



Summer 2020
Volume 23 Issue 2

Over the Garden Gate

President's Corner

Shantha McDonald

The Great Georgia Pollinator Census

The Great Georgia Pollinator Census takes place this year on August 21&22. This is an event in which citizen scientists participate to record various pollinators they see on flowers in one area during a fifteen minute period. This task can take place at any location such as your home garden, school garden or even at your work place garden. The results of this event will be submitted to the database at the University of Georgia.

So, what is pollen and what are pollinators? Pollen is the genetic material, a fine sticky yellow powder, produced by the male part of a flower, the anther. This pollen is needed by the female part of the flower, the stigma, in order to reproduce. Only the pollen from flowers of the same species can lead to fertilization, resulting in successful seed or fruit production.

Pollinators are small animals such as insects, bees, butterflies, wasps, ants, beetles, bats and birds that carry pollen on their bodies or beaks. In their quest to drink nectar from flowers, which provides them with energy and nutrition, pollinators travel from flower to flower. The pollen from these flowers stick to their bodies when they land on a flower to drink its nectar. During such interactions between pollinators and flowers the pollen is transferred from one flower to another resulting in reproduction of the flower.

Pollinators are very important for seed production, crop production, and bio-diversity. Of course, all of this has an impact on our economy. They are also the key to survival of various species of wild plants. Without the pollinators we will not be able to obtain any of

our colorful fruits, nuts, and vegetables. Pollination also occurs through wind pollination and some artificial pollination is done by humans. However, this happens on a comparatively small scale.

There is evidence that pollinators' populations are dwindling worldwide. Scientists believe this is due to the misuse of chemicals, loss of habitat, various diseases, parasites, and invasive plants and animals. It is important for us protect these pollinators for the survival of our species.

One of the steps we can take to promote and protect pollinators is to participate in the pollinator count. The data collected in this event will help scientists to obtain much needed evidence on pollinators from various parts of the country. In addition, by taking some simple actions such as planting native plants to provide nectar and food for pollinators and their larvae, reducing the use of pesticides, installing native bee houses and bat houses, reducing the size of your lawn by incorporating flower beds and others you can help pollinators. You will receive additional information regarding the Great Georgia Pollinator Census in my newsletter.

Here is a link to information on gardening for pollinators:

https://secure.caes.uga.edu/extension/publications/files/pdf/B%201456_2.PDF

Write for Us!

Like to write? Have something to say? Your fellow master gardeners want to hear from you!

Email Rick at
rsfreeland@charter.net for details.

Inside This Issue:

President's Corner	1
The Elusive Click Beetle	2
Hydrangea Lore	2
Misunderstood Tomato	3
Heritage Landscape	4

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The Elusive Click Beetle

Hugo Kollmer

I recently had my first encounter with an Eastern Eyed Click Beetle, lying on our patio, with legs retracted, withdrawn and apparently dead. From eight feet away, this curiosity, with its glossy exoskeleton, resembled a piece of costume jewelry. I reached down and picked it up. A moment later, I felt movement and heard a distinct click. Studying this mysterious object, I concluded it was undoubtedly an insect. I set it down and watched. Within a few minutes, the beetle's legs quickly extended and then it crept off among a group of ferns.

Adult Eastern Eyed Click Beetle *Alaus oculatus*



Nearly two inches long, the Eastern Eyed Click Beetle (*Alaus oculatus*) is commonly referred to as the Big Eyed Click Beetle. Click beetles

are the acrobats of the insect world in that if they are turned over on their back they are able to flip themselves in the air and land on their feet.

Harmless, the Eastern Eyed Click Beetle is a quite interesting and eye catching insect both because it is pretty large (longer than an inch) and has those beautiful pair of eyes adorning the back of its head. Don't be deceived, though, these are not the real eyes of the beetle.

This formally attired gray and black and white insect is one of the largest of the 800 Click Beetle Family (Elateridae). Other Click beetles can be found across the eastern U.S., as far west as Texas, but they lack its unique traits. Huge eyespots on its pronotum make it one of the most easily identified beetles. These are "false eyes, likely an adaptation to scare off potential predators. The true eyes of the Eyed Click Beetle are much smaller and located at the bases of its heavily saw toothed antennae.

Occasionally, an adult Click Beetle will take flight during its midair maneuver, but more often it simply falls back to earth. If it lands on its back the beetle may "click" or it may tightly tuck its legs and anten-

nae and "play possum" until the predator loses interest. Eventually, it will wander off, perhaps looking for a meal such as flowers, nectar or leaf sap.



Click Beetles, like bees, ants, butterflies, and some other insect orders, stage (complete) metamorphosis; egg, larva, pupa, and adult. Larvae, with their elongated shape and hard exoskeletons, live in soil for as long as five years.

Although its cousins cause significant damage to the roots of agricultural and horticultural plants, larvae of the Eastern Eyed Click Beetle (wireworms) consume noxious larvae, including those of wood-boring beetles, flies, and other pests.

Hydrangea Daydreaming

Rick Freeland

Hydrangeas are deciduous summer flowering shrubs, sporting bold, globe-shaped blooms, pendulous blossoms, or dainty flowers resembling lacy cap. Species flower colors range from deep blue to hot pink to white to pale green.

Of the twenty-three hydrangea species, five are cultivated in the United States.

Hydrangea macrophylla (Bigleaf Hydrangea) has a unique design characteristic—you can change the color of its flowers. Depending on your soil's pH, Bigleaf flowers can be deep blue or vivid pink.

Other plants, like *Hydrangea quercifolia* (Oakleaf Hydrangea), have panicle-shaped white flowers that, in time, fade to a pink-tinged lavender. As a native understory plant, Oakleaf hydrangea looks perfectly at home planted at the edge of the woods. In the fall, the plant's foliage turns a deep, rich red. That, along with a cinnamon

brown exfoliating bark exposed in winter when the plant sheds its leaves, makes Oakleaf Hydrangea interesting in every season.

Hydrangea paniculata 'Grandiflora' (Pee Gee Hydrangea) and *Hydrangea arboreceans* 'Annabelle' (Smooth Hydrangea) each have showy white flowers. And Annabelle, with its huge mophead blooms, works especially well as a specimen plant.

Hydrangea anomola petiolaris (Climbing Hydrangea) is a true climbing vine, and will eventually cover a trellis, arbor, or other garden structure—even a tree. It's a lacecap hydrangea, sporting white blooms.

Flowers aren't the only assets hydrangeas bring to a garden design. Their loose, rounded forms (averaging about 4' high and just as wide) are perfect for low screens and massing. The plants also work well used in mixed borders.

If given room to grow and allowed to keep their natural form, massed hydrangeas can make a vivid statement planted in front of privacy fences or lining walkways and paths. Or position them behind a patio or along property lines, where their structural forms can help define space.

A mature hydrangea can be showy, and makes a good stand-alone specimen plant that draws the eye. Place one at the end of a walkway, or in front of a stand of conifers for a premium accent. Their medium-coarse textures are perfect foils for finer-textured plants.

Hydrangeas also make wonderful container plants and cut flowers.

Versatile hydrangeas serve both functional and aesthetic purposes. Their many design characteristics make them excellent choices for most any landscape design.

Tomatoes, which most consider quintessentially Italian, actually originated in South and Central America, where they are still found in the wild. The native fruit is the size of a pea. Over time, the tomato has been hybridized and cultivated but this plant sure did have a bad reputation early on. Mostly because the plant resembled deadly nightshade. Early botanists recognized the relationship of the tomato plant with the ‘Solanaceae’ family, deriving from the nightshade plants. This family also contains potatoes, chili peppers and eggplants; however, at the time, Europeans were only familiar with the eggplant. All the others came from the New World and were considered suspect.

The Italians, famous for using tomatoes in their cuisine, only used the tomato as table decoration well into the 17th century

In 1597, when the tomato was introduced in England and North America, it was viewed as unhealthy and poisonous, unfit to eat. As breeding advances were made in Spain and Italy this view slowly changed.

The tomato was also known as a poisonous apple because some aristocrats ate the fruit and died. We now know that they really died from their pewter plates which contained lead.

The first references to tomatoes in the North American colonies was

printed in 1710, placing tomatoes in the Carolinas. The tomato became an acceptable, edible fruit in many regions. Word of the tomato spread slowly and with it many myths and questions from farmers, who knew how to grow them but not how to cook them. By 1822 hundreds of tomato recipes appeared in print.



In the 1830’s in New York, the tomato was thought to be poisonous because of an infestation of the tomato horn worm [larva stage of sphynx moth]. It wasn’t thought that the caterpillar was toxic but that it poisoned the tomatoes as they crawled over the plant.

During the Civil War, canneries boomed, filling contracts to feed the Union army. Tomatoes grew quickly and held up well during the canning pro-

cess. After the war, demand for canned products grew, which meant that more farmers needed to grow them.

In 1887 U.S. tariff law imposed a 10% tax on vegetables, but none on fruit. A Manhattan wholesaler, John Nix, sued the New York tax collector claiming tomatoes were really a fruit and not a vegetable. The case was filed in 1887 and made its way to the Supreme Court in 1893. In the case witnesses read from dictionaries and definitions for ‘fruits’ and ‘vegetables’ but ultimately the court unanimously ruled that although botanically speaking tomatoes were technically fruits (berries), in everyday life vegetables were things usually served at dinner and not like fruits that were generally served as dessert.

But that doesn’t mean the question is really settled. Several states such as Tennessee and Ohio rebelled, making the tomato their state fruit. New Jersey made it their state vegetable. And then Arkansas has made it both their state fruit and vegetable. So, you decide.

Throughout the 19th century the tomato has made its way into the hearts and homes of Americans. In the 1870s & 80s seed catalogues began to offer more varieties and in 1897 Campbell Soup came out with condensed tomato soup, securing the tomatoes’ place in our culinary history.

Know Your ‘Maters

Rick Freeland

Not all tomato plants are created equal. It pays to know your ‘mater before planting.

Determinate variety tomatoes (or “bush” tomatoes) grow to a certain bushy height and growth ceases. Fruits on a determinate plant will normally all ripen at approximately the same time, likely spanning just a few weeks. A determinate variety still may need support (unless it is a dwarf), but since the plants don’t grow too large, tomato cages or small stakes should suffice. Determinate tomatoes are great for growing in tomatoes within a small space, and fruiting in a relative short period makes canning a snap.

Indeterminate tomatoes (or “vine” types) keep growing and producing fruit until the first frost kills the plant. They can grow really large, averaging 6 feet, but some varieties may reach 12 feet or higher. Indeterminate tomato plants require substantial staking to support their weight. Indeterminates will continue to bloom and produce fruit throughout the growing season, enabling you to prolong your fresh tomato feast.

What the Heck?

CEC

Cation Exchange Capacity (CEC) is a measure of how much fertilizer a soil can hold and release over time. High CEC is good. It means your soil will hold a lot of fertilizer. Clay soils have high CEC. Low CEC means you will have to fertilize more often. Sandy soils have low CEC.

A Project with Purpose

In his quest to restore peace and unity in the United States after the Civil War, James Longstreet took refuge in Gainesville, Georgia, as a gentleman farmer and hotel proprietor. The **Longstreet 1875 Heritage Landscape** is restoration of the grounds of his Piedmont Hotel in keeping with the horticulture that surrounded Longstreet and his guests as they strolled the garden paths and gazed out to the distant Blue Ridge Mountains.



Restoration of the property to 19th century specifications has been underway by the Longstreet Society Site Development Committee for over 15 years. Five years ago, landscape architect Rick Freeland, a Hall County Master Gardener, redesigned the landscape to reinterpret James Longstreet's historic design for the Piedmont Hotel gardens.

UGA Extension Hall County Project Review has approved the project for Master Gardener community service that will insure integrity of the Longstreet landscape as a major feature of the City's Main Street Project and Midtown Greenway redevelopment.

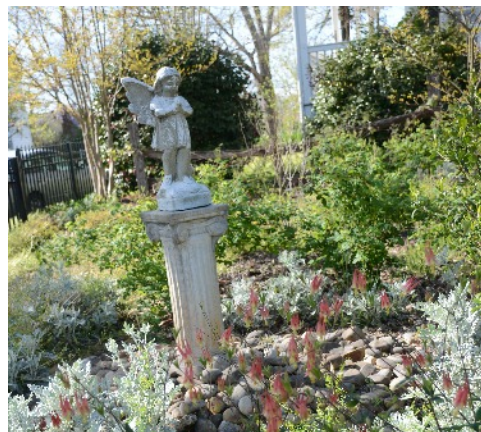
As a living, horticultural "museum," the landscape interpolates the plantings and architectural features of the late 1800s when domestic horticulture was taking hold over in the South after the agricultural dominance of corn and cotton. The Berckmans' Fruitland Nursery in August, GA, was the major supplier of plants that it

propagated and imported from all over the world through the port of Charleston, SC.

As a young boy, James Longstreet had lived on his Uncle A.B. Longstreet's plantation, which he sold to Fruitland Nursery and today is the 13th hole of Augusta National Golf Club that features the Formosa azalea. From the Fruitland Nursery catalogues 1875 to 1885, Longstreet would have ordered the tea olive *fruitlandii* for his hedge rows, gardenia *fruitlandia* for tea gardens, Helen of Troy camellia for his specimen plants, Catawba grape vines for his vineyard, and perennials that flourished in the Piedmont Hotel tea gardens.

Master Gardeners who participate in the "Longstreet Historic Gardens" project are propagating the heritage plants and studying feasibility of their use in contemporary landscapes:

- **Peace Garden** features gardenias, snapdragons, roses, native azaleas and rhododendron as those enjoyed by Longstreet's granddaughter Jamie Longstreet Paterson who lived in the remnant of the building in her last years.



- **Angel Garden** combines heritage plants of banana shrub, crepe myrtle, dusty miller featured in Fruitland Nursery catalogues along with native species columbine, phlox, sedum, wild hydrangea of

the Gainesville woodlands. This garden was designed by Nathan Wilson, Lanier Nursery and Gardens.

- Liberty Garden displays historic camellia japonica imported by Fruitland Nursery from England, Belgium, Japan and China to revitalize Southern garden horticulture.



- Brotherhood Garden, dedicated to founders of the Longstreet Society and features white flag iris-Cemetery Iris, Althea rescued from Longstreet's Green Street farm, forsythia and winter jasmine acquired from Sautee Nacoochee Holly Hill estate with provenance from Fruitland Nursery ca. 1850's.

As Hall County Master Gardeners prune the *Rosa rugosa* for rosehip jam, spread the Cemetery Iris, and forestall erosion with Vinca Major, they enhance the Longstreet 1875 Heritage Landscape to share the spirit of peace and brotherhood so needed in today's troubled times. As James Longstreet counseled to the New York Herald reporter at the outbreak of the Spanish American War, "On the eve of battle with a foreign foe, I would say to the children...love one another."

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