May 2015

Volume 10, Number 4

An E-mail Gardening Newsletter from Cornell Cooperative Extension of Rensselaer, Albany and Schenectady Counties



# Root Concerns

Notes from the underground

# Grub Hubbub in Collar City



September 11th Memorial Park

Grubs figure pretty big in my life. Every lawn lecture I give eventually comes around to the subject, even if they weren't on my agenda. I've studied grubs for research projects, counseled people whose lawns have grubs, and consoled those whose lawns were destroyed by them. Grubs are partly responsible for my career. I am fascinated by grubs, while most others are repelled.

If you've somehow gotten this far in life and don't know grubs, here's the scoop. Grubs are the larval stage of beetles, including the Japanese beetle and the European chafer, the two most popular characters in the Capital District. The adult beetles lay eggs in August, which quickly hatch into grubs. The grubs are white, C-shaped, have six legs on the front end, and a brown head capsule. They voraciously devour the roots of grass plants. They survive winter underground, eat a little more in the spring, pupate, then emerge as the next generation of beetles in June or early July.

There were rumblings last fall that the grub population was large, judging from the phone calls and inquiries. Now that spring has sprung, some lawns just aren't turning green. The worst case I've visited so far is the September 11th Memorial Park in Lansingburgh. A pretty spot bordering the Hudson, volunteers have spent countless hours planting, mulching, weeding and all the rest, turning the space into a true community asset. Originally part of the lawn was sodded, the other seeded. So which part did the grubs destroy? The sod, naturally. Grubs, it turns out, have good taste.



A full grown grub. Note six legs and brown head capsule. Photo from www.nysipm.cornell.edu

When Master Gardener Bette asked me to go have a look, I wasn't pre-

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Various animals have dined on grubs here

pared for the total destruction I witnessed. The lawn wasn't damaged – it was simply gone, with only a few (apparently tasteless) weeds left by the grubs. Not only will it be a tremendous amount of work to re-seed or re-sod the area, it will also be a substantial cost, for which there is no budget. I hope financial aid comes along, somehow, to turn the brown soil green again.

Grub professionals (as we like to call ourselves) estimate grub populations by digging small holes using a golf course cup cutter. The sample removed is about one-tenth of a square foot. At 9/11, I consistently found two grubs per cup cut, which means there were about 20 per square foot. The grubs are European chafers, the hungriest species. Entomologists estimate that just five to ten European chafers per square foot will significantly damage a lawn. Twenty turns a lawn into a moonscape.

But I think the actual grub population at 9/11 last fall was much higher, because numerous small peck-holes indicate a large amount of bird feeding. Crows, gulls and other winged creatures of the avian persuasion love grubs. There was also soil disturbance typical of skunks or raccoons, who also love a grubby snack. While we might distain the damage they do, the birds and mammals provide a great grub early-warning system. Too bad no human received the signal.

High populations of European chafer grubs have also been found eating the grass at a Troy school and in several home lawns. For more information about grubs and their management, see our fact sheet at: http://rensselaer.cce.cornell.edu/gardening/lawns-ornamentals/lawn-fact-sheets

**Text and photos by David Chinery**

# Yikes! What Is This?



This is a very scary-looking insect that you WANT to have in your garden. Six-spotted Green Tiger Beetles are ½" long with a bright metallic green body and long, white mandibles. The outer wings, called elytra, each have 3-5 white spots. Since there are 2 elytra, there can be 6-10 spots on a beetle. These beetles are usually found in open woods or along paths or streams. They usually live alone and only get together to mate. The male rides on the female's back for a while after mating to keep other males away. Eggs are laid in the ground by the female's ovipositor in June or July. Grubs hatch and burrow into the ground, then pop their heads up to catch small insects or spiders. The larvae overwinter in the burrow until the following July, when they pupate and hatch as adults in August. Adults are active during the day, catching the same small insects and spiders, either on the ground or while flying 1 to 3 feet off the ground. Adults also overwinter in their original burrows. Six-spotted Tiger Beetles are preyed upon by insect-eating birds and skunks but are hard to spot on the ground and emit a foul smell when threatened.

**Text by Pat Mulligan and photo by Christine Oppedisano**

# Morning, Glory!



http://extension.illinois.edu

One of my happiest work memories happened many years ago when I used to call a local grower to order annual plants for a busy garden center. No matter how rushed and over worked he might be, his voice never gave way to the stress of the season. The phone would ring in the greenhouse and the greeting was always the same, "Mornin', Glory!" he would cheerfully answer. The annual vine, morning glory conjures up much the same image and it is aptly named as it closes for the night and cheerfully opens to greet the day. The morning is this plant's most glorious time! The bloom lasts but a day before it gives way to another. It is an old-fashioned plant that most of us can remember growing on the fence at grandma's house. "Heavenly Blue" is an old variety but still one of the most commonly grown for nostalgia and the gorgeous china blue color.

Morning glories belong to the genus *Ipomoea* (Ip-po-mee'a), a large group of over 500 species including the familiar sweet potato vine. The morning glory family is *Convolvulaceae*. Native to Mexico and Central America, this vine is an annual in most zones of the United States. 'Scarlet O' Hara', 'Crimson Rambler' and 'Scarlet Star' are wonderful hot-pink-to-red cultivars while 'Grandpa Ott', 'Star of Yelta', and 'Mt. Fuji' have rich purple tones. A strong grower, the morning glory vine can climb 15 feet to cover a fence, arbor or trellis by clinging tenaciously with tendrils to form a dense screen. A favorite technique of vine lovers is to interplant morning glories with moonflowers (*Ipomoea alba*) for evening and daytime bloom. The plants have similar habits and requirements but the moonflowers are very fragrant.

Morning glories need well drained soil, a warm, sunny location, and a vehicle to get up and growing. They do not like overly rich soil or a lot of fertilizer. The seeds are large and very hard so they benefit from a few hours of soaking in tepid water or being rubbed between sheets of sandpaper to disturb the outer coating. They can be sown directly into the soil in late May or early June in the Capital District or they can be started indoors up to 4 weeks before setting the plants outside. Young plants benefit from pinching back the stems and one or two applications of a low nitrogen organic fertilizer. After that it is best to ignore them as they are quite drought tolerant. Do not be tempted to overdo the TLC as you will "kill them with kindness." Be sure to plant these garden charmers where they will be seen and enjoyed as they are certain to bring a smile and a memory to all who pass by!

**Text by Sue Pezzolla**

# HEIRLOOMS, HYBRIDS AND NOW THE BEST OF BOTH



Photo: Territorial Seed Company, Cottage Grove, Oregon

With all the misinformation and fear surrounding plant manipulation these days I thought I would bring up a time tested procedure for plant improvement. Have you heard of the new grafted tomato called Ketch-up 'n' Fries ™ ? This new cultivar is being offered to gardeners this season. Of course it is probably already sold out, as this product has received many positive reviews and has been a big success in the United Kingdom.

Ketchup 'n' Fries ™ is a grafted plant consisting of a tomato plant above ground (called the scion) and a potato plant below ground (the rootstock) growing together. This is possible because both the tomato and the potato are members of the same family, (Solanaceae), which makes them naturally compatible. Gardeners can expect to harvest 500+ red cherry tomatoes and up to 4.5 lbs of delicious white potatoes. Both vegetables will taste perfectly normal. This is a great new opportunity for those growing plants in containers but it does equally well in the open soil. This grafted combination is being offered for the first time exclusively by mail order by Territorial Seed Company. There is no genetic modification involved.

Grafting has been around for hundreds of years. Historically, most of the effort has been done with grapes, apples and roses. This old art is now making a comeback especially in the modern vegetable industry. Worldwide, billions of vegetables were grafted in 2011, and hardly any of this was done in the US. Why? It all goes back to the refusal of the U.S. to sign the climate-change treaties. This treaty encouraged farmers to grow sturdier plants because they were no longer allowed to use the soil fumigant called methyl bromide. Governments around the world have been trying to ban the use of this product as it has been known to deplete the ozone layer.

By grafting vegetable plants onto vigorous rootstocks, plants have been shown to be more disease resistant and more productive. Many tomato varieties as well as watermelons, peppers, cucumbers, and eggplants can be grown the same way. Johnny's Select Seed of Winslow, Maine has touted this new movement to be the "biggest single change since people started hybridizing tomatoes in the 1920's and '30's."

Home gardeners can try this practice themselves, although it is not as easy as it sounds to get the graft to heal without lots of practice. The good news is that now more and more retailers are bringing grafted plants to the market and they are also available via mail order. Companies like Territorial Seed Company, in Cottage Grove, Oregon, and White Flower Farms in Litchfield, Connecticut are selling more grafted plants.

TEXT BY CHUCK SCHMITT

Growers and homeowners are reporting yields that are two to three times heavier than what they normally receive from their heirlooms, without any change in flavor. They are also reporting an earlier and longer harvesting season. The fruit is identical, the plants merely produce more of them in a single season. The reasoning is that these vigorous root systems not only impart the disease resistance, they also grow a greater root mass, improving their ability to take up water and nutrients. Research has shown grafted tomato roots stretching four, six and even ten feet from the plant verses the non-grafted plant producing a root mass reaching only two to three feet. Finding more available resources, especially water, helps these plants withstand drought stress and extended periods of heat. This allows them to continue growing (i.e. photosynthesizing), while other plants shut down.

Keep in mind it is important to plant these grafted plants differently. Do not plant them up to their "necks" or in a trench to encourage rooting along the stem. The graft must be kept above the soil so that all the improvements imparted by the root system are not lost.

If you are interested in trying some grafted tomatoes this year look for Brandywine, Mortgage Lifter, Green Zebras or even two varieties on the same plant, i.e. Sungold and Sweet Million growing together. Look for more selections and combinations to be available in the coming years!



CORNELL COOPERATIVE EXTENSION OF RENSSELAER COUNTY

PRESENTS

A talk by Dr. Margaret Smith



## "GMOs: Just the facts"

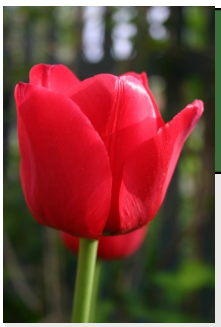
*Nearly 70% of processed foods on our supermarket shelves contain some form of "genetically-modified-organisms," more commonly known as GMOs. For over 12,000 years humans have been modifying plants to adapt better to weather and soil conditions: corn, rice, wheat and fruit are some examples. But it's only been since the 1990's that genetic scientists have been working in laboratories, looking for ways to create crops that are more disease-resistant. Today, almost all corn, soy, and cottonseed oils have been "modified" genetically in some form. Dr. Smith will share what we know and where we're going with this technology.*

**Wednesday, May 27, 2015 at 7:00 P.M.**

CORNELL COOPERATIVE EXTENSION OF RENSSELAER COUNTY * 61 State Street * Troy, New York

Space is limited. Please RSVP by calling 518-272-4210 OR e-mail br84@cornell.edu

**Dr. Margaret Smith is a professor with Cornell University's College of Agriculture and Life Science's Department of Plant Breeding and Genetics. She conducts research on both "field corn" and "sweet corn" with an emphases on breeding for productivity and adaptation to New York's growing conditions, and improving insect and disease resistance.**



# What to do in May



Prepare your tools if you haven't done so already. Clean and sharpen blades for optimum efficiency.

Tackle the garden beds. A premature winter last year sent a lot of us into an early hibernation, and a very cold April had us dragging our feet. Rake out remaining leaves, clean up perennial remains, and add them all to the compost pile.

Add compost OR fertilizer to your beds.



Mulch beds to prevent weeds and improve water retention.

May has been very warm and dry, so don't forget to water.

Prune early flowering shrubs (e.g., forsythia, lilac) after they have bloomed.



Harden off plants that need to be brought outdoors.

Organize and disinfect containers with 1 part bleach to 9 parts water.

While prepping containers, create a shopping list of plants needed. This is a great way to avoid "impulse buying" of plants.

Add fertilizer to lawns in late May.

While busy in the yard and the garden beds, remember to be pro-active with tick prevention. Wear protective clothing and always do a tick check. Tick populations are said to be very high this year, due to the snow keeping them cozy all winter.

Text by Master Gardeners Helen Dolan and Renee Hale and photos by David Chinery



# The Problem With Privets

Destroying a good gardening tool gives me tremendous guilt. For this adult hang-up I'll blame my father, a most careful man who still proudly maintains his Simplicity garden tractor purchased new in 1967. Leaving a rake in the rain, bending a shovel or forgetting to oil my secateurs isn't normally in my vocabulary of acceptable behavior. But, in just this one instance, I'm giving myself permission to feel okay about sacrificing my loppers to the cause of eradicating some privet.

A privet hedge, almost twenty years ago, seemed like a good idea. I wanted to screen out the busy street, and the plant of choice had to be cheap, available in quantity, and fast-growing. I purchased thirty little twigs through the conservation department, stuck ten in the ground here, twenty over there, and they all grew. In-between the two privet hedges I experimented by planting elderberries, lilacs, pussy willow and viburnums, all shrubs needing little pruning. Today I wish I had gone more that route, because the privet's virtue of fast growth turned out to be its greatest vice.



The little privet sticks grew to lush hedges eight feet tall in two summers. The third June I threw away my powerless clippers for an electric "Hedgehog," a noisy but virile machine which sliced through new shoots with lawnmower efficiency. But then one of the rules plant physiology kicked in: pruning stimulates growth. A June haircut encouraged the privet to bush out in all directions again by August. The twice annual privet shearing became my summer ritual.

At year ten I went on strike. Let it grow, I decided. How tall could it possibly get? While I enjoyed extra summer days off privet patrol, the new shoots reached skyward. By year eleven I was getting nervous as the privet reached an untold height of fourteen feet. It became increasingly difficult to see around it down the street or to get to the compost pile. The monster was unleashed. I gave in, grabbed saw and loppers, and hacked the hedges in half, expending more effort than I ever saved. I chided myself to forget the laziness. The privet replied, "We never sleep." Keeping these cats in the bag required the diligence of a Pinkerton guard.

Eventually I met the garden writer Sydney Eddison, author of "Gardening for a Lifetime: How to Garden Wiser as You Grow Older." This lovely lady had the answer, and it was to work smarter, not harder. Remove the privet. This spring I sawed the ten-plant hedge to the ground. Then I was stumped by the stumps. Too cheap to hire them removed (another virtue taught by Father), I started digging. Having a bad day at the office makes ripping a privet stump out a party, and soon I was down to the last one. Stomping on the loppers to slice a stubborn root (a technique not taught in horticulture school) the handles crumpled. Bring out the axe! The privet lost, my tool is gone, and I'm closer to carefree.



**Text and photos by David Chinery**

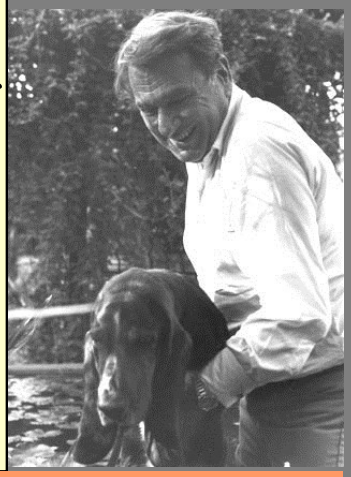
# Green Shots: The Gardening World in Pictures

This month's photos come from Rensselaer County Master Gardener Denise Maurer. Denise writes, "I find watching our gardens evolve through the seasons fascinating. Spring kicks it off with flowering trees and spring bulbs. Summer brings us a riot of color in perennials and annuals followed by autumn colors of trees, mums and asters. Then there is winter. While the gardens sleep, snow and ice can turn a landscape into a jewelry box of gleaming crystals."



"There is nothing like the first hot days of spring when the gardener stops wondering if it's too soon to plant the dahlias and starts wondering if it is too late."

Henry Mitchell, The Essential Earthman (gardencolumnist)



## Gardening Questions?

https://plinthetal.files.wordpress.com/201

## Call The Master Gardeners!



In Albany County: Call 765-3514 weekdays from 9:00 AM to 3:00 PM and ask to speak to a Master Gardener. You can also email your questions by visiting their website at www.ccealbany.com

In Schenectady County: Call 372-1622 weekdays from 9:00 AM to 12:00 Noon, follow the prompt to speak to a Master Gardener and press #1. You can also email your questions by visiting their website at http://counties.cce.cornell.edu/schenectady/

In Rensselaer County: Call 272-4210 weekdays from 9:00 AM to 12:00 Noon and ask to speak to a Master Gardener. You can also email your questions to Dhc3@cornell.edu

## Staff Contributors

**Cornell Cooperative Extension of Rensselaer County**
David Chinery (dhc3@cornell.edu and (518) 272-4210).
*Newsletter editor, designer and layout technician*

**Cornell Cooperative Extension of Albany County**
Sue Pezzolla (sep37@cornell.edu and (518) 765-3516) and
Chuck Schmitt (cds34@cornell.edu and (518) 765-3500)

**Cornell Cooperative Extension of Schenectady County**
Angie Tompkins (amj22@cornell.edu and (518) 372-1622)

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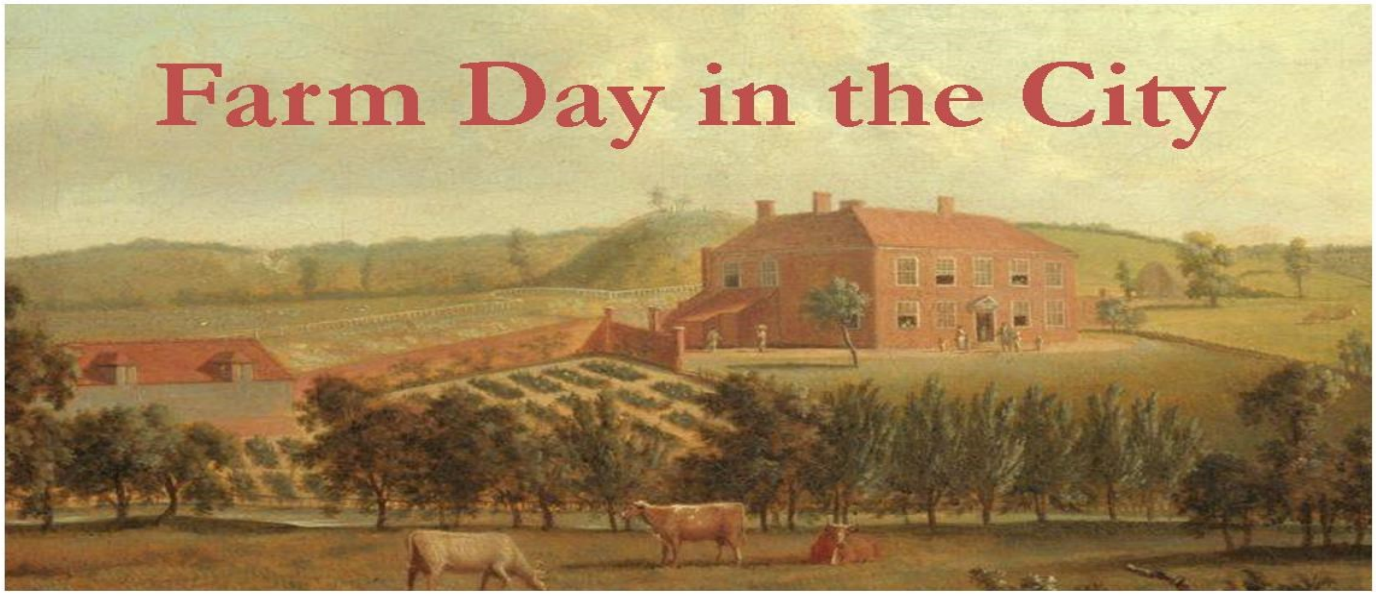
# Farm Day in the City



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P.O. Box 497, 24 Martin Road, Voorheesville, NY 12186
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