

January/February  
2015

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

Volume 10, Number 1



# Root Concerns

Notes from the underground

## Let's Get To The Bottom

It's taken me three tries in three years to get to No Bottom Pond. First, the trailhead parking lot in high-elevation Austerlitz was under two feet of snow, while my hometown of Castleton was clear. Second time, I made it to the hilltop above the pond, but the path downhill was a sheet of ice. Not wanting to break a leg then read a headline saying "Middle-aged toddler airlifted to Albany Med," I turned back. Last week was the charm and I was able to dip my hiking stick in the pond's chilly waters. I'm humbled to report that it is a round trip of less than two miles.



This wonderful place in northeastern Columbia County is part of Beebe Hill State Forest. As if the pond's moniker wasn't enticing enough, access is from Fog Hill Road, which adds further intrigue. My guidebook, Dunn and Delaney's "Trails With Tails," reports that the pond is often full of water in spring but dry in summer and fall, thanks to a nature-made underground drainage system. This was once linked to No Bottom Pond Cave, which was unfortunately obliterated in 1958 by the State of New York in favor of the construction of the Berkshire Spur. Despite this disruption, the pond keeps flushing. Luckily the public today can visit the southwest corner of the pond, but a trek entirely around is prohibited due to private land ownership. I can personally attest that the pond was full on the last day of 2014, complete with a thin skim of ice.

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No official signs greeted me at the parking lot and I saw no trail blazes, so I followed Dunn and Delaney's advice and took the right-hand path. The forest has been unkindly logged in the past, and dead limbs and standing arboreal skeletons dominate the landscape. The trail is an old road composed of ruts, water and ice, making it a slow slog. The traveler skirts a swamp off



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to the right, a merry brook on the left, then slowly starts uphill. It's a good atmosphere to cogitate on the life of one Oscar Beckwith, a gold miner who staked his claim near the pond. In 1882, Oscar murdered his business partner Simon Vandercook, then broiled his body on a wood stove. He initially escaped authorities but was eventually found in Canada and brought home to justice. I was glad to find no signs of either cannibalism or the cabin, but a persistent low moaning might have been more than just the cold wind in the pines.

As a horticulturist I must finish with some notes on nature. A good stand of mountain laurel (*Kalmia latifolia*) grows near the pond, lovely despite being infected with leafspot. A curious clubmoss called groundpine (*Lycopodium*) is abundant, as are mosses and evergreen ferns. Needle ice, filaments of frozen water which form when soils are above freezing but air is below freezing, decorated the trail edges. It may not be there when you visit, as No Bottom Pond is full of mystery.

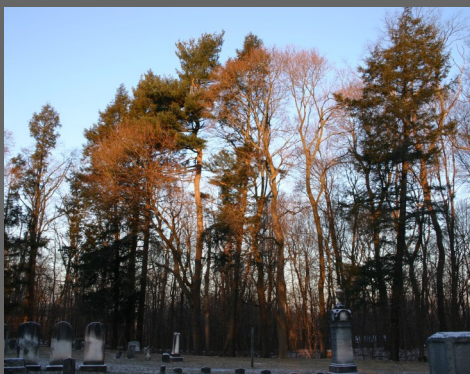


After visiting No Bottom Pond, a hike to the top of Beebe Hill (Elevation 1,755 feet) to visit the Fire Tower is also in order. The trip upward takes about 40 minutes from the Barrett Pond parking lot off of Columbia County Route 5. The tower is open to the public and there are outstanding views to be enjoyed from the top!

Text and photos by David Chinery

## Yikes! Who Is This?

Over the winter holidays I was knocking about the Village of Castleton and realized that hemlock woolly adelgid (*Adelges tsugae*) was infesting a number of trees in the area. Now is the time for gardeners in Rensselaer County and elsewhere to learn how to identify this deadly pest. If you find hemlock woolly adelgid on your property, in your neighborhood or elsewhere, contact your local Cornell Cooperative Extension office listed at the end of this publication. See also the story on hemlock trees on page 10 in this issue of "Root Concerns," and for extensive background information, visit the The New York Invasive Species Clearinghouse website at [www.nyis.info](http://www.nyis.info)



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Text and photos by David Chinery

# One Cuddly Cactus

There is no time warmer and fuzzier than Christmas, with jolly Santa, cute Rudolph and playful Frosty, so one wonders how exactly a cactus got caught up in all the excitement. And with so many other holiday plants vying for attention, from the poinsettia, holly, ivy and mistletoe to the big kahuna Christmas tree, it seems amazing there is space for a cactus, and a rather humble one at that. But yes Virginia, there is a cactus, the Christmas cactus.

Although it doesn't hail from the little town of Bethlehem, the Christmas cactus was in cultivation since at least 1818, decades before Dickens penned his "Christmas Carol." Today we know it botanically as *Schlumbergera truncata*, and there are currently a total of six *Schlumbergera* species recognized. The journey to get to this level of identification has been more tortuous than the travel of the three wise men, as a variety of plants were lumped under this name by one botanist, then given different monikers, such as *Phyllocactus* and *Zygocactus*, by other authorities. Adding to the confusion were the numerous hybrids created and similar plants named for other holidays, including the Thanksgiving cactus. In an effort to greatly simplify the story, I can say that Christmas cactus stems have rounded, symmetrical teeth, flowers that hang lower than horizontal and pink pollen. Conversely, the Thanksgiving cactus features stems with pointed teeth, flowers held horizontally, and yellow pollen. In the name of full disclosure I should also point out and describe the Easter cactus, the Holiday cactus and the Whitsun cactus, but it would be past New Year's if I did.



[www.extension.iastate.edu](http://www.extension.iastate.edu)

Although neither prickly nor spiny, the demeanor of a Christmas cactus might generously be called simple and homely. Lacking leaves, the green stems do all the photosynthesis, and are pad-like with irregular edges. As each new flat pad grows, its jointed construction plus its flexible constitution give the plant a weeping habit. The overall effect is of a rather clumsy-looking creature. But what this cactus lacks in class is more than compensated by the flowers, which are multi-petaled, tubular, and come in a rainbow of colors, including red, rose, purple, lavender, peach, orange, cream, and white. The abundance of vivid blooms on a cascading plant gives the impression of a July Fourth firework. With that in mind, I'm rather surprised someone hasn't created an Independence Day cactus.



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Cultivating a Christmas cactus is generally easy. They require conditions similar to their native home along the Brazilian coast, where they live perched on other plants as epiphytes, or lolling on rocks as lithophytes, all because of their rudimentary root systems. Bright daytime light, temperatures in the 60's and long nights – fourteen hours of darkness – are the ideal autumnal conditions to get plants to set buds and flower close to the year-end holidays. Practice careful kindness, since overwatering can kill them, and full sun in summer bleaches the pads to a sickly yellow.

*Schlumbergera* is no schlump – it's part of more holidays than your least favorite relative.

**Text by David Chinery**

# Starting Fresh For 2015

Text by Sue Pezzolla

January is all about a fresh start. It may mean resolutions or a timeline to accomplish things but for most of us it is about making some changes in the New Year. I would like to offer a few guidelines for veggie gardeners to make changes towards sustainability for the season ahead:

- \* Chose vegetable varieties that are disease resistant. This will translate to less disease and less fungicide use.
- \* Build up your soil's health by adding compost and aged manures, and by using natural fertilizers rather than chemical.
- \* Have your soil tested for pH level and amend accordingly
- \* Plant to attract pollinators
- \* Start a compost pile
- \* Plan for cover crops
- \* Use row covers to start the garden earlier and to keep it going later
- \* Plan for successive crops and replant; keep your plan in a journal
- \* Grow the herbs that you use in cooking
- \* Learn about ways to preserve your harvest that work with your timeframe

These ten points will give you a basic plan to become a more sustainable gardener and to lessen your carbon footprint, plus they will increase your garden's productivity. It is all about making the best choices for your garden and the environment. Perhaps you are already using a few of these guidelines and to add one or two more each year would be an easy lift. Cornell publishes a list of suggested varieties for New York State vegetable gardens and this is the place to start when the seed catalogs start coming. See the website:

<http://vegvariety.cce.cornell.edu/gardenInfo.php>

Choosing to grow disease resistant vegetable varieties is very important especially with tomatoes. Early blight and Septoria leaf spot are common soil-borne disease issues in the Capital Region impacting potatoes and tomatoes primarily. Late blight is an air-borne fungal disease attacking both potatoes and tomatoes. By choosing varieties that hold up well against these diseases, the chances of a plentiful harvest are increased. So it pays to look at the science and make good decisions for your garden. Your local Cornell Cooperative Extension office can supply you with fact sheets on each of these guidelines so call or email for additional information.



# What to do in January & February

\* Pick stems of aging Poinsettias to make an arrangement in a vase with water.

\* Check houseplants. Rest them in January/February by keeping them away from heat, with minimal water and fertilizer. Remember to rotate the pots for even growth; prune the plants if they get leggy. Start new plants with the cuttings.

\* Pot up amaryllis bulbs and paperwhite narcissus for some winter color.



[extension.oregonstate.edu/gardening](http://extension.oregonstate.edu/gardening)



[lancaster.unl.edu](http://lancaster.unl.edu)

\* Try forcing branches from spring flowering shrubs and trees.

\* Wrap delicate outdoor pots with a couple layers of burlap and twine.

\* Outdoors, continue to clear paths and check walls and fences. Treat wooden fences, sheds and outdoor furniture with preservatives if outside temperatures allow.

\* Be sure the water you provide for wild birds is clean and unfrozen. Keep feeders filled with seed and suet.

\* Avoid walking on frozen grass as it can get damaged. Book your lawn mower in for maintenance.

\* Clean and repair garden tools. Sterilize tools by soaking in one part bleach to nine parts water, then rinsing, drying and lubricating them with WD40 or equivalent. You can do the same for pots and containers, but skip the lubrication step.

\* To check the viability of last year's seeds, place 10 seeds between two damp paper towels, seal in a plastic bag and place in a warm place. Check in 7 to 10 days or longer for some varieties. If 7 or

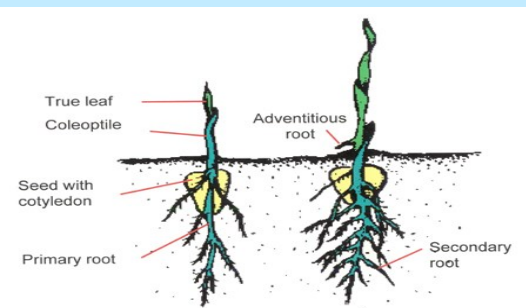


[extension.unh.edu](http://extension.unh.edu)

more seeds sprout, they are good for the upcoming season.

\* Start a garden journal. Draw a map of your garden and vegetable plot. Remember to rotate vegetable crops.

\* For inspiration read seed catalogs, garden magazines and books.



[www.ext.colostate.edu](http://www.ext.colostate.edu)

It's Not Easy Being **Green**:

## Trees: From Myth To Tomorrow

Trees seem to be surrounded by legends. Remember Jack and the Beanstalk? In that Hungarian legend, the beanstalk became a tree that held up the world. The plot changes in Siberia. Their legend has the tree of life holding up the sky. And here in New York, the Iroquois called trees “The Standing People,” for they contained the spirits of the dead.

**Make Way For The Vikings.** Yggdrasil is the ancient Norse tree of life and critical in the tales of the god Odin. According to the myths, Odin was seeking further wisdom, so he went on a vision quest and wound up hanging himself on the tree of life for nine days and nine nights. Odin pierced himself with a spear. As a result of this epic ordeal, Odin gained the wisdom that he was seeking from magical runes.

In some tales, the tree of life is described with an eagle at the top, which would be associated with Odin, and a serpent at the bottom, which would represent the underworld.



**The Tree of Zaqqum – One Tree You Don't Want To See.** According to the Quran, this species exists only in hell and draws its energy from the raging flames of the hellfire itself. The Quran goes on to point out that the denizens of hell are starved mad with hunger. The only thing to eat? The foul-smelling fruit from the Tree of Zaqqum.

After the damned eat the fruit—which causes their faces to fall off—they are given a horrible boiling liquid to drink. Their bodies become a melted heap of flesh and bone. That's not the end. The damned are recycled and repeat the process. It really doesn't matter which religion's mythology tells the story: Hell sounds pretty terrifying.

### Three real trees rooted in legend

**Olive Tree.** How can you talk about Greek mythology without mentioning the olive tree? Athena loves this tree because it helped her win a bet. According to the reports, Poseidon (god of the sea), and Athena (goddess of war, wisdom and crafts) were struggling to gain control of Athens. Zeus became tired of the squabbling and intervened. He decided that the city would go to the god/goddess who produced the best gift for man. Poseidon produced a horse. Athena created the first olive tree. Who won? Well, is the Acropolis in the city of Poseidon?



**Myrrh Tree.** Most of us associate this tree with the Three Wise Men. But it's been in legend much longer than that. No, this small, spiny desert tree is rooted in Aphrodite's jealousy. As legend has it Myrrha was a princess whose mother dared to compare her beauty to Aphrodite's! The goddess wasn't pleased and, in a fit of pique, she caused the girl to fall in love with her own father. When Dad found out, he chased his daughter with an axe. Who saved her? Enter Aphrodite – the contrite and compassionate – who turned the princess into a tree. A small, spiny desert tree.



**Apple Tree.** Somewhere around third grade, we all heard the legend of Johnny Appleseed. He was an eccentric who wandered the west planting apple trees. What the teacher failed to tell us was why. What made apples so important? Well, it wasn't to provide filling for Mom's apple pie; it had more to do with filling Dad's mug with cider. The fermented kind. Ah yes, the goal was alcohol. Seems it's easier to turn apple juice into "happy juice" than to turn corn into whiskey or hops into beer.

### Tree of 40 Fruits.

Syracuse University Professor Sam Van Aken is the proud father of a single tree that grows 40 types of fruit. The artist's rendering of his creation is getting attention worldwide, thanks to CBS News coverage. "It's flattering. It's amazing. But yeah, it's overwhelming," Van Aken said. The art professor grew up on a farm in Pennsylvania. A few years ago, he learned that the New York Agricultural Experiment Station -- a 125-year-old institution that preserves and produces fruit -- was going to rip up its stone fruit orchards. So he set out to find a permanent home for seeds that trace back thousands of years.

"When I started, it was a matter of essentially collapsing an entire orchard down onto one tree. That was the practical application for it." The result is not an entire orchard in one, but "a couple orchards in one."



Artist rendering of The Tree of 40 Fruits Courtesy of Sam Van Aken

Text and photos contributed by  
Rensselaer County Master Gardener  
Don L. Maurer

We seem to be fascinated by trees.....the legendary, the practical and the ones bordering on the edge of imagination. But why? Is it because in the shelter of an ancient oak we feel a sense of history? Or when we plant a tree, are we proclaiming our faith in the future? Or could it be the humility many feel standing beneath the majesty of a Californian redwood? Somehow the big trees reassure us with a sense of permanence; they were here before us....and they'll remain after us. And, life goes on.

# A Six-Pack of Mulch

Each spring, we receive several questions about applying mulch in the garden. These questions range from what to use, how much, when and where, to which color is best. To start the new growing season off right, I thought I would address six of the most frequently asked questions from Capital District gardeners.

## What is mulch?

Mulch is any material, either organic or inorganic, that is placed on the soil surface in a vegetable or flower garden, or a landscaped bed. Properly used mulches are very beneficial to plant growth (photos 1 & 2).



## Which is better: organic or inorganic mulch?

This is really a matter of personal preference. Inorganic mulches are materials such as gravel, decorative stone, landscape fabric and plastic (photo 3). Organic mulches are things like wood and bark chips, grass clipping, pine needles, cocoa shells, buckwheat hulls, shredded leaves, etc. If you asked the plants being surround by mulch which they preferred, the overwhelming answer would be organic. Why? Organic mulch not only helps retain moisture in the ground and keep weeds at bay, it also decomposes over time, adding minerals, nutrients and organic matter to the soil. This, in turn, reduces soil compaction by attracting earthworms and small insects, and it provides a food source for microorganisms. Simply put, organic mulches not only add organic matter to the soil, they feed the soil.

## Is red mulch better than black or brown?

Some organic mulches, primarily the wood-based products, are available in a variety of colors, mostly red and some black. These colors are the result of dyes added in the production process. These dyes do not add any known benefit to the plant or soil. In fact, little research has been conducted on the overall effects of these dyes. These colors tend to remain vibrant for only one season, and once they fade, more mulch is sometimes added to refresh appearances each spring. Unfortunately, this practice can lead to the over-application of mulch around trees and shrubs.



## What size and how much mulch should I use?

The particle size of the material you choose will affect its appearance, and for organic mulches, the speed at which it decomposes. Smaller particles will break down more quickly and need to be replenished more often. This process also feeds and improves the soil at a quicker rate. Typical recommendations are to use 2 to 4 inches of mulch around plants, keeping it off of the crown of perennials and the trunks of trees and shrubs. Mulch is usually applied in spring after the ground thaws but can also be applied late in the season, after the ground freezes for the winter.





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### What are these strange growths in my mulch?

Organic mulches, unlike inorganic mulches, are derived from living material that decomposes over time. Much of this decomposition is performed by fungi that send up fruiting structures in the process. One such structure is a cream to brown colored cup-like growth that holds small, round, black spore masses called artillery fungus (*Sphaerobolus stellatus*).

Source: *Clemson.edu*

These structures often appear in a well-lit area and spread by shooting their spore masses onto adjoining surfaces. Black spots show up on leaves, patio furniture, houses, cars and other nearby structures (photo 4). They are very difficult to remove.



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Another common growth appearing on wood-based mulches are the slime molds. Slime molds are generally brightly colored, yellow or orange growths that may reach a foot or more in spread (photos 5 & 6). After their growth is complete, slime molds will dry up and disappear without causing any harm.



7.

### Can mulch hurt my plants?

If used improperly, yes. Adding too much mulch to a tree or shrub (i.e. over 4 inches deep) will negatively affect the plants. Also, piling mulches against tree trunks or shrub stems can cause girdling through decomposition (photos 7 & 8). Mulch that has been decomposing in a large pile without adequate oxygen can become “sour”. Sour mulch has been deprived of oxygen, causing the accumulation of acetic acid. Sour mulch often



9.

gives off an alcohol, vinegar or ammonia smell and when placed under plants can cause foliage burn and even death (photos 9 & 10). So be wary of wood-based mulches that have these odors.



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### Final thoughts

Mulching the garden is the best work-saving measure gardeners can employ. Mulched gardens are generally healthier, more weed free and more drought resistant (photo 11). So whichever type you prefer, use mulch to beautify your garden and add free time to your day.



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# In Lari We Trust

It's nice to hear good news at the beginning of a new year. I like it even better when I hear it from an entomologist who is battling one of our worst bugs. Cornell researcher Dr. Mark Whitmore, who seems to do a good job staying positive even while surveying the devastation of such tremendous pests as the emerald ash borer, is upbeat about the chances of reining in hemlock woolly adelgid, yet another bad actor in the forest.

Hemlock woolly adelgid only attacks hemlocks, so other needled evergreens – the pines, spruces and firs – are safe. The telltale sign is a white blob of fluff the size of a cotton ear swab tip made by the adults to hide the eggs. These white puffs, attached to the hemlock's delicate twigs, are easily seen without a magnifying glass. Eggs become feeding nymphs and then adults, which attach to the tree's twigs and reproduce. Gradually, needles and branches die, and the tree becomes denuded. It is difficult to imagine that this tiny thug, which makes a living sucking sap, can bring down huge, stately specimens, but it has been doing so since shortly after arriving in Virginia from Japan in the 1950's. Fanning out north and south, it is currently lurking from northern Georgia to southern Maine. We're finding increasing evidence of it here in the Capital District, and it has spread out into central New York and the Finger Lakes. Yet there is no need to surrender just yet, as most of our hemlocks are still pest free, and a little guy named Lari is on the way.

Formally known as *Laricobius nigrinus*, "Lari" is a small, rather non-descript black beetle. Most in this genus feed on fungi, giving them the common name "tooth-necked fungus beetles," but our Lari has a passion for adelgids. Most of the time predators are native to where their prey comes from, but Lari is from the Pacific Northwest. Female adult Laris (should we call them Larettes?) lay eggs in the spring, and their new larvae feed on adelgid eggs. When mature, the larvae drop to the ground and pupate in the soil, then emerge as adults in autumn. These adults come out hungry, and feed on adelgid nymphs to the following spring. It's a nice system, since both larvae and adults attack the pest.

Scientists have been studying Lari for decades to learn the basics about its biology. When it was determined that Lari could be a helpful adelgid-aid and not a public nuisance, the first releases of laboratory reared beetles were made in 2003, with many more sent forth since. Success has been reported in North Carolina, but in Kentucky this spring researchers found no Laris alive, blaming the polar vortex. Mark Whitmore first released Laris at six sites in the Finger Lakes in 2009, and reports that third-generation beetles have been recovered in two places. He warns that it takes years for insect predators to establish, so I'm staying upbeat and pulling for Lari.



Meet Lari, the hemlock's best friend.  
Source: [www.nyis.info](http://www.nyis.info)

# Green Shots: The Gardening World in Pictures

This month's photo's were taken by Rensselaer County Master Gardener Barbara Nuffer. Barbara writes, "My husband and I flew to Denver in June, rented a car and drove up to the Grand Tetons in Wyoming. Our goal was to camp for a week at Jenny Lake, as we had done following college graduation in 1972. We then toured Yellowstone and eventually made our way down to Rocky Mt. National Park in Colorado. We were lucky to see a great variety of wildlife and wildflowers, as well as deep snow in the mountain passes, where we did a lot of hiking."



Lupines in The Tetons



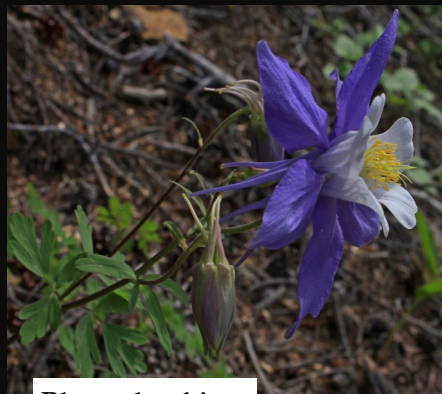
Larkspur (Delphinium)



Shooting Star



Western peony



Blue columbine



Monument plant (Gentian family)



Scarlet paintbrush

Denver Botanical Gardens, Chihuly Glass Exhibit



Rocky Mountain National Park



“I am fully and intensely aware that plants are conscious of love and respond to it as they do to nothing else.”

Celia Thaxter  
American writer and poet (1835-1894)



Celia Thaxter - 1882

Source: s-media-cache-ak0.pinning.com

## 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 Mondays and Thursdays 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 Tuesdays and Thursdays 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](mailto:Dhc3@cornell.edu)

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