



North Carolina in April, continued from page 1

interested in gardening and nature.

The Botanical Gardens of Asheville are a smaller but quite nice facility next to the UNCA campus. According to its website it encompasses 10 acres, with rougher trails around the outer edges, a number of which lead to University buildings. North Carolina is ancestrally a forested state, and this mostly describes the botanical gardens. It is largely made of natural and semi-natural vegetation, without the manicured formal gardens we are familiar with at Clemens Gardens. Instead, you walk paths through the forest, probably a step or two less manicured than at Munsinger Gardens. I was clearly there at an optimal point in the springtime, where the trees had mostly leafed out and the spring wildflowers were all up, with a number of flowering trees in full bloom.

I saw a variety of blooming *Trillium* species in the forest, and flowering dogwoods and tulip trees were flowering. An active small river ran through the gardens, requiring trails to cross it on bridges in several places. Close to the entrance there is a nice meadow with trails around it and some small raised beds in the middle. A painter was set up there, painting one of the flowering trees. It was slightly jarring to see bearded irises in full bloom, since those in my garden at home were only a couple of inches out of the ground. There were a number of interesting log cabin-style buildings on the grounds. I wished it was clearer what the history of these were, since they looked legitimately old rather than recent reconstructions. There were a couple of interesting naturalistic but clearly built rock gardens, displaying native cactus and other plants of that microhabitat.

As stated, the Botanical Gardens are quite naturalistic, with only limited

signage to tell you what the different plants are. Their website mentions that very rare species are included, though it somewhat dubiously claims there is a complete collection of plants native in the state. This is rather unlikely given the size of the Gardens, not to mention that North Carolina experiences a substantial elevation gradient, and the Atlantic Coastal habitats have quite different vegetation from that of the mountains.

However, the Botanical Gardens of Asheville are only one of several reasons a Minnesotan would enjoy visiting western North Carolina. Outside of Asheville is the much larger and probably fancier North Carolina Arboretum, which I unfortunately did not have the time to visit. This facility sounds like it is comparable to the Minnesota Landscape Arboretum in Chanhassen, and if I am in this area again I will most certainly take a tour. Beyond gardens, though, Minnesotans would find the broader environment of this region interesting.

North Carolina exhibits a great range of habitats, all the way from the hot, humid maritime region to the mountains of the west, including Mt. Mitchell, the tallest mountain in the United States east of the Black Hills of South Dakota. I didn't have an opportunity to explore the eastern third of the state at all, but my workshop was in the lower elevations in north-central North Carolina, and it was fascinating to drive from there to the west and see all the stages of springtime within a three-hour drive.

I started out at about 800 feet elevation, where it was late spring. This was approximately April 21, and trees at those lower elevations were at least 95% leafed out, with some of the flowering trees having gone past. The

forests there contain a number of woodland species recognizable to Minnesotans, and despite never having visited there before I knew a surprising number of the plants. However, it was delightful to see the woods full of native rhododendron trees, constantly reminding me I was not at home.

As I rose in elevation into the mountains, the vegetation went back farther and farther to very early spring, and at the higher elevations trees were still bare from the winter. It was particularly interesting to see this fluctuate as I drove up and down. The mid-to-high elevations also would feel superficially similar to a Minnesotan, since that area represents environmentally the southern finger of the northern forest ecosystem, perched there at the top of the southern Appalachians. The texture of this environment would be somewhat reminiscent of parts of northern Minnesota to the visitor.

The Blue Ridge Parkway is a narrow two-lane road that winds through the higher elevations in the mountains, allowing you to visit the forests and, theoretically, see spectacular views at overlooks every few miles. Sadly, I had the bad luck to visit during three days of mostly rain, and each overlook only allowed me to see off into a dense fog. Nevertheless I did enjoy getting to see the southern Appalachians in the springtime. Hopefully, at another time I will get to see the views as well.



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Invasive Pests

by Beth Berlin

Minnesota is no exception to change, and unfortunately some change that isn't welcome is new invasive insects and plants. The Minnesota Department of Agriculture monitors and regulates invasive insects and terrestrial plants. Some pests that all homeowners and gardeners should especially keep on their radar include: palmer amaranth, oriental bittersweet, spotted wing drosophila, Japanese beetle, brown marmorated stink bug, gypsy moth, and of course the emerald ash borer.

All of the insects above have been found in Minnesota; however their locations and spread are still of great significance to not only homeowners but the Minnesota Department of Agriculture due to their environmental impact, a human health concern, or a potential financial impact due to crop or yield loss. For example the brown marmorated stink bug will feed on over 300 species of horticulture and agriculture plants. In Minnesota, crops of concern include grapes, apples, soybeans, and garden vegetables. This insect was accidentally introduced to the United States in the mid-1990s from Asia. Currently in Minnesota it is not considered "established"; however there are known locations where there is an overwintering population. The insect seeks warm overwintering locations such as our heated garages and homes just as the Asian beetles do. Note that



Spotted Wing Drosophila

Minnesota is home to a few native stink bug species; however, the brown marmorated has distinct characteristics, including 1/2-inch long shield shape, striped antennae, rounded shoulders, dark and light banding on edge of abdomen, and marbled pattern.

Another pest Minnesota has been dealing with since 2012 is the Spotted Wing Drosophila (SWD).

This invasive fruit fly is native to Asia; it was discovered in Hawaii in 1980 and California in 2008. Once in the continental 48 states it spread rapidly and impacts nearly all berry fruit crops and grapes. The female fly deposits her eggs into the fruit prior to their being fully ripe, using a sharp ovipositor at her rear. (Native fruit flies do not have this ovipositor and are unable to cut into the fruit's skin and deposit their eggs.) The eggs then hatch and larvae begin to eat the fruit from the inside out, with fruit collapse occurring in approximately five days. Currently SWD has been confirmed in approximately 75% of Minnesota counties.

Trapping is the first effort a homeowner or grower should try in order to correctly identify the presence of adult SWD. In the fruiting zone, place a sealed cup with 3/16" holes drilled near the top and 1" of apple cider vinegar and a drop of dish soap. Check the trap weekly; placing a sticky card above the vinegar inside the cup will create more ease in identifying the pest. The

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Arrest the Pest

When spending time in our gardens, forests, and farms, we necessarily confront the inevitable pests. These are the insects, diseases, and animals that harm our plants and affect human health. However, we are not alone in dealing with these invasions. The Minnesota Department of Agriculture invites our participation in a program established for protecting our forests and agriculture. It involves detecting pests on their arrival, reporting them, and preventing their spread.

This program is Arrest the Pest. It calls for participation by the people of Minnesota. It calls for three acts:

1. Take pictures and notes of the affected plant, noting size, colors, and markings of the pest, plus the species of the plant.
2. Capture the insect if possible, and put the insect, disease, or plant sample in a plastic bag and freeze it, using caution in handling the insect or plant.
3. Report your findings to Arrest the Pest. You can email photos and description to arrest.the.pest@state.mn.us. Or you can call 1-888-545-6684 and leave a voicemail message detailing your pest discovery. Or you can use their smartphone/tablet app: Great Lakes Early Detection Network (GLEDN) app downloaded from the Google Play Store or Apple App/Store. Whichever means you choose for reporting, be sure to include your contact information.

For more information about the Minnesota plant management plan, go to www.mda.state.mn.us and Plants, Pests & Pest Control. For more information about Arrest the Pest, go to the website mda.state.mn.us/arrestthepest.

Non-Hosta Shade Perennials at Munsinger Gardens

by Joan Andersen

Gardeners love their shade gardens, especially on hot summer days when there is work to do or a good book to read. The backbone of any shade garden is the hosta—a plant that can be any size, from mini to giant, with leaf color from a deep blue green, chartreuse, yellow, or bright green. There is an incredible variety of leaf forms and patterns available to light up a shade garden. Hosta is extremely hardy and very easy to care for.

But there are times when a garden needs something more. Most of us like looking at different forms of plants and enjoy the blooms of other shade perennials. Munsinger Gardens is mostly shade, but occasionally a tree has been removed to make areas of some sunshine in the course of a day. This environment is ideal for many plants—the bit of sun makes them bloom better and have better leaf color and the shade keeps them cooler in the hot part of the day and prevents them from drying out.

I visited with Nia Primus, Gardens Supervisor, to learn about the shade plants that are the backbone of Munsinger Gardens. Here are a few of her favorites:

If you have a lot of room and are looking for a big plant to put in your shade garden, consider *Kirengeshoma palmata* or yellow wax bells. It has a neat rounded shape and large maple-shaped leaves and will grow to 3'-4' tall and wide. The plant has clusters of waxy yellow flowers late in the season.

Another favorite is *ligularia dentata* or big leaf ligularia. Cultivars commonly sold include 'Desdemona' and 'Othello.' These plants have large green leaves with maroon undersides and maroon stems. Nia's favorite cultivar is 'Britt Marie Crawford' which has large green chocolate leaves with maroon undersides. All cultivars grow to about 3'x3' tall and wide, and produce stalks with yellow or golden daisy-like flowers in summer. Be sure to cut off spent flowers—they have windborne seed.

Another stately plant for the moist shade garden is *Actaea racemosa*, formerly (and commonly) known as *cimicifuga*. To confuse things more, it is also sold as bugbane, snakeroot, and black cohosh. 'Hillside Black Beauty' and 'Brunette' are two cultivars with deeply lobed purple leaves and white bottlebrush flower spikes in late summer. 'Chocoholic' is similar except that the flowers are mauve pink, fading to white. It is native to North America so the fragrant flowers are very attractive to our pollinators and butterflies. Most cultivars grow a large clump of leaves up to 5 ft. tall and 3ft. wide with flower stalks held above the leaves.



If you need something on a completely different scale, try some plants that act like a ground cover in shady areas. Nia likes *Ajuga reptans*, commonly known as bugleweed. The plant is available with green leaves but Nia likes 'Burgundy Glow,' which has tricolored foliage of white, pink, and green, or 'Chocolate Chip,' which has deep burgundy and green foliage that is darker in deep shade. Bugleweed gets blue flowers in summer. Use caution when planting—the plant spreads by stolons so the characteristics that make it a good groundcover can also make it invasive in some places.

Lamium maculatum is another plant that will grow as a ground cover in shade. The common name is dead nettle. Many cultivars are available and most have a combination of green and white or silver on their leaves. 'White Nancy' has white flowers and will grow in dry shade under trees. Many cultivars have attractive pink flowers. Some varieties such as 'Anne Greenaway' have leaves of chartreuse and green. Stems root to the ground where they touch, so the plant will spread to new areas—gardeners beware.

Wild ginger is another good ground-cover choice for shade. *Asarum europaeum* (European wild ginger) has heart-shaped glossy green leaves and is about 6" high. *Asarum canadense* (our native wild ginger) has a similar leaf shape but the leaves are not as shiny. It is attractive to some of our native insects and butterflies.



Another favorite plant grown mainly for foliage is *Epimedium rubrum* or red barrenwort. It grows about 12" tall and forms a thick clump of heart-shaped green leaves edged in red. The stems are wiry and the entire plant has a delicate appearance. It has red flowers in very early spring. This is a reliable low maintenance plant that will survive our winters and live in part shade and tolerate dry to medium conditions once it is established.

Finally, let's not forget to mention some perennial plants that grow well and bloom in part shade. *Dicentra spectabilis* or bleeding heart, is a favorite early spring bloomer. Most have pink and white locket-shaped flowers. The cultivar 'Gold Heart' has chartreuse leaves. If conditions are too dry or hot, bleeding heart may go dormant in summer, so keep it watered.

Pulmonaria (common name lungwort) is another lovely plant that blooms early in the season. Many cultivars have green leaves that are mottled or splashed with white that make them interesting all year even when they are not blooming. 'Raspberry Splash' has pink blooms and an upright habit. 'Silver Bouquet' has silvery white foliage and pink and blue flowers. 'Mrs. Moon' has spotted green leaves and light pink and blue flowers. This plant prefers cool roots, so plant it away from hot sun.

A good plant to choose if you are looking for a long season of bloom is astilbe. Plants have attractive ferny foliage all season and flowers come in shades of white, pink, purple, and red. Astilbe grow and bloom best in part shade and they must never be allowed to dry out. There are so many plants on the market that you can choose by color, bloom time, and size of plant. Selecting a variety of plants that bloom at different times will give a long season of color in the shade garden. Spent blooms may be removed, but some gardeners leave them up for winter interest.

As you can see, there are a lot of lovely shade plants and there are a lot more at Munsinger Gardens than are described here. If you visit, feel free to ask the garden staff about the flowers that interest you—they are happy to share their knowledge about the plants they care for.

Invasive Pests, continued from page 3

identifying characteristics include: 1/8"-1/2" in size, light brown color, and red eyes (only present shortly when alive or shortly after death). Males have a dark spot on their wings. A magnifying lens can reveal a serrated ovipositor in females. Pesticide use is possible for control, however research is showing that for best results exclusion nets over the fruiting plants is most effective; netting needs to be 80 gram (<0.98mm holes).

Finally, the gypsy moth is causing issues to Minnesota's forests. Often confused with the native forest tent or Eastern tent caterpillar, the gypsy moth is not native to Minnesota. Caterpillars, like the tent caterpillars, are defoliators. However, the key identifying characteristics of the gypsy moth caterpillar are the five pairs of blue dots and six pairs of red dots down its back. Currently the north shore is experiencing the highest outbreak; since 2014 Cook and Lake Counties are both under a quarantine that limits the movement of items such as logs, posts and pulpwood, firewood, Christmas trees, boughs, garlands, and nursery stock, to name a few. Very recently a portion of Richfield and Minneapolis will be treated due to an infestation isolated to that area.

Information about all of these insects and plants can be found at the Minnesota Department of Agriculture's website as well as the University of Minnesota Extension's website. Do your part to help prevent the spread of these pests by keeping an alert eye out for them.

(Beth Berlin is a Horticulturist at the University of Minnesota Extension for Stearns, Benton, and Morrison Counties.)



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Book Review

by Idella Moberg



The Hidden Life of Trees: What They Feel, How They Communicate—Discoveries From a Secret World, by Peter Wohlleben, 2016

Peter Wohlleben is a German forester who tends a beech forest on behalf of the town of Hummel, Germany. Wohlleben uses emotions when he speaks. He believes that people understand this better than pure scientific language. He writes and teaches us about trees from the perspective of the trees. In Germany he gives tours of local forests. In August 2017, his tour will be based on his book *The Hidden Life of Trees*.

Trees have feelings. When they are thirsty they make ultrasonic noises with their roots. This is how trees scream in agony. Trees communicate by scent to get rid of aggressors. Trees react to almost all aspects in their environment, searching for food, protecting themselves from the elements, and participating in the interplay between being an individual tree and a member of a community.

Trees are social. They have friendships. They can detect what kind of tree is standing at their side. Through their root tips they detect their children and suckle them. Friends intertwine their roots. They arrange their branches to allow each other to share sunlight. They support each other by providing sugar through their roots. Old tree stumps are kept alive through the roots of nearby neighbor trees. Trees thrive in communities. Trees have to work together to have a long life in a healthy forest. Together they can create their own local climate to protect themselves.

Some trees are more independent. Wohlleben calls them pioneer trees. For example, birch trees like to live on their own. They are the first to live in an empty space. They grow fast and

die young. On the other hand, beech trees are more sociable. They grow more slowly and taller, and live for hundreds of years.

Trees can learn things like how to conserve water in a drought. Where does a tree store its memories? Wohlleben thinks this happens in its roots. Perhaps this is a reason why forest trees keep their old stumps alive.

Wohlleben talks at length about the Woodwide web. Fungi, with its several miles of filaments, connects trees. Through this, trees can warn each other about droughts and insects and other dangers. Through fungi, nutrition is exchanged among the trees.

Trees are really slow. They are pretty much stuck in one place. But they have been known to migrate. It takes a forest millennium to do this. Unlike most animals and plants, trees grow stronger and taller the longer they live. For trees, slower is better.

Urban trees are like street kids. They grow up fast, without rules, without parents or relatives. They are planted in hard-packed soil. Their roots have been cut to fit. And the trees never recover. They die young, get chopped down and replaced by new street kid trees.

Peter Wohlleben's book is thought inspiring. Despite his emotional use of language, he is really teaching us some very learned science about what is happening in the forest. He is practical about human use of the forest. For him, it just makes good sense to take care of the forests. In his forest they have created a burial place where trees serve as headstones. It's a good idea to keep finding ways that humans and the forest can be mutually beneficial. Healthy forests provide more timber. They make good air. It's fun to walk through a forest.

A Passing Note

In our homes some of us have prints that display the beauty of our Gardens as painted by Bela Petheo. This splendid artist and teacher died May 3 at the age of 82. Born in Budapest, Hungary, he came to the U.S. in 1959. Earning his M.A. at the University of Chicago in 1963, he came to our region as instructor of art history and painting at Saint John's University and Saint Benedict. By donating prints to Munsinger Clemens Botanical Society for our sale, he supported the beauty of the Gardens as preserved in his paintings. **We thank him again.**

RAP

Many of our readers are familiar with one of the privileges of membership in Munsinger Clemens Botanical Society: RAP, the Reciprocal Admissions Program. Your current MCBS membership card entitles you to special admission privileges and discounts at 300 gardens throughout North America and the Cayman Islands. A complete list of participating gardens can be found in the online directory on the AHS website, www.ahsgardening.org/rap.



Music in the Gardens

"Music in the Gardens" is a free Sunday afternoon concert series held on alternating Sundays at 3:00 p.m. Arranged by Munsinger Clemens Botanical Society and supported by its members, the concerts are located near the gazebo in Munsinger Gardens on the banks of the Mississippi River. And root beer floats are still available for only \$1.00.

2017 – 18th Season

June 11	Gypsy Mania Hot Club
June 25	Granite City Brass
July 9	Random Road
July 23	Dennis Warner
Also Memorial Release of the Butterflies*	
August 6	Monday Night Jazz
August 20	Laura Caviani Trio

Program schedule may be subject to change.

* Memorial Release of the Butterflies is a collaborative event between Quiet Oaks Hospice House, Munsinger Clemens Botanical Society, Saint Cloud Symphony Orchestra, and local hospice agencies. At 2:00 pm butterflies will be distributed to participants at the Gazebo. After a short program, at 2:30 the butterflies will be released as symbols of hope and remembrance of loved ones. The concert will begin at 3:00 pm. Butterflies may be purchased online at www.quietoakshospicehouse.org.

Music in the Gardens Players

Gypsy Mania A spontaneous, vivid performance by some of Minnesota's most stellar gypsy-jazz artists played in the Django Reinhardt French swing tradition of the 1930s. The ensemble includes the unmistakable mastery of jazz violinist Gary Schulte, the diverse guitar styling of Glen Helgeson, tasty, refined bass work of acoustic bassist Steve Pikal, and accomplished jazz drummer Jay Epstein.

Granite City Brass These five dedicated professional musicians have been performing as a quintet for the past 12 years with a repertoire that includes jazz, folk, religious, patriotic, opera, classical, and American music theatre. They all are currently or have been performers with the Saint Cloud Symphony Orchestra, and all have degrees in music or music education. They perform in other musical organizations such as the Lake Wobegon* Brass Band and Minnesota Centre Chorale Orchestra.

Random Road is a talented group of musicians hiding-out and making music in Central Minnesota. Their eclectic and broad musical tastes are reflected in the name of their band. They are willing to go down any musical road to see where it

leads. Band members include Joe Meyer, Rick Walter, Nancy Ebel, Nancy Drontle, Susan Schleper, Carolyn Yaggie-Heinen, and Cristina Seaborn.

Dennis Warner and the Ds Recognized for his crafty wit and skillful musicianship, Folk/Americana musician Dennis Warner captivates audiences in over 100 cities each year, cleverly blending up-tempo songs, ballads, audience participation, and humor. With his smooth vocals and six and twelve string guitars, he is joined by the other Ds—Dan Neale, guitar, Derrick Raiter, percussion, and Dennis (D.K.) Kennedy, marimba.

Muggsy Lauer and Monday Night Jazz A love of jazz brought the members of Monday Night Jazz together, and they've been playing practically every Monday night 8-10:30 pm in downtown Saint Cloud for over 13 years. They started at the Tavern on Germain, and moved to the Veranda Lounge in 2006. The current band consists of founding member Muggsy Lauer on guitar, Karl Van Beckum on bass, Mike Anderson on sax, Richard Witteman on trumpet, Dr. John Harlander on piano, and Dr. Terry Vermillion on drums.

Laura Caviani Trio Jazz pianist Laura Caviani is a veteran of two decades of performing, recording, and composing with some of the best jazz musicians in the region. Her recordings have received such praise as "stunningly fresh" from JazzTimes and "in a word, outstanding" from the Minneapolis Star Tribune. She has recently been commissioned by Saint Cloud's Great River Chorale. Performing with Laura will be Chris Bates, bass, and David Schmalenberger, percussion.

Munsinger Clemens Botanical Society
invites you to participate in



*Photography
in the Gardens*

Our Photo Contest continues into November, with entries due this year on November 3 and 4 at the Lake George Municipal Complex, 1101 7th Street South, Saint Cloud. The four categories of photos are Adult and Youth Landscape and Adult and Youth Hardscape. Guidelines and the entry form are available on the Munsinger Clemens website. You can also find lists of previous winners there. Winning Photos from 2016 will be on display at the following locations:

June and July—River's Edge Convention Center
September—Saint Cloud Hospital
October—Quiet Oaks Hospice House

Art Fair in the Gardens

Find all these wonderful items at our 10th Annual Art Fair in the Gardens on **July 20, 10:00 am to 7:00 pm**. Stroll throughout the Gardens on a beautiful summer day among the flowers. Browse and purchase some pieces of artwork from local and regional artists to decorate your home or garden.

There will be food, beverages, and wine from Westside Liquor, Erbert & Gerbert's, Kettle Licious Kettle Corn, and Good Earth Food Co-op. Once again we will have music throughout the day. On stage in the lower gardens:

11:30 to 1:30—Paul Imholte
2:30 to 4:30—John Hollingsworth
5:00 to 7:00—OK Factor

Carlos Quinche will be in the upper gardens all day playing native flutes.

Art Fair in the Gardens Players

Paul Imholte performs original and traditional music on string instruments ranging from the hammered dulcimer to the fiddle and from the guitar to banjo. His songs deal with local themes of bikers, ghosts, farmers, outlaws, loggers, smoking horses, and other odd and lovable characters he has known. He is a founding member of the Celtic music band, Ring of Kerry. He has released ten CDs of his music.

John Hollingsworth is also a local performer. He has band experiences as well as individual performance on a diversity of styles.

The OK Factor features Olivia Diercks on cello and vocals, and Karla Dietmeyer on violin and vocals. The OK Factor is a progressive folk duo based in Minneapolis. Olivia and Karla couple their classical training with genre-bending techniques and musical ideas, creating all original music that has earned them honors in composing and performing.

Carlos Quinche is a music artist from Ecuador who currently lives in Minnesota. His music ranges from traditional melodies from his country to contemporary American covers. He uses traditional Andean instruments made from bamboo, some from Native American cultures.

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Articles and comments are welcomed.

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