There is no more delightful decoration for a flower garden than butterflies fluttering from bloom to bloom. Butterflies will visit, and probably stay to lay eggs, wherever there are a variety of plants for food and shelter, some moisture and no pesticides. Whether or not they appear in your backyard ultimately depends on whether their favorite plants are growing there. Certain plants support larvae; many others support adult butterflies.

Larvae need specific plants

The typical garden is not likely to have plants that host most butterfly larvae. Caterpillars of each species are pretty picky, favoring the foliage of specific plants or plant groups. Larval host plants are often unattractive, weedy, wild and generally considered unattractive when used in cultivated gardens. To attract butterflies, gardeners must add these plants to their landscape. Larval host plants of common butterfly species include aster, bermudagrass, clover, hollyhock, lupine, mallow, marigold, milkweed, nettle, parsley, passionflower, plantain, snapdragon, sorrel, St. Augustinegrass, thistle and violet. Fortunately, adult butterflies have more cosmopolitan palates.

The flower nectar they need for energy is available from a variety of plants. Butterflies will visit landscapes in search of flowers easily accessed by their long, coiled tongues. They are particularly attracted to "hot"-colored, fragrant flowers.

Butterfly favorites

All time favorite butterfly-attracting flowers include aster, Joe-Pyre weed, black-eyed Susan, lantana, butterfly bush, liatris, butterfly weed, pentas, coreopsis and purple coneflower.

The butterfly gardener’s challenge is to provide a diversity of plants in communities throughout the property to support both larvae and adults. Variety is the key. Choose lots of different kinds of plants from annuals to perennials. Wildflower meadows featuring native plants are ideal for attracting butterflies. Food crops add to the diversity, too. Make sure blooms are available to visiting butterflies the entire season. The greater the variety of suitable plants, the larger number and diversity of butterfly visitors your garden will attract.

For more on planting butterfly gardens, see the University of Georgia Cooperative Extension publications website at [www.caes.uga.edu/publications/](http://www.caes.uga.edu/publications/).

(Frank Watson is the University of Georgia Cooperative Extension agent in Wilkes County)
Worm Bins: The Perfect Composting Solutions for Apartment Dwellers
By Lisa Sehannie

Benefits of a Worm Bin
Vermicomposting is a great way to divert food scraps from the landfill. When food scraps are diverted from the landfill, it actually saves your municipality money on landfill costs. Scientists state that worms can turn “garbage into goodness.” Once your worms have broken down the food scraps into vermicompost, this can be used on your house plants; it can be combined with potting soil mixes, and this can be used to start off your seedlings; and it can also serve as a mulch and soil conditioner.

Let’s look at a simple example of the positive effect worms can have on diverting food scraps from the landfill. Let’s look at one small area of Athens, with 30,000 people. Let us assume that the average family generates as little as 1 pound of kitchen waste per day. For this whole area, this will equate to 30,000 pounds of food waste per day; which is 5,475 tons per year! Now, let’s say only 5 to 10% of these families will participate in a vermicomposting system. This will still equate to approximately 250 to 500 annual tons of waste diverted from landfills!

Hesitations for Worm Bins
Where can I put it? This is especially a concern for people living in an apartment community. You can place it on a shaded balcony or patio; or even under the kitchen sink. If you do place it outside, be sure to check on the worms, as they do not like extreme temperatures – hot or cold.

I live in an apartment - what can I do with the castings?
As mentioned above, you can combine vermicompost with potting soil mixes, and this can be used to start off your seedlings or used on house plants. And finally, the mix can also serve as mulch or a soil conditioner.

Will the worm bin smell badly? A well maintained worm bin should not smell. If you find your bin emitting a foul odor, there could be a few reasons for this. If too much food is in the bin, your worms may not be able to eat all of the food scraps. The food may start to rot, which could cause a smell. Also, if your bin is too moist, it can also cause the bin to smell.

Are they high maintenance?
A simple worm bin is quite low maintenance. This is what the bin requires:

- Set up the worm bin
- Add food scraps
- Harvest the Compost Tea
- Harvest the Compost

Just below the surface is a team of workers, working hard just for you. They are a low maintenance team, but won’t stop working until the job is done. And if you listen closely, you may hear them chomping away at the meal you just shared with them. Can you guess what this team is made up of? If you guessed composting worms, you are right! Worms are the new craze in composting, and in this article, we will discuss setting up a simple worm bin and some of the benefits of having a worm bin in your home. If you are not already doing any Worm Composting, after this article, you will most definitely want to begin.

I have always felt that discarding my food scraps is such a waste of good materials. But I thought living in an apartment prevented me from doing any kind of composting. I discovered vermicomposting, which is the fancy way to describe a simple worm bin, and is perfect for apartment dwellers.
Basic Steps to Setting up a Worm Bin

Setting up a worm bin is a very simple process. It can be done in a short period of time, and can be a fun family project. If you have children, this is a great way to involve them and begin educating them on how small actions can make a difference. Let’s look at a very simple way to set up a worm bin:

Buy or Build a Simple Worm Bin

- Place bedding in the bin for your worms, along with water to moisten the bedding. Shredded newspapers works great
- Add your worms
- Place your bin in an appropriate location. For the first few days, shining a light on the bin will deter them from coming to the surface of the bin – worms do not like light!

In a few weeks, after your worms have settled, you can begin adding food scraps. Remember, that the smaller the food particles, the easier it will be for your worms to consume these items.

What can you feed your worms?

You are now ready to start your very own worm bin! As you get started, know that your worm bin, even on a small scale, will make a difference and will have an impact on your community.

Sources:
http://www.happydranch.com/articles/Worms_and_Vermicomposting.htm
(Lisa Sehannie is a University of Georgia Cooperative Extension Master Composter Volunteer.)

Q&A: Camellia Seeds Require Patience

by Amanda Tedrow

I have discovered some bulb-like things growing on a camellia in my yard. I cut one open and there appeared to be one or more seeds inside. Is this a seed pod and if so how do I germinate? Or is it a disease that needs to be fought? Please advise.
— Phyllis D., Athens

Camellia plants can produce seed pods depending on the cultivar, environment, and age of the plant. I believe you are describing some of these seed pods rather than an insect or disease problem. Keep in mind that the seedlings grown from these seeds will not look like the parent plant and will probably have much different flowers as well. These seed pods will germinate best if harvested when they begin to change color from green to a reddish brown color which occurs in the fall for most cultivars. Make sure you do not allow the seeds to dry out before planting them in the soil. An extension specialist from the University of Arkansas recommends “pour boiling water over the seeds and allow them to remain in the cooling water for 24 hours before planting. Plant them in soil high in organic matter. Keep them moist and wait for them to germinate.” These seeds could take a few months to germinate, so do not give up hope if you do not see leaves emerging from the soil within a couple of weeks; this is to be expected. Once the seeds have germinated, make sure to keep the soil moist but not wet. Too much or too little water can quickly kill a young un-established plant. A seedling camellia plant will not bloom for five to seven years, so you will be waiting quite a while to see the color of the blooms.

(Amanda Tedrow is the University of Georgia Cooperative Extension agent in Athens-Clarke County)
May Weather Delays Planting by a Few Weeks

By Pam Knox

May was wet, cool and cloudy throughout most of the state. That wet, cool weather kept the soil too wet to plant in some areas, while fields were too dry in others.

In either case, Georgia farmers found their planting schedules delayed until the end of the month.

North Georgia was very wet, with areas north of Atlanta receiving inches more than normal over the course of the month. The southwest corner of Georgia was well below normal, however, receiving 3 inches less rain than normal.

The highest monthly precipitation total reported by the National Weather Service station was 5.26 inches observed in Atlanta (1.59 inches below normal) and the lowest was the station in Augusta with 2.26 inches (0.39 inches below normal). Athens received 3.63 inches (0.63 above normal). Macon received 3.95 inches (1.23 above normal). Brunswick received 3.40 inches (1.54 above normal). Columbus received 2.86 inches (0.33 below normal). Alma received 3.02 inches (0.55 above normal). Savannah received 3.16 inches (0.08 above normal).

Minor flooding was seen mid-month in northern Georgia where soils were saturated from the heavy rain. Roads and water lines were affected in some areas, leading to “boil water” advisories in a few locations.

Drought operations on Lake Hartwell ended on May 7 as heavy rainfall in the northern part of the basin and releases from Lake Hartwell upstream raised the lake levels at Thurmond Dam above 328 feet for the first time since March 30, 2011. The last time the water at Thurmond Lake was above 328 feet for any period of time was February 2010.

The highest daily precipitation measurement reported by Community Collaborative Rain Hail Snow Network was 6.40 inches on May 19 near Flowery Branch in Hall County. An observer near Suwanee reported 5.18 inches on the same date. Most of this rain fell in less than six hours. The highest total rainfall observed in May was 14.32 inches near Cumming in Forsyth County, followed by 13.27 inches from the Flowery Branch observer.

Despite the rain, cooler weather helped to reduce the amount of severe weather Georgia saw in May. Severe weather was reported on five days; however, all but one of the reports was for scattered wind damage. A May 21 report described nickel-sized hail near Jackson in Butts County.

In Atlanta, the monthly average temperature was 68.1 degrees F (2 degrees below normal). In Athens, the average was 67.4 degrees (2.6 degrees below normal); in Columbus, the average was 71.5 degrees (1.5 degrees below normal); in Macon, it was 68.4 degrees (3.5 degrees below normal); in Savannah, it was 71.7 degrees (1.6 degrees below normal); in Augusta, it was 68.4 degrees (2.7 below normal); in Alma, it was 70.6 degrees (3.1 below normal); and in Brunswick, it was 73.0 degrees (1.5 below normal).

Atlanta set a new record low for daytime temperature with 59 degrees on May 6, breaking the old record of 62 degrees set in 1920. Columbus had a record low daytime temperature of 66 degrees on the same day, breaking the old record of 67 degrees set in 1992. Augusta set a record low temperature of 40 degrees on May 14, breaking the old record of 42 degrees set in 1997, and Savannah posted a new record low of 48 degrees on the same date, breaking the old record of 49 degrees set in 1997.

By the end of May, soil temperatures warmed enough for most planting to proceed, and soil moisture levels decreased in northern Georgia, allowing farmers to enter their fields and finish planting. The wet conditions in the north fostered lush growth of hay but caused some disease problems in small grains. Dry conditions in the south caused delays in planting due to lack of needed soil moisture.

Overall, the crops were delayed by about two to three weeks due to the spring weather across Georgia.

(Pam Knox serves as University of Georgia Agricultural Climatologist with UGA Department of Crop and Soil Science.)
The Natural Resources Conservation Service (NRCS) is teaming up with farmers and ranchers across the U.S. to implement conservation measures that will help pollinators while improving operations on the farm.

By spreading the word about the important role pollinators play in food production, conservationists are drawing growers’ attention, then showing them how to create habitat in fields, pastures, and forests.

According to NRCS:
- The most common avian pollinator is a hummingbird.
- The U.S. is home to 4,000 species of native bees.
- Pollinators’ ecological service is valued at $200 billion each year in America.
- The southeastern blueberry bee visits about 50,000 blueberry flowers in a lifetime, leading to 6,000 ripe blueberries.
- Ninety percent of our vitamin C comes from insect-pollinated plants.
- Honey bees communicate by dancing.
- Some flowers hold static charges until visited. Bumblebees, sensing static electricity, know which flowers to visit.
- Native bees are valuable crop pollinators. More than 3,500 species of native bees (often called pollen bees) help increase crop yields and may serve as important insurance when cultivated European honey bees are hard to come by.

There are simple, inexpensive ways you can increase the number of native bees living on your land. Increasing the number of pollinators on your land may improve your yield, and some improvements to pollinator habitat are eligible for financial help from government programs.

NRCS provides the following tips to farmers looking to protect and improve pollinator habitat on their land:

- Know the habitat on your farm. Using the illustration as a guide, look for areas on and around your land that can support native bees. Most native bees are solitary or live in small colonies. Bumble, digger, and sweat bees make up the bulk of pollen bees in most parts of the country.
- Protect flowering plants and nest sites. Once you know where bees are living and foraging, do what you can to protect these resources from disturbance and pesticides.
- Enhance habitat with flowering plants and additional nest sites. Most bees love sun and prefer to nest in dry places. Nests are created underground, in twigs and debris, and in dead trees or branches. You can add flowers, leave some ground untilled, and provide bee blocks (tunnels drilled into wood) to increase the number of native bees on your farm.
- If you want to do more to increase the number of native bees pollinating your crops, you can plant hedgerows or windbreaks with a variety of flowering plants and shrubs, reduce or eliminate your use of pesticides, or work with your neighbors to protect natural areas around your farm.

There are a few things native bees just can’t live without. Farmers can make the most difference by focusing on those critical needs, including:

- Food: Bees eat only pollen and nectar. In the process of gathering these resources, they move pollen from one flower to another, and thus pollinate your crops. Bees rely on an abundance and variety of flowers and need blooming plants throughout the growing season. Native plant species are particularly valuable.
- Shelter: Native bees don’t build the wax or paper structures we associate with honey bees or wasps, but they do need places to nest, which vary depending on the species.
- Wood-nesting bees are solitary, often making individual nests in beetle tunnels in standing dead trees.
- Ground-nesting bees include solitary species that construct nest tunnels under the ground.
- Cavity-nesting social species—bumble bees—make use of small spaces, such as abandoned rodent burrows, wherever they can find them.
- Protection from pesticides. Most insecticides are deadly to bees, and unnecessary herbicide use can remove many of the flowers that they need for food.

Three things that you can do to begin improving habitat for native bees on your land:

- Minimize tillage. Many of our best crop pollinators live underground for most of the year, sometimes at the base of the very plants they pollinate. To protect them, turn over soil only where you need to.
- Allow crops to bolt. If possible, allow leafy crops like lettuce to flower if they need to be tilled right away. This gives bees additional food sources.
- If you use insecticides, choose ingredients targeted to specific species (for example, Btk for pests such as leaf rollers) and the least harmful formulations (i.e., granules or solutions). Spray on calm, dry evenings, soon after dark when bees are not active. Keep in mind that even when crops are not in bloom, some of your best pollinators are visiting nearby flowers, where they may be killed by drifting chemicals.

(Allison Floyd is a managing news editor for the Athens-Banner Herald in Athens, GA.)
This year’s extraordinarily wet winter and spring has and will continue to stimulate rapid production of new leaves in many of our woody landscape plants. This lush new growth may now need to be trimmed to prevent shading of vegetable gardens and flowerbeds.

Vegetable gardens that produce tomatoes, peppers, beans, and squash need the benefit of at least six hours of direct sunshine per day to yield flavorful and highly nutritious produce. This sometimes means branches of trees must be pruned to remove leaves that restrict and block light. Summer pruning of trees can be done easily, safely, and effectively by thinking about the process before you begin.

Wounds have to heal

Most trees actively grow in the summer, providing there is enough water to support the growth. Where you make pruning cuts in woody plants has a marked influence on the rate the wounds will heal. In summer time, the ability to quickly close a wound can be the difference between a long-term healthy tree and a tree compromised by the presence of fungi and bacteria that will cause decay and breakdown of structural wood in the trunk.

When you remove limbs from trees by making a single cut, very often the bark along the main branch or trunk may strip or tear due to the weight of the falling limb. The new soft wood that is exposed by the torn bark provides a site that can be quickly colonized by decay-causing fungi and bacteria.

Bark damage can be avoided by making three separate pruning cuts to completely remove a branch. This will leave a clean wound without stripping bark on the supporting branch or trunk. Clean wounds made with sharp clean tools tend to heal quicker than similar cuts made with dull blades or dirty tools.

Step by step process

To remove a limb or branch larger than one inch in diameter from a woody plant, make a cut about one-fourth to one-half through the lower side of the limb about a foot from the main trunk or supporting branch. Then make a second cut on top of the limb a few inches further from the trunk than the first cut. The branch will fall from the plant, leaving a stub of the severed branch or limb. Remove the remaining stub by cutting it back to the branch collar.

The branch collar is a swelling or bulge formed at the base of branches by the annual production of overlapping layers of branch and stem tissues. Branch collar tissues contain large numbers of cells that are capable of producing new growth that quickly seals the wound caused by pruning.

Stubs of branches should not be left protruding from the trunk. Wound healing on stubs takes much longer to heal and stubs provide a direct route for decay organisms to enter and establish colonies in the wood of the trunk. Research conducted by scientists and arborists from universities and research centers all over the country has shown that treatments to pruning wounds such as paints, waxes, and resins do not speed up the process of healing. In some cases these treatments retard healing by killing the tissues that close the wound.

Use clean, sharp tools

Always use clean, sharp tools when pruning trees and wear safety glasses, hat, and gloves to reduce potential injury to eyes, hands, and head. If you use a chain saw, make sure the saw is sharp and that you wear all the safety equipment recommended by the manufacturer and cease work before you become weary. Most accidents happen when operators are tired.

For more information about pruning, see the University of Georgia Cooperative Extension publication at:

www.caes.uga.edu/Publications/pubDetail.cfm?pk_id=7656&pg=dl&ak=Horticulture.

(Stephen Garton is the University of Georgia Cooperative Extension Coordinator in Forsyth County.)
Goodness Grows will host The Legends of Oglethorpe on Saturday, October 26 and Sunday, October 27 from 9:00 AM—5:00 PM at 332 Elberton Road in Lexington. Participate in this living history weekend with “in character” actors bringing to life nine individuals who have been a part of Oglethorpe County’s rich history. There will also be carriage tour rides and self-guided walking tours. Purchase tickets in advance or call 706-743-5055 for additional information.

Join Kurt Straudt of southeastsucculents.com and learn how to Make Your Own Succulent Dish Garden on Sunday, July 28 2-3:30pm. The cost of this class is $35 and includes everything (soil, plants, decorative stones or moss) except the container. Succulents are easier to care for in containers that have a drain hole (a lot easier to not over-water) Advanced registration is required. The class takes place at the Wylde Center (435 Oakview Road in Decatur). For more information, call 404-889-2925.

Slow Food Atlanta and the Wylde Center presents Save Your Seeds and Share! (a FREE event) on August 3 from 10:00 Am—noon at The Wylde Center (435 Oakview Road in Decatur). Complimentary coffee will be provided by local coffee shop Kavarna, so bring your mugs! At 10:30am the presentations and seed saving demos will commence. After we learn from our experts, we will taste and share our summer fruits. For more information call 404-889-2925.

Join Dan Harris, beekeeper and owner of Booger Hill Bee Company, for an Advanced beekeeping class at the State Botanical Garden of Georgia Shade Garden Arbor on August 10 from 9:00 AM—11:00 AM. The class costs $16 and participants will perform a 24-hour Varroa mite count and apply a variety of fall treatments for Varroa and other pests. Harris will also discuss fall and over-wintering preparations for your hive. Completion of the beekeeping for beginners series required. Contact Cora Keber for more information, 706-542-6156.

Gardening Events in Our Area

West Broad Farmers Market is at the corner of West Broad and Minor Street on the first Saturday of every month (May-December) from 10:00 AM-1:00 PM. The next market is open on August 3. For more information, contact Athens Land Trust at 706-613-0122.

Seniors Garden Club hosted by the Athens Council on Aging meets every Thursday from 10:00 AM-11:30 AM. Meetings are FREE. Contact 706-549-4850 for more information.

Athens Farmers Market is at Bishop Park on Saturdays from 8:00 AM—12:00 PM and at City Hall on Wednesdays from 4:00 PM-7:00 PM. Saturday market events include live music, chef demos, and kid’s activities.

Visit the Oglethorpe Fresh Farmers Market at 111 South Platt Street for on Saturdays from 8:30 AM—12:30 PM in the heart of downtown Lexington. In addition to produce, there will also be jams, jellies, honey, and friends! For more information, contact 706-743-3015.

Amanda’s Slice

I never thought I’d say this, but “rain, rain, go away. Come again another day!” With 36 inches of rainfall, Athens has already seen 76% of its average annual rainfall. It’s only July!

While some plants have done exceedingly well with all the rain, others have not. Multiple clients have brought wilted, browning tomato samples by the extension office throughout June and July. After one look at the samples, it was evident that early blight disease has had a field day in gardens this year.

Keep an eye out for plants in your yard that might be stressed with the amount of water they have received. A client brought in a yellowing Rose of Sharon, requesting a recommendations to prevent further yellowing. Unfortunately, there isn’t much anybody can do for sensitive outdoor plants under these wet conditions. My only recommendation is to ensure there is adequate drainage to draw water away from sensitive plants.

With all that said, Happy gardening!

“Everybody talks about the weather, but nobody does anything about it.”

Mark Twain
Outdoor Water Restrictions:
Clarke, Barrow, Oconee & Jackson Counties

Outdoor water use for Clarke, Barrow, Oconee, and Jackson Counties is now limited to three days per week with even number addresses allowed to water on Saturday, Monday, and Wednesday and odd number addresses allowed to water on Sunday, Tuesday, and Thursday. The ban on watering between 10:00 AM and 4:00 PM remains in effect for all scheduled watering days. No outdoor watering is allowed on Fridays other than exemptions below.

THE FOLLOWING USES ARE EXEMPT FROM ALL HOURLY/DAY OF THE WEEK RESTRICTIONS:

- Drip Irrigation
- Soaker Hoses
- Hand Watering
- Food Gardens
- New installations of plants and turf (with a permit)
- Grey Water, Rainwater and AC Condensation Reuse
- Golf Course- Tee and Green Irrigation
- Plants for sale, resale, or installation

For more information and additional exemptions please see the following link:


Mission Statement

The Cooperative Extension’s mission is to respond to the people’s needs and interest in Agriculture, the Environment, Families, and 4-H/Youth in Athens-Clarke County with unbiased, research-based education and information.