If you are a proud owner of a dogwood in your landscape, now is the time to be on the lookout for a particular pest, the Dogwood Sawfly (*Macremphytus tarsatus*). A member of the Hymenoptera family, this pest is rather easy to identify, once you become familiar with it.

I discovered we had a problem in our garden Memorial Day weekend, when I was doing some weeding around our dogwoods. The leaves of the plant look twisted, and some were turning brown and had partially chewed leaves (Photos 1 and 2).

Once I took a closer look, the culprit was revealed. Tiny, caterpillar like larvae were feeding on the foliage (Photo 3). Sawfly larva have chewing mouthparts that leave holes in the leaves. The adult sawflies emerge in the spring, and females lay their eggs on the underside of the leaves, along the leaf veins. After
the sawfly larvae molt a second time, they develop a white waxing coating over their entire body, which is thought to mimic bird droppings (Photos 4 and 5).

During the last stage in its development, the larvae shed the white covering as they prepare to pupate. The larvae (Photo 6) then construct pupal chambers by boring into dead wood on the ground or into the soil.

Large groups of sawfly larvae can cause considerable defoliation to dogwoods. Although it isn’t esthetically pleasing, typically the defoliation takes place throughout the summer and normally will not harm the plant. However, if you find these critters to be a nuisance, you can handpick the larvae or remove and destroy the leaves you find them on. There is only one generation each year.

You can also contact your local Cornell Cooperative Extension office for more information. I believe one of the best rules of thumb in gardening is to know your enemy! We need to correctly identify the problem before we run for a solution. By spending a little bit of time researching the pest and understanding its lifecycle, will allow for good decision making and management options. Scout for pests in your garden early on. The sooner you can discover an issue, the easier it will be to control it.
If there is any plant well-suited for the gardening needs of this new century, it might be Fothergilla, the shrub you’ve never heard of. At least a little of the rub lies in the name. In a world where marketing counts, the moniker Fothergilla has little sparkle or snap, and doesn’t convey any of this species’ charms. Likewise, the common name of witch-alder conjures up visions of Hogwarts and not something tasteful you might like to plant in the front yard.

There are two distinct species to consider. Fothergilla major, or mountain fothergilla, is a denizen of the southern Appalachians, living on both rocky ridges and cooler hillsides. It is a large, multi-stemmed shrub growing up to 20 feet tall, and it has two peak seasons of interest. Spring finds F. major covered in white, spikey, bottle-brush flowers which exude the scent of honey. After spending the summer in anonymous green, the foliage turns to vibrant reds, oranges and yellows. Sounds great, but a 20 foot tall shrub next to the front door might engulf the house. Fortunately, nature has also provided us with the dwarf fothergilla. In looks, Fothergilla gardenii appears much the same as its bigger cousin, just in a pint size. Reaching to just 3 feet tall or perhaps a little taller, this gem can fit into many modern landscapes. It naturally occurs in acidic, dampish places from North Carolina’s coast through the Florida panhandle, and is not plentiful anywhere in its range. Though both are southerners, they can readily adapt to the cold northern climate of the Capital District and beyond, and thrive with ease in soils that differ significantly from their mother earth. I’ve never seen mountain fothergilla outside of an arboretum, but dwarf is sometimes sold by local garden centers who have caught on to, as Jackie Gleason used to say, how sweet it is.

Growing in two distinct ecospheres, the two fothergillas probably didn’t have a chance to meet, but an interesting thing happened in the 1970’s when both types were being grown in nurseries. According to an article by plantsman Rick Darke, the two species crossed, although at the time no one knew that some horticultural hanky-panky had gone down. Nurseryman collected seed from the dwarf fothergilla plants, thinking that a new generation grown from that seed would also be pure F. gardenii. They then selected the best seedlings for further propagation, study and sale. These new seedlings, some with even better flowers, fall color, and vitality than the parents, were all somewhat carelessly (in retrospect) named dwarf fothergilla. Only later did someone ask, is that true? Scientists used a method called flow cytometry to count chromosomes. It was found that mountain fothergilla has 72 chromosomes, dwarf has 48, and these new questionable types had 60, making them truly children of the two species. Today, you can buy these exciting hybrids under the name Fothergilla x intermedia. I haven’t heard if any paternity lawsuits have been filed.
In our Master Gardener volunteer group in Rensselaer County we read a book called "Bringing Nature Home," and I realized as I read it that a great portion of the book was devoted to insects. I have had a life-long aversion to insects and many years ago I decided that knowing more about insects would help me to overcome my fear of them. I began to attack my study of them, and here are the results: first of all, I was telling my granddaughter exactly what is in the second sentence and she said to me, "Are you still afraid of insects?" I answered her by saying, "Yes!"

Let's go back to thirty years ago and look at what I learned about insects. First of all, there are loads of them and they are grouped into roughly thirty groups called orders. When I am studying something that has thirty categories, I make a table or a spreadsheet and I consult it for reference. That did not work for me. That is, I made the spreadsheet, but I did not feel comfortable in the world of insects. How else could I learn about insects? I decided to try an evolutionary approach. This satisfied me, but it has many hiccups.

The first insects were wingless, e.g. the silverfish. A major advance in the success of the insects was the development of wings. Well, wings can be folded (clearly an advantage) e.g. beetles, or not folded e.g. dragonfly. Some insects have the same body form and life needs throughout their whole lives. In this case the young, though smaller than the adult, resembles the adult and eats the same foods as the adult. This type of development is called incompetent metamorphosis and the young are referred to as instars or imagoes. The grasshopper has this type of development. Other insects have complete metamorphosis, changing body form and eating habits four times. The four stages are the egg, the larva (the feeding stage), the pupa (a senescent time when the adult body develops) and the adult (the reproductive stage). In a very broad sense these are major events in the development of insects. The development of wings and changing forms of development are not in an evolutionary straight line. For example, one of the most modern insects, the flea, is a very recent insect, and yet it has no wings. It could, however, not exist until warm-blooded animals were on earth. When something descends from a more complex ancestor, we call it "degenerate evolution."

Let's look at the four stages of complete metamorphosis. In the book, "Bringing Nature Home," I was surprised to learn that some true bugs (Hemiptera) guard their eggs. Up until reading the book, I had thought that the only care the egg was given was to deposit it in a rich supply of food. That's what is done by those nasty white butterflies whose eggs develop into my cabbage-eating larvae. And, in general, that is true! The egg is laid and it is up to the developing insect to fend for itself. The larva, on the other hand, may be cared for by adults. This is especially true of the social insects, e.g. bees, termites and ants. Larvae have been observed under many conditions, but I believe all of them are eating conditions. Because they have been seen under so many different circumstances, they have been given several different names: caterpillars, grubs, and maggots. The pupa undergoes phenomenal body changes, and to accomplish this, it secretes a covering over its body as it grows wings. Yes, only winged insects can have complete metabolism. Some names for pupae include chrysalis and cocoon. An insect cannot have complete development without a pupa. For example, the dragonfly has an aquatic young stage, but then the young climbs onto a reed or other plant and changes into the winged adult. There is no senescent pupa. The adult is the reproductive stage. Some adults with complete metamorphosis feed, but I'm not sure all feed. Do moths feed?

So, I have learned a little about insects, but not enough to overcome my fear of insects.

BY Master Gardener INGE ELEY
I thought I knew all the holidays and their associated plants. There is Easter’s lily, Thanksgiving’s mum and of course Christmas with its trinity of tree, poinsettia and mistletoe (as well as the holly, ivy and cactus lurking about in the background). But this year I learned a little about Dyngus Day, a Polish-American celebration with its roots in Europe. At the centerpiece of these festivities is a classic harbinger of spring, the pussy willow. Once again, we can find horticulture at the core of the human story.

Christian legend holds that Dyngus Day, scheduled for the Monday after Easter, celebrates the end of Lenten restrictions and the joy of the Resurrection. Digging deeper, some say it all started with the Pagans, who were marking the end of winter and the March equinox. In any case it came to pass that Dyngus was marked by young men sprinkling water on young ladies of their choosing, along with giving them a tap using a pussy willow branch. The ladies probably needed little encouragement to reply in a like fashion the following Tuesday. Associated activities included boys going house-to-house with a rooster, boys dressing as bears and the drinking of honey-rich krupnik. While the American version now focuses more on parades and Polish pride, it is nevertheless a lot of hoopla for a Monday.

While it’s fun to speculate on the hijinks of courtship, this is a gardening story so let’s focus on plants. There are many willow species which have fuzzy catkins, but three are most prominent: *Salix caprea*, goat willow, *Salix cinerea*, gray willow, and the American pussy willow, *Salix discolor*, the only one of the bunch native to our shores. In general, they are all fast-growing, deciduous small trees reaching to perhaps 20 feet tall with a similar spread. They naturally reside in damp places, but will also tolerate soils of average moisture content, only shunning very dry sites. There are male pussy willow trees and female pussy willow trees, and the males are more beautiful, since they sport larger, showier catkins. These are actually petal-less flower spikes, and appear gray and fuzzy before they sprout anthers and stamens loaded with yellow pollen. Interestingly, the botanical term “catkin” was birthed from the Dutch word for kitten, katteken, since the furry flowers resemble cat’s paws or tails.

Those seeking to buy a pussy willow for their garden have some options. Native *Salix discolor* rooted cuttings or established plants are readily available and have the advantage of fitting in with our local ecosystem. Nurseries often feature European goat willows or goat willow hybrids, since these have larger flowers than their American cousin. Particularly noteworthy is the black pussy willow, *Salix gracilistyla 'Melanostachys'*, which features flower spikes of a dark, blackish hue and red anthers. Japanese pink pussy willow, *Salix gracilistyla ‘Mt. Aso’*, has catkins of a very attractive pink tone. If cut early and forced, it could be an alternative to red roses for Valentine’s Day, which could use a more-affordable holiday plant.

By David Chinery
This month’s Green Shots page was written and photographed by Rensselaer County Master Gardener Meg Distell. Meg writes, “These photos come from world-renown glass sculptor Dale Chihuly’s current show at New York Botanical Garden. At the entrance to the conservatory is his work called “Citron.” No two pieces of glass in this creation are alike and each is individually attached to a main support (Photo 1). The tower of icicles (Photo 2) was first designed to represent the icicles of the northwest. But in the vibrant yellow and orange colors the icicles seem more like flames. The colors are repeated in the flowerbeds surrounding the sculpture.

The artwork in Photo 3 is called Macchia Forest, with macchia meaning “spotted” in Italian. These flower-like forms reminded Chihuly of his mother’s gardens. The spots on the glass are created by fusing colored chips of glass to the larger surface. These organically-shaped sculptures (Photo 4) look like other-worldly life forms growing among similarly strange plants. In Photo 5, lily-like structures are seen floating on the water and almost mystical birds in blue dance behind them in the conservatory.
Here’s another nice mess you’ve created, David. Years ago, I happily accepted a couple of shoots of Giant Solomon's Seal (Polygonatum biflorum var. commutatum) for my shade garden. Season after season, it stayed in a neat, enjoyable clump, providing no problem. In spring it is a late riser, so I’ve even fretted that a mysterious malady killed the patch when it was slow to return. But our relationship has changed, and this May small seedlings of GSS appeared everywhere, thick as thieves. So I’m out prowling about, trying to wedge the developing rhizomes out of the ground before they spread, finding the trickiest to extract are those embedded amongst other perennials. Whilst squatting to cull a particularly recalcitrant specimen, I gracelessly rolled backwards, crushing the developing Hosta ‘Frances Williams.’ The real Frances Williams, a plant breeder who discovered this lovely hosta in the 1930’s, would likely not be amused.

Solomon’s Seals as a group are certainly garden-worthy plants. Variegated Solomon’s Seal is the flashiest of the bunch, with bright green leaves edged with sharp white. In my garden it has formed a slowly expanding patch, but it doesn’t run away madly or self-sow from seed as does GSS. Small Solomon’s Seal is nice too, with stems rising to a graceful arch perhaps two feet high. It has lovely, white, bell-shaped flowers which dangle below and transform into blue berries (not edible). GSS is similar, but bigger: the stems in my garden easily grow five feet tall, and the books claim it can reach seven. Such stature can make a welcome impact, since many other shade plants fall in the medium to short range. Both Small and Giant Solomon’s Seals are native to the Hudson Valley, so there is no need to have a moral dilemma if either one makes its way into the surrounding woods. I guess this all leaves me still admiring GSS, but cautious about it staking a claim in every garden bed. Perhaps I’ll nip off those blue berries this summer before they roam about.

I’m happier about the Pagodas which are sprouting up along the edge of the woods. Rather than picturesque towers in Sichuan, here I’m referring to another native plant, known officially as Alternate-leaved dogwood (Cornus alternifolia). The “Pagoda” moniker comes from its tiered branch arrangement, giving the small tree a very distinctive form. It doesn’t develop the large, showy blossoms of our Flowering Dogwood or the Chinese species, having much smaller clusters of white blooms, but that doesn’t really matter here. It is the layered wedding cake effect of its shape that makes it special, and if that means only people tuned into such subtleties appreciate it, then so be it.

Far odder things have turned up in my garden lately. I nearly rolled off my riding lawnmower when I saw a $100 bill lying on my front lawn. Sadly, it turned out to be a fake. If a press secretary comes out of the bushes, I’ll be prepared.
Bake a meatloaf and you can test your product in a jiff, but evaluating a gardening project takes more time. Back in 2000, when both I and the world were still innocent, I picked up a seed beneath a female ginkgo tree living at the corner of 6th Ave. and State St. in Troy. Ginkgo seeds are easy to germinate, and through careful watering, repotting and overwintering procedures, I produced several six foot trees in six years. Tree seedlings, like teenagers, eventually get too costly and large to keep, so I planted one at our Demonstration Garden at the Robert C. Parker School in North Greenbush (see photo), two in my front yard, and gave the rest away. Now, ten seasons after the trees were installed in their “forever homes,” it is fascinating to reflect on their fate.

The ginkgo (Ginkgo biloba) is to the plant world what George Burns was to comedy – old. Ginkgos roamed the earth 270 million years ago, making them ancient when the dinosaurs first appeared. According to the fossil record, ginkgos once covered the world, but died out in the future Capital District about 7 million years back. The species survived in China and Japan, unknown by westerners until the late 1600’s, and it didn’t make it back to our shores until 1784, when William Hamilton planted one near Philadelphia.

Ginkgos have other assets along with staying power. The delicate, fan-shaped leaves and unique canopy structure – no two ginkgos are the same shape – make the species a standout on the arboreal scene. Stunning yellow fall color and a majestic presence are two additional attributes. Ginkgos are also tough, too, suitable for the man-made environment of the 21st century, tolerating heat, poor soil, drought, and pollution with aplomb.

Despite my close relationship with my seed-grown ginkgos, part of each tree remains a mystery – they keep their gender identity to themselves. It may take 20 to 50 years for a ginkgo to flower, finally revealing if it is a boy or girl. Why am I so curious about such personal information? Anyone who has trodden on ginkgo fruit, a juicy seed covered in orange pulp, wishes they watched where they stepped. The pulp smells horrible – very much like dog duty – and leaves a lasting impression on your sole, as well as your nose. The School’s ginkgo was placed well away from roads and sidewalks, just in case it is of the female persuasion. The seeds, non-malodorous, are a popular ingredient in eastern cuisine. Now that the seedlings have turned 17, we may be able to answer the question soon, or perhaps not until I’m 86 years old.

Other results are more apparent. The School tree is on a windy knoll in full sun, and is now perhaps 15 feet tall, with thick limbs and a storm-damaged top. My front yard ginkgos are perhaps ten feet taller, of thinner form, shaped by their part-shade, more sheltered environment. While clothes don’t make the man, environment does at least partly make the ginkgo.
What to do in June

“What is so rare as a day in June?
Then, if ever, come perfect days ....”

We hope poet James Russell Lowell’s optimism proves correct...

* Fertilize peonies liberally after blossoms fade
* Prune: evergreens; spring blooming shrubs; lilacs after they finish flowering and the scent is just a pleasant memory
* Divide spring flowering perennials after they have lost their blooms
* Plant gladiolus and canna (if you haven’t already!)
* Place stakes or cages around young tomato plants. Since we now have sun and heat, they will start to grow!

* Water container gardens daily when mother nature doesn’t do it for you
* Hang hummingbird feeders and don’t forget to clean the feeder and change the fluid frequently
* Thin root vegetables such as carrots, beets and radishes to promote growth
* To have a beautiful lawn, promote deep root growth by mowing high (leaving the grass 2.5 to 3 inches tall).

* Mulch your gardens to conserve moisture and discourage weeds
* Fertilize your container plantings once with slow-release pellets or a couple times per month with a water-soluble fertilizer solution
* Harvest lettuce if you planted it early enough
* Keep an eye out for pests by watching for yellowing leaves, wilted new growth or twisted foliage. A close look (especially at the underside of a leaf) might reveal mites, aphids, or something else!

Text by Master Gardeners Kathy Henry and Don Maurer and photos by David Chinery
“I would like to see all wild harmless things but especially all birds protected in every way.”

*Theodore Roosevelt*

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Gardening Questions?

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](http://www.ccealbany.com)

In Schenectady County: Call 372-1622 weekdays from 9:00 AM to 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.ccc.cornell.edu/schenectady/](http://counties.ccc.cornell.edu/schenectady/)

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

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“Root Concerns: Notes from the underground” is a shared publication of Cornell Cooperative Extension of Rensselaer, Albany and Schenectady Counties. It is published by Cornell Cooperative Extension of Rensselaer County.
Cornell Cooperative Extension of Rensselaer County
Master Gardeners present

Garden Tour 2017
“Held Rain or Shine”

Thursday, June 29th, 4 to 8 PM

Admission $10 per person
$30 per car for 3 or more people

*Drive-it-yourself tour/ Parking at each
garden is limited, so carpooling is suggested.

Maps sold from 4 to 7PM on June 29th
at Oakwood Cemetery, Oakwood Avenue
entrance, Troy, NY 12180

For more information:
http://ccerensselaer.org/ or
(518) 272-4210
“DIY Garden Projects” **Thursday, July 13 from 7 to 8 PM.** Gardening offers the chance to explore dozens of possible Do-It-Yourself projects, and our Master Gardener Team will show you several of their favorites, including mosaic stepping stones and bird baths. Creative solutions to make watering your plants more effective, including deep pipes, rain barrels, and ollas, will also be discussed.

“Mighty Microbes” **Wednesday, July 19 from 7 to 8 PM.** The activity of gardening brings us in contact with billions of microbes, but just who are they and what do they do? Learning about microbes can help us benefit our health when we apply that knowledge to what we grow in our gardens, how we care for our garden soil and what we eat. Presenter Janet Poole is a Master Gardener with Cornell Cooperative Extension of Rensselaer County.

“Cooking In The Garden” **Tuesday, August 1 from 7 to 8 PM.** What can you do with summer’s gorgeous produce? Join our Master Gardeners as they make three kinds of pesto (arugula, kale & sun-dried tomato), sautéed radishes, gazpacho, tomato/watermelon salad and spiralize various vegetables for summer treats. Samples and recipes provided!

“Late Summer Is For Lawns” **Wednesday, August 9 from 7 to 8 PM.** Mid-August to mid-September is the best time for lawn weed management, overseeding fertilizing, and renovation. Bring samples of problems (weeds, bugs, etc.) and we’ll discuss options to improve your lawn for the future. Hosted by CCE Educator David Chinery.

“What’s Happening At The Demo. Garden?” **Wednesday, August 23 from 6:30 to 7:30 PM. ****NOTE EARLIER START TIME!** We’ll take a walking tour and check on the Cornell Vegetable Variety Trial, Herb Garden, Prairie Garden, Fragrance Garden, Pollinator Garden and more! Be prepared to walk and stand, or bring an easily portable chair.

For more information, call Cornell Cooperative Extension’s Horticulture Program at 272-4210 or e-mail dhc3@cornell.edu

Directions: From Interstate(1-90) Exit 8; east onto Rte 43; pass through Rte 4 intersection toward West Sand Lake; (approximately 2.1 miles); Left at Robert C. Parker School.