



Burlington County Master Gardeners Newsletter

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Welcome

The autumnal equinox is past; harvest holidays and cold weather are coming. The growing season is ending but gardeners are not slowing down. The goal of this publication is to communicate what plants are blooming and what pests are buzzing around the County and to highlight the work of our Master Gardener (MG) project teams to both the MG community and the general public and to share information on the Master Gardener Program in Burlington County as well as general horticultural information. Master Gardeners are trained volunteers who assist the Rutgers New Jersey Agricultural Experiment Station (NJAES) Cooperative Extension in its mission to deliver research based horticulture programs and information to the general public.

What's Blooming

Now is the time to pay special attention to your fall vegetable crops such as brassicas (cabbage, cauliflower, chard, broccoli, Brussels sprouts, kale, spinach, etc.) winter squash and pumpkins. These are all long season crops (which means they take some time to mature for harvest) so be sure to scout them weekly to keep pests and diseases in check.

Chrysanthemums or 'mums' are the keynote for the autumn flower garden. However, there are several native plants which bloom until frost providing a burst of fall color and supplying bees and butterflies with nectar and when other sources are beginning to fade. These include *Caryopteris* (blue mist shrub) which presents a blue flower cluster starting in August, *Chelone* (Turtlehead) which has blossoms shaped like turtle heads with colors varying from white to pinks and purples, various members of the Aster family (genera *Almutaster*, *Canadanthus*, *Doellingeria*, *Eucephalus*, *Eurybia*, *Ionactis*, *Oligoneuron*, *Oreostemma*, *Sericocarpus*, *Symphotrichum* and *Eupatorium*). The faded flowers of boneset (*Eupatorium perfoliatum* L.) are especially attractive to migrating male monarch butterflies because the flowers provide a chemical which improves their fertility and makes them more attractive to females.

What's Buzzing

- Deer ticks adult peak activity thru early December
- Winged yellow ants
- Fall web worms
- Cabbage looper
- Diamondback moth
- Fall armyworm



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The following may try to overwinter in the house:

- Box elder bugs
- Western conifer seed bug
- Asian lady beetles
- Brown marmorated stink bug

NJAES publishes the [Rutgers Plant and Pest Advisory](#) for commercial growers. These publications contain information which can be useful to homeowners. A new feature is that the NJAES Vegetable Working Group has joined the Cornell University's Network for Environment and Weather Applications (NEWA) to bring disease and insect forecasting to vegetable growers throughout New Jersey. Over 30 weather stations from Sussex to Cape May County now offer forecasting services for 19 specific pests. The website, managed by the New York state Integrated Pest Management (IPM) program, can be found at <http://newa.cornell.edu/>. Because the map can be slow to paint, you can save time by using the "Choose a NEWA weather station home page" menu. The list is in alphabetical order by town.

Calendar

Garden Chores

- Watch for frost warning (mid-October).
- Harvest mature green tomatoes for ripening indoors BEFORE first frost.
- Cover tender plants when frosts are forecast.
- Bring in houseplants.
- Bring in summer bulbs for storage.
- Plant spring bulbs until the ground freezes.
- For lawns: complete turf seeding by October 15 and fertilize for the last time before November 15.
- Clean up and compost debris from beds, but remove and destroy any material from diseased plants.
- Drain and store hoses for the winter.
- After ground freezes, apply winter mulches to bulbs, perennials, and strawberries.
- Keep firewood away from house until ready to use to avoid brining critters in logs into the house.

Events

Rutgers Master Gardeners Association of New Jersey (RMGANJ) Fall Conference (\$25)

10/06/12, 8:30 AM-3:30 PM, Douglas Campus Center, 100 George St., New Brunswick, NJ



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This is biggest and best MG event of the year in NJ. Speakers and workshops are top-notch and it's always fun and interesting to meet and talk with MG's from all around the state. The keynote address and presentation of awards will count as 3 hours of CE and the afternoon workshop sessions will count as 1 hour of CE each, for a potential total of 5 hours of CE to be earned in one day. Space is limited, registration is required.

Bats of New Jersey (Free to MG's, \$5 donation requested from other attendees)

10/09/12, 12:00 noon-1:00 PM, RCE Auditorium, Westampton, NJ

Education and Outreach Manager for the Conserve Wildlife Federation of NJ, Maria Grace, will give a presentation on the importance of bats to our ecosystem and the benefits they provide to us as gardeners. Feel free to invite a friend to this event! Attendance qualifies as 1 CE hour for MG's. Please RSVP to Brooke McMinn at burlingtonmg@njaes.rutgers.edu.

Garden Club of NJ Gardening Study School (\$50/day or \$85 for both days)

10/09/12 and 10/10/12, 8:00 AM-3:30 PM - Holly House, Rutgers Gardens, East Brunswick, NJ

The Gardening Study School is held annually and consists of 4 courses, each containing 10 hours of instruction on an extensive array of gardening topics. Completing the curriculum and passing exams based on each of the four courses can lead to becoming certified as a Gardening Consultant. The exams are given a couple of days after each course and are not mandatory unless you want to pursue certification. Attendance qualifies as 10 CE hours (5 hours for each day) for MG's. See link for more details: http://njclubs.esiteasp.com/gcnj/gardening_study_school.nxg.

Bee-ginner's Beekeeping (\$175)

10/11/12-10/12/12, 9:00 AM-4:00 PM

10/13/12, 9:00 AM-12:00 noon, Rutgers EcoComplex, Bordentown, NJ

Several people have asked when this workshop would be offered again, and here it is! See link for details and registrations: <http://www.cpe.rutgers.edu/brochures/intros/bee.html>. Attendance qualifies as 14 CE hours.

Master Gardener Potluck Picnic (Free-just bring a side dish!)

10/27/12, 3:00 PM-7:00 PM, the home of Judy & Bruce Shaw, 523 Creek Rd, Moorestown, NJ

4:00 PM Open mike for MG stories

4:30 PM Croquet (optional!)



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Celebrate the Joys of MG and Halloween! We'll provide Burlington County Vegetable Lasagna, tea and lemonade, paper goods, cutlery. Bring a side dish and any other beverages of your choice. Family welcome. ** Costumes** optional but prizes will be given! RSVP: jauershaw@gmail.com.

2013 Burlington County Master Gardener Training Program (\$250, Free to certified MG's)
01/15/13-04/16/13, Tuesdays and Thursdays, 9:00 AM-12:00 noon, RCE, Westampton, NJ

Now accepting new applications. Time spent in classes qualifies as CE hours for certified MG's. Providing a snack qualifies as 1 other volunteer hour. Contact RCE at 609-265-5050 for details.

Rutgers Professional Landscape Programs (various fees)
Upcoming Course Offerings

Rutgers Office of Continuing Professional Education offers many classes related to gardening and horticulture that MG's may find useful. See links for details and registration.

Arboriculture and Tree Care: http://www.cpe.rutgers.edu/landscape/arboriculture_tree_care.html.
Plants and Pruning: http://www.cpe.rutgers.edu/landscape/landscape_plants-and-pruning.html.
Turfgrass Management: http://www.cpe.rutgers.edu/landscape/turfgrass_management.html.

General Meetings

Fall: October 9, 2012, 10:00 AM-12:00 noon, RCE, Westampton, NJ

Winter: January 8, 2013, 10:00 AM-12:00 noon, RCE, Westampton, NJ

Spring: April 9, 2013, 10:00 AM-12:00 noon, RCE, Westampton, NJ

Summer: July 9, 2013, 10:00 AM-12:00 noon, RCE, Westampton, NJ

Attendance qualifies as 2 other volunteer hrs. Providing a snack qualifies as 1 other volunteer hr.

Articles

What is a Tree Worth?

By Joan Johnson

Trees brighten city streets and delight nature-starved urbanites. Now scientists are discovering that they also play a crucial role in the "green infrastructure" of America's communities.

Condensed from an article by Jill Jonnes in *The Wilson Quarterly*, Winter 2011

On April 8, 1905, President Theodore Roosevelt, attired in a dark suit and top hat, was in Fort Worth, Texas, where youngsters looked on from a school window as he shoveled soil over the roots of a sapling. It was Arbor Day, which schools and communities had recently begun commemorating.



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The ever vigorous president was demonstrating hands-on, his love of trees. For him, this was not a publicity stunt. In an address several years later, he celebrated "the importance of trees to us as a Nation, of what they yield in adornment, comfort and useful products." He saw trees as vital to the country's well-being. "A people without children would face a hopeless future; a country without trees is almost as hopeless." (*Today we KNOW that trees may be responsible for saving our planet and preserving the environment which nurtures the human species.*) Roosevelt used his presidential power to create and enlarge 150 national forests, preserving them by presidential decree. Next he created the National Forest Service to ensure the wise conservation and use of these public lands.

America is blessed with some 600 native species. In 1793, Thomas Jefferson said that, "I never before knew the full value of trees. Under them I breakfast, dine, write, read, and receive my company. What would I not give that the trees planted nearest the house at Monticello were full grown."

Unfortunately for the seemingly endless virgin forests that were here when the colonists arrived, trees were taken for granted. They were felled for building shelter, cut up for heat and cleared for agriculture.

In the 1850's along came Julius Sterling Morton, a nature lover who conceived of an annual day of tree planting, inaugurating a tradition that was rapidly adopted around the country and finally the world. Today, Arbor Day is observed in the U.S.A. on the last Friday in April. Prior to WWII arborists, foresters and landscapers began to perceive the need for urban tree planting, and started to raise public awareness of it. A Chicago municipal forester declared that "trees planted in front of every home in the city cost but a mere trifle, and the benefits derived are inestimable." In the years after the war, city forestry departments started planting new trees and performing maintenance on those existing. Smokey the Bear became the spokesperson for the National Forestry Service in their annual fight against the raging fires of the dry season out west.

By the 1970's most Americans were living in the cities and suburbia, and we became increasingly aware of the need to plant trees. Upon taking office in 1989, Chicago mayor Richard Daley vowed to plant half a million trees as part of the effort to revive the decaying city. As it became apparent that Chicago's air was heavily polluted, he queried, "Don't trees clean the air?" No one could provide an answer at that time. No one knew anything about America's urban forest. What trees were there? How many of each species? How old were they, and how was their health? Did they really affect air quality? Or reduce the need for air conditioning? How many gallons of rainwater did the root zones absorb, help filter and keep out of the overstressed sewerage system? What effect did tree lined streets and tree rich landscaping have on commerce? Or crime? Or human well-being? How could you quantify the benefits so as to persuade city officials that trees were valuable "green infrastructure" and not mere ornamentation?

Forest Service botanists and scientists began studying how to establish a science of the urban forest. The first study was the Chicago Urban Forest Climate Project. (*It is interesting to me that one of the*



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leaders in urban forestry was Chicago...not a city that you would normally think of as being an environmental leader. The report was authoritative and comprehensive. They listed the size of the Chicago metro area's urban forest as 51 million trees, 2/3 of which were in good /excellent condition. It was replete with charts and graphs, and included detailed information about commercial /residential distribution, tree canopy density, etc. Now there was actual data to show how many tons of carbon dioxide, sulfur dioxide, ozone and particulate matter were removed by the trees.)

This study introduced a radically new way to think about city/suburbia trees. Based on the impressive information in the study, the US Forest Service set up its Center for Urban Forest Research to continue and refine the data. A study in New York City showed that street trees delivered \$122 million in benefits annually or about \$209 per tree. In response to this and other NYC urban studies of the city's trees benefits, as shown in dollars and cents, those in control began to respond by quadrupling the city's forestry budget. Also a new initiative, Million Trees NYC in partnership with Bette Midler's NY Restoration Project is about one third of the way: the completion date is 2018.

In the Delaware Valley, Plant One Million is a regional partnership led by the [Pennsylvania Horticultural Society](#) (PHS) to plant one million trees throughout 13 counties in southeastern Pennsylvania, New Jersey, and Delaware. The goal is to restore the "tree canopy cover" —the area of land shaded by trees—in the Greater Philadelphia Region to 30 percent. [added by editor]

Now the Forestry Service has developed software to assess and evaluate our urban and suburban forests. It is called i-Tree and is in use nationally by foresters, landscape architects, and state, county and community commissions and among the spinoffs is something called the Tree Benefit Calculator which tells homeowners the value of their trees. *(I figured that my 30 year old willow oak absorbed and filtered approximately 7669 gallons of rainwater (\$75.92), raised my property value by (\$75.67), saved 229 kilowatts of electricity (\$17.58), improved air quality and stored carbon (\$17.58). My family and I also enjoy the trees beauty, shade, coolness while hearing the music of songbirds and watching the wildlife living and playing in the branches.*

This has been a very brief overview of the awakening interest over the past century, in our nation's forests and trees, urban and suburban forests and WHY the planting and maintenance of trees is of prime importance in the preservation of our environment on this planet.)

Rubber Mulch

By Judy Janas

Several weeks ago a friend asked if it was OK to use rubber mulch in his garden. I didn't know and decided to research it. Googling "Rubber Mulch", I found numerous websites touting the wonders of rubber mulch. "Long-lasting—never mulch again!" said one website. "Safe for pets and children",



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said another. I then added, “ext” (for agricultural extension service) to my search and found several university based websites which painted a very different picture.

Rubber mulch is made from shredded tires that can be dyed and then used in ornamental landscapes and beneath playground equipment. I further learned that it is not especially effective in keeping down weeds. In fact, organic mulches such as wood chips, straw and fiber mats provide much better weed control.

Just as tires burn in dump sites so does rubber mulch giving off noxious fumes and even damaging areas around it.

Contrary to sales promises about never having to mulch again, rubber mulch does break down. Microbes break down rubber just like they eventually break down any other mulch. As rubber mulch breaks down it releases toxic chemicals into the soil as well as into water sources.

Finally, when rubber mulch gets hot it can burn your feet to say nothing of the way hot rubber mulch can smell.

So, to answer the question “Is it OK to use rubber mulch in the garden? The answer is a resounding “No!”

Cicadas – Who’s That Humming in My Ear?

By Adele Bourne

Because spring came so early, summer was so hot, rains so torrential, winds so tempestuous, this year the constant hum of cicadas from late April through early September seems especially remarkable. Three thousand varieties of cicadas have been identified, seemingly all of them surrounding my quiet house, comforting at times, hugely irritating at others. Who are these creatures and what do they mean to the gardener? Friend or foe? Mystery or solution? What place do they have in nature’s scheme? And why do they surround my house?

In late spring, usually May or early June, Periodical Cicadas (*Magicicadas septendecim*)- and they are truly magical- appear every 13 or 17 years, emerging into the air as adults, all at once, or over a period of two or three days, as noisy, social, flying insects, sometimes in clouds of thousands, even millions, sometimes over several states at a time..

This transformation occurs after 13 to 17 years spent below ground as root- sucking, solitary, sedentary nymphs. There is no other creature who behaves quite like this in the natural world.



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The nymphs cause little damage to plant or tree roots unless an old orchard has been infested for generations. Then plowing and application of certain insecticides can help. Cicadas live in undisturbed habitats which explain why they buzz around my yard which has not changed since 1901, and they do not buzz where the new Starbucks is being built over there on Fellowship Road in what had once been open meadow.

Most damage is caused by the female cicadas when they lay their eggs. Equipped with a handy saw-toothed blade at the end of their abdomens, they pierce the bark of a twig and carve a slit into which they lay up to two dozen eggs, then move on down the line, carve another slit, lay some more, up to 600 eggs for each female cicada. Female adults don't eat much if at all, and die shortly after laying their eggs. The males die shortly after mating, their life consisting of "fly, sing, mate, die". In years of small broods, such as 2012, little damage is done. The last foot of a twig may break off in a natural kind of pruning. But in years of heavy infestation, such as may happen with the arrival of Brood I in NJ in 2013, young trees and bushes are at risk. Wrap them in 1/4" mesh or netting to protect them, or hold off on planting them until mid-July when the adult periodical cicadas have died off and the eggs, after seven or eight weeks, have hatched into nymphs which have disappeared into the ground.

Burrowing a foot and a half to two feet below ground in an old apple or peach orchard or undisturbed land, the nymphs undergo what appears to be five cycles of growth. It takes them seven or eight years to mature, but then continue to grow and feed until 6 more years have passed for some, ten more years for others. At long last, when mating time arrives, the nymphs push up within an inch of the surface, and then stop. If the ground is wet, they build themselves a small tower, tiny cones that can sometimes be observed in an old orchard. Then, at a mysterious signal no one has yet been able to identify, on just the right night at just the right time, they push up from the ground, fasten hard onto an upright of some kind, a tree, bush, stalk, or blade of grass, wriggle out of their split nymphal skin, emerge fully grown, their bodies at first soft and white, then hardening and darkening. This hardening allows the males to begin their mating music, by vibrating membranes of their abdomens. The females listen silently, and then fly up to mate with the males. Sayonara!

Periodical cicadas, native to North America, appearing in the North East and as far south as Virginia, and as far west as Illinois, were mistaken by early colonists as a plague of locusts, hence they are sometimes called 17 year locusts, although locusts are in the grasshopper family, and cicadas do not wreak the same kind of havoc as locusts do. Since 1893, entomologists have tracked the appearance of periodical cicada broods. The three species with a 17 year cycle, mostly emerge in the North while the three species with a 13 year cycle emerge in the South, although there may be overlap. The 17 year cycle that appeared in 1893 was labeled Brood I, Brood XVII appearing in 1909, Brood I appearing again in 1910. Thirteen year cycle broods were numbered XVIII through XXX.



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There are approximately 13 broods of 17- year cicadas and the same number of 13- year cicadas, although some broods are very small, some nearly extinct, and some are overwhelmingly large.

All cicadas look rather like my grandmother who was once called “plain, short, stout, and brilliant.” With stubby bodies, clear wings, and large compound eyes, they fly clumsily, occasionally bump into people but only by accident. They do not sting. If you pick up a cicada and feel a prick that is a female digging in your palm with her egg depositor. If the cicada buzzes madly, like the one whose desperate yelp for help led our fellow Master Gardener Judy Shaw to rescue it from the grasp of a cicada wasp, it is a male. Cicada music, specific to each species, not only attracts mates but sounds alarms.

Cicada wasps do help control the cicada population, but even more effective are the animals, birds, and fish who gorge on the soft white bodies of the newly adult cicadas. A website, “If You Can’t Beat ‘Em, Eat ‘Em” tells us that cicadas are part of the same biological phylum as crawfish, shrimp, and lobster. They have as much protein pound for pound as red meat, are full of vitamins and minerals, are low in fat, and possess no carbs. Long savored by the Iroquois Indians, male cicadas can be toasted like crunchy popcorn; female cicadas can be roasted on a stick, made into tacos, stir-fry or dumplings. (See the website for recipes.)

Ancient peoples have seen cicadas as symbols of rebirth. They very well may become someday our saving grace. While I am not yet ready to harvest them, I find them now far more comforting, far less annoying as they drum on and on and on.

References:

Articles:

- George A. Hoover, “Entomological Notes: Periodical Cicada *Magiciada septendecim* (Linnaeus),” College of Agricultural Sciences, Pennsylvania State University, 2003.
- Louis M Vasvary, PhD., “Periodical Cicadas: “17 Year Locusts,” Rutgers Cooperative Research & Extension Fact Sheet, Desktop Publishing, Rutgers-Cook College, 2004.

Books:

- Donald J.Barror/Richard E. White. Insects, Peterson Field Guide, pp. 58, 18, 129, plate 4.
- The Gardener’s Notebook: “Cicada 2012: Control of Periodical Cicada Insect.”

Websites:

- <http://animals.nationalgeographic.com/animals/bugs/cicada/>



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Vermiculite and Asbestos

By Wayne Korn

I learned something today from a seemingly simple call in to the Helpline. A couple in Hainesport had a freestanding fireplace they wanted to remove. They had installed it 33 years ago and, at the time, used vermiculite (a lot of it!) to insulate the firebox. Their question was, do we need to have the vermiculite “tested” prior to removal? They had heard that vermiculite from Colorado might be contaminated with asbestos. Vermiculite? Asbestos? Colorado? Isn’t vermiculite something you mix into potting soil? Hmm... I gave her the standard Master Gardener Intern response and said I would do some research and get back to her with the caveat that they were not to disturb the vermiculite. A call to the NJ State Department of Environmental Protection proved fruitless. The technician I finally got punted to asked me what vermiculite was. By that time Brooke’s ears had perked up and she had already pulled up a US Environmental Protection Agency (EPA) website about vermiculite contaminated with asbestos. <http://www.epa.gov/asbestos/pubs/verm.html>

Why should I be concerned about asbestos-contaminated vermiculite insulation?

“A mine near Libby, Montana was the source of over 70 percent of all vermiculite sold in the U.S. from 1919 to 1990. There was also a deposit of asbestos at that mine, so the vermiculite from Libby was contaminated with asbestos. Vermiculite from Libby was used in the majority of vermiculite insulation in the U.S. and was often sold under the brand name Zonolite. If you have vermiculite insulation in your home, you should assume this material may be contaminated with asbestos and be aware of steps you can take to protect yourself and your family from exposure to asbestos.”

How can I tell if vermiculite insulation contains asbestos?

“You should assume that vermiculite insulation is from Libby and treat the material as if it contained asbestos by not disturbing it or by using a trained professional if it needs to be removed. Since the Libby mine was estimated to be the source of over 70 percent of all vermiculite sold in the U.S. from 1919 to 1990 and vermiculite from Libby was contaminated with asbestos, further testing is not necessary to take the appropriate precautions. While you can hire a trained professional to test your attic for asbestos, this may be expensive and, depending on the methods used, might give you erroneous results. We do not recommend that you open your walls to check for vermiculite.”

The web site has pictures of different forms of vermiculite that is worth a look. The call was closed out by sending her our findings and recommendations.

P.S. Use perlite in your homemade potting soil.