year.

•Force bulbs for indoor show. Place bulb on gravel and water enough to cover the roots, keep in dark place until root system is established and sprout reaches 3 inches, bring gradually into the light and refill container with water to original level. Enjoy the blooms of Paper-white, Narcissus, Lily of the Valley, Jonquil, or Hyacinth in this way.

•Make sure the birds in your garden have food, shelter, and water.

•Place leaves in compost bin.

In Bloom

Mums, Marigolds, Periwinkle, Salvia, Sasanquas, Golden Rain Tree, Roses, Ageratum, Aster, Camellia, Celosia, Colchicum, Dahlia, Petunia, Salvia, Torenia, and Zinnia.

Dillon Mizelle, Co. Coordinator & Extension Agent
MSU-ES Greene County
Phone: (601) 394-2702 E-mail: mm3583@msstate.edu

Preparing Potted Plants For Colder Weather

It is beginning to cool off outside which means it's time to start taking steps to prepare for cold nights! One of these steps is bringing in your potted/patio plants when it gets in the 50s or lower. There are several steps to bringing in your plants you can take to reduce stress not only for your plants but for you as well. One of the first is to place your plants in the shade for two weeks before bringing them inside your home, this will help prevent leaf drop when making the change in environments.

Make sure you trim any dead, unhealthy, or leggy growth from the plant, this is also a great time to repot your plant if it is outgrowing its pot or if you simply want to use a different pot.

Another great step would be to rinse your plant of any dust, dirt, or bugs while also giving it a good deep watering before bringing them inside, once inside you won't need to water them as much being that most plants don't need as much water as they needed outside.

You'll need to make sure your plant is getting the right amount of sunlight and air circulation while indoors. If you must leave it where it could still possibly freeze make sure not to use thin plastic nursery pots, these pots do not insulate the roots well, making it easier to freeze and thaw which can damage the plant.

51st Annual Ornamental Horticultural Field Day

Thursday, October 3rd, 2024

Registration: 8:00 a.m.

Program: 8:30 a.m. – 12:00 p.m.

Topics Include:

Grafting and Other Demonstrations

Research Updates

Breakfast Will Be Provided!!

Location:

MSU South MS Branch Experiment Station
711 W. North St
Poplarville, MS 39470

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For more info email:

Scott Langlois: scott.langlois@msstate.edu

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Tim Ray, C.A., Co. Coordinator & Extension Agent
MSU-ES Harrison County
Phone: (228) 865-4227 E-mail: tim.ray@msstate.edu

Controlling Small Flies In The Home

Many people may have been dealing with small flies lately. There are several species of small, gnat-sized flies that may occur in homes or offices and become a real nuisance. They include fruit flies, phorid flies, moth flies, and fungus gnats and most often occur briefly in our homes.

Fruit fly

Fruit flies often breed in decaying fruit or vegetables as well as in other types of decaying organic matter. They are often seen flying about overripe bananas, tomatoes, empty juice or wine bottles, or similar items. These small flies can reproduce quite successfully in the few drops of liquid in the bottom of empty container.

Phorid fly

Phorid flies breed in a wide range of decaying organic matter, including decaying vegetable matter or meat, animal feces, and many other sources. They are sometimes referred to as drain flies because the larvae of some species feed on the organic scum that accumulates inside drain pipes and garbage disposals. Phorids can also breed in the residue inside garbage cans that are not cleaned frequently and in moist food residues that accumulate under and around appliances.

Moth fly

Moth flies are also called drain flies or sewage gnats and may be seen resting on bathroom or kitchen walls near the drain from which they probably emerged. The larvae breed in sewage and other organic accumulations in drain pipes from which adults emerge.

Fungus gnats occur indoors where houseplants are kept. The larvae breed in the potting media, feeding on fungi growing on the roots of the plants as well as on the roots themselves. These small flies do not bite, but when numerous, can become a nuisance by hovering around the TV, computer monitor, or other light sources in darkened rooms. The key to controlling these pests is to identify their breeding source which can be any type of organic matter.

Fungus gnat

Routine sanitation helps prevent infestations which includes: take out garbage regularly; clean up any spilled food or garbage; dispose of any fruits or vegetables that are overripe or rotten; repair leaks and regularly empty and clean drain pans under appliances; use properly labeled algaecides to prevent accumulations of algae in drain pans; avoid overwatering houseplants and empty and clean drain saucers regularly; clean drains regularly with an appropriately labeled microbial drain cleaner that can be purchased online or found locally.

When infestations of small flies occur, the best way to control them is to find and eliminate their breeding source, and it helps to be able to identify the kind of flies involved.

Heath Steed, Co. Coordinator & Extension Agent
MSU-ES George County
Phone: (601) 947-4223 E-mail: h.steede@msstate.edu

Stink Bugs In Your Vegetable Garden

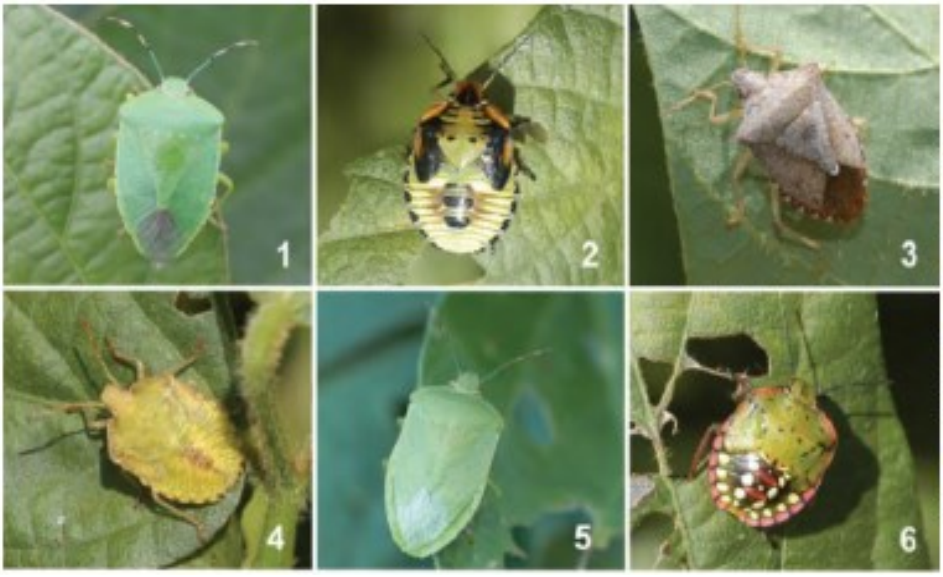
One of the most damaging and common insect pests in late summer and fall gardens are stink bugs. A crop of vegetables can be damaged so severely by heavy infestations of stink bugs that the crop can be ruined. There are several key reasons that stink bugs are such a problem in late season vegetable gardens.

First, stink bugs have several generations each year, increasing their numbers with each generation. This is the reason that there are heavier numbers of stink bugs in the late summer than there were earlier in the year. Second, stink bugs reproduce on many different major row crops and weeds. After these crops mature the stink bug adults are trying to find another suitable host. Stink bugs are strong fliers and this makes it easy for them to move in where they feel comfortable. Third, stink bugs are fruit and seed feeders who focus their feeding on the part of the plant that we, as humans, like to harvest and eat as well.

The most common stink bug species that we have to deal with here in south Mississippi is Green Stink bugs, Southern Green Stink bugs, and Brown Stink bugs. The immature stink bugs known as nymphs can cause the same damage as the adults. The nymphs look similar to the adults as far as shape but the color can vary based on their stage of development.

Another bug that can cause the same damage as the stink bug is the Leaf Footed Bug. They are larger and have an elongated body with leaf shaped segments on their hind legs.

Using an effective insecticide, such as products containing bifenthrin, cyfluthrin, gamma-cyhalothrin, permethrin, lambda-cyhalothrin or malathion, is the best way to get rid of this pest problem. (**Make sure and use the pesticide that is labeled for your particular crop.)** Most likely you will have to tr eat several times for stink bugs or leaf footed bugs because these unwelcomed bugs will continue to visit as long as there is a crop there that they like. **Be sure to always read the label carefully and follow the directions because the LABEL IS THE LAW!**



1. Green Stink Bug Adult
2. Green Stink Bug Nymph
3. Brown Stink Bug Adult
4. Brown Stink Bug Nymph
5. Southern Green Stink Bug Adult
6. Southern Green Stink Bug Nymph

Private Applicator Certification Training

The Mississippi Pesticide Safety Education Program has updated its online and face-to-face certification programs to meet this demand. The new mandated training and competency requirements from the U.S. Environmental Protection Agency are for applicators who use restricted use pesticides on farmland and need to renew or obtain certification.

The new trainings are designed to provide increased public health and safety benefits by raising safety standards to be consistent with commercial applicators. Trainings consist of video modules covering new safety, environmental protection and application procedures. These modules prepare applicators for the 55-question competency exam, which requires a score of at least 70%.

Mississippi's online and face-to-face certification programs are developed and delivered by the Mississippi State University Extension Service. For private pesticide applicator online training, visit http://msuext.ms/dkp8h. To learn about upcoming in-person trainings, visit https://extension.msstate.edu/calendar or contact your local Extension office. The new trainings cost $60 per applicant.

The online private applicator training consists of video modules and an online proctored exam. While the video modules are accessible on mobile devices, the online exam will require a laptop or desktop computer, a webcam, adequate internet connection and valid photo identification. The online test will be proctored by the online proctoring system Honorlock. Alternatively, the private applicator exam can be taken either online or as a paper test at a local MSU Extension office.

Horticulture Field Day Special Afternoon Session!!

Door Prizes!!

Special Session:
51st Ornamental Horticulture Field Day
UAV and Robot Exhibition

Thursday, October 3rd, 2024

Program: 1:30 p.m. – 3:00 p.m.

Optimizing Plant Care with Drone and Robotics: Precision Weed Control, Spraying, and Sustainable Cultivation

Dr. Prabha Sundaravadivel, Ph.D.,
Associate Professor
Department of Electrical and Computer Engineering
The University of Texas at Tyler, Tyler, TX, USA

Abstract:

This presentation explores the integration and optimization of drones and robots to boost efficiency, precision, and productivity in plant care. By utilizing drones equipped with advanced sensors for real-time plant health monitoring, spraying systems for targeted pest and weed control, and robotic arms for tasks like light-based monitoring and care, we address key challenges such as labor intensity, plant health assessment, and optimizing maintenance routines. The drones, equipped with spraying systems, enable precise application of herbicides and pesticides, minimizing resource waste and environmental impact while effectively managing weeds and pests. The proposed methods leverage cutting-edge technologies to enhance decision-making, reduce labor costs, and promote sustainable, high-quality ornamental plant care. We will explore the potential for scaling these technologies across various horticultural environments. This approach not only increases overall productivity but also supports environmentally-friendly practices by ensuring healthier, more vibrant plants with minimal resource use.

Location:

MSU South MS Branch Experiment Station
711 W. North St
Poplarville, MS 39470

For more info email:

Patricia Knight: prk3@msstate.edu

USDA Agricultural Research Service
U.S. DEPARTMENT OF AGRICULTURE

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