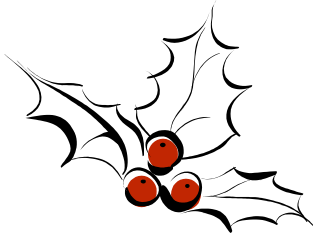


Roots & Shoots



Master Gardener
Society of
Oakland County, Inc.

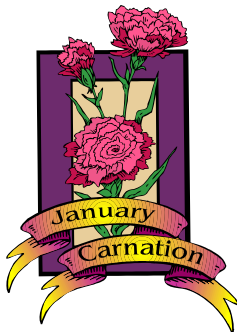


December 2013 – January 2014



December 10, 2013 @ 6:00pm
MGSOC General Society Meeting & Location
Beautiful Savior Lutheran Church
5631 North Adams Rd, Bloomfield Hills, MI 48304

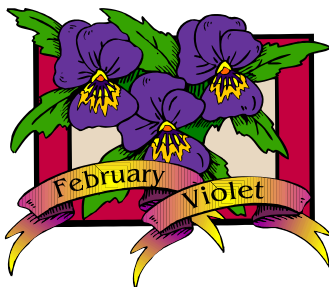
Holiday Potluck



January 14, 2014 @ 6:30pm
MGSOC General Society Meeting & Location
Beautiful Savior Lutheran Church
5631 North Adams Rd, Bloomfield Hills, MI 48304

Speaker : Nanette Alton
Education: "Pilot Plantings & Slope Restoration Projects"

A business meeting will take place, prior to the start of our Educational Program.



February 11, 2014 @ 6:30pm
MGSOC General Society Meeting & Location
Beautiful Savior Lutheran Church
5631 North Adams Rd, Bloomfield Hills, MI 48304

Speaker : Lisa Steinkopf
Education: "African Violets: Their Care & Cultivation"

A business meeting will take place, prior to the start of our Educational Program.



Carol's Corner

With the volunteer season in large part behind us and Thanksgiving ahead of us (as I write this), I'd like to say a big **THANK YOU!!** to all of you for working so hard to make Oakland County and SE Michigan a better place to live because of your outreach to so many organizations. So many of you take leadership roles on your projects and act as mentors to those you lead. Even if you're not taking a leadership role on a project, I bet you're working harder than any other group there! Thank you for everything you do. Even the seemingly smallest volunteer task can make the world of difference to a group or an individual.

As the year comes to an end, now is the time to enter your hours in the VMS system. **Your hours need to be entered into the VMS system before December 31! (Please don't wait until the last minute to do this.) Your hours need to be entered before you Re-certify for 2014. The Recertification website window will be 1 month and will open on January 1. If you miss this deadline, you'll be paying a late fee.** This information is for those of you recertifying. Trainees have one year from the last day of class to get your 40 hours in for your Basic Certification. Please look for the notices on this in your "inbox" coming from the VMS Administrator.

If you have any problems, please don't hesitate to contact Cathy Morris at 248-858-1639 or morrisc@oakgov.com. She understands the system and will be able to help you.

The Fall MG Training class just ended. We had a lot of fun and now have a great new group of Trainees. It's amazing how fast the 13 weeks goes by! Please make sure to welcome any new faces you see as you volunteering or coming to MGSOC monthly meetings.

The winter MG training class will take place at Tollgate and we will be using Distance Learning technology. As of this writing, Oakland and Livingston Counties will be holding our classes at the same time. The class will be Thursday evenings from 6pm to 10pm from January 23-April 24. There will be a live presenter at one of the sites each week and it will be "beamed" to the other site live with the ability to ask questions etc. I am talking with County of Oakland and hope to get this technology installed in the EOB Conference Center in time for the fall 2014 class.

If you know anyone who wants to take the class and tollgate is convenient, please send them the registration link http://mg.msue.msu.edu/become_a_master_gardener_volunteer.

Wishing you all a wonderful Holiday and a happy and healthy New Year!

The Year at a Glance—MGSOC Meetings/Events for 2014

January 14	Nanette Alton	Pilot Plantings & Slope Restoration Projects	
January 21		MGSOC Board Meeting	7PM @ Extension Office
February 11	Lisa Steinkopf	African Violets: Their Care & Cultivation	
March 11	Marna Nemon	Let them Eat Your Garden	
March 17		MGSOC Board Meeting	7PM @ Extension Office
April 15	George Papadelis	New and Under Utilized Shrubs	(DATE & LOCATION CHANGE)- Location: Telly's Greenhouse 4343 24 Mile Rd (NOT the one on John R.)
April 26		2014 Conference	"Gardening and All that Jazz"
May 13	Pat Seibel	Container Planting	
May 19		MGSOC Board Meeting	7PM @ Extension Office
June 5 - 8		Bus Trip to St. Louis, MO	
June 10	Cheryl English	Species and Small Flowering Clematis	
July 8	Janet Macunovich	Choosing and Planting Trees	
August 12	James Rizzo	Creating Living Walls	
August 18		MGSOC Board Meeting	7PM @ Extension Office
September 9	Molly Robinson	Decorating with Molly	
October 14	Sue Grubba	Shady Characters in the Garden	
October 20		MGSOC Board Meeting	7PM @ Extension Office
November 11	Julia Hofley	Take Back Your Garden and Protecting Your Investment	
November 17		MGSOC Board Meeting	7PM @ Extension Office
December 9		Holiday Potluck	

Save The Date for the MGSOC 2014 Garden Conference
Saturday, April 26, 2014
“Gardening and All That Jazz”

Building on the success of their first annual garden conference and always striving to outdo themselves, the **MGSOC Conference Committee**, under the direction of **Denise Brown**, has the start of another fabulous conference!

Volunteers on this hard-working committee, utilizing “lessons learned” from last year’s conference, have booked a new venue for this year. The **Oakland Schools Conference Center on Pontiac Lake Road in Waterford** will provide a larger, brighter and more comfortable venue with better food choices.

Keynote speakers this year will include **Allan Armitage** on “*Perennials*,” **Stephanie Cohen** on “*Native Plants*,” **David E. Perry**, a specialist in “*Photography in the Garden*” and **Stacey Hirvela** on “*Designing with Flowering Shrubs*.” In other words, there’s something for everyone.

If you’d like to know a little more about our tremendous speakers, peruse their web sites:

www.allanarmitage.net, www.theperennialdiva.com, www.davidperryphoto.com and www.staceyhirvela.com.

A quick “Google” for each one also brings up link after link of their accomplishments.

With the thought that music and gardening go hand in hand, the theme for the 2014 conference is “*Gardening and All That Jazz!*” featuring two well-known area jazz musicians. **Kerry Price** of Royal Oak – vocalist, pianist and long-time area educator and performer – will entertain us during the morning registration period. Kerry is featured in “Who’s Who” of American Jazz and Blues singers. In addition, **The Dave Bennett Quartet** (www.davebennett.com) will provide a little Benny Goodman-style clarinet during our luncheon and shopping break. David, from Waterford, has been the featured soloist for several years with the Detroit Symphony Orchestra and will make his debut at Carnegie Hall on November 1 with the New York Pops orchestra.

The conference will again feature a Garden Market with more vendors than last year, raffle prizes and gift bags. Although open to any interested gardener, the conference will provide Master Gardener education credits for those Master Gardener Volunteers seeking to (re)certify for educational hours.

Tickets go on sale January 14, so please mark your calendar for this very special and unique garden date.

—Submitted by Sally Bolle



Stop and Smell the Roses A Tale of Two Trips to the Columbus Park of Roses

Most Master Gardener Volunteers love a good tour, and this gardener is no exception. As an avid traveler, I make a point of including a visit to local green spaces on every itinerary. On a recent weekend getaway in search of historic postcards, another favorite, my sister Sarah and I went to Columbus, Ohio. As first time visitors, we were excited to check out the North Market, the historic neighborhoods of Short North and German Village, and as many public gardens as we could fit into three days. While in Columbus we had lunch at the Franklin Park Conservatory and Botanical Gardens, caught sight of Topiary Park on our way to the Art Museum, and took a morning stroll through Inniswood Metro Gardens. We also discovered a new favorite, the Columbus Park of Roses, twice.

On our first visit we were headed south on High Street aka U.S. 23 to the North Market and came upon the Clintonwood Farmers Market. As people who should have bumper stickers that say "I brake for Farmers Markets" we could not resist a quick detour. After purchasing a few Winesap apples for a snack we decided on another pit stop at the nearby local branch library. Did you know the Columbus Metropolitan Library (CML) was rated the No. 1 library system in the nation in 1999, 2005, 2008, and 2010? In our search for parking we noticed the sign below:



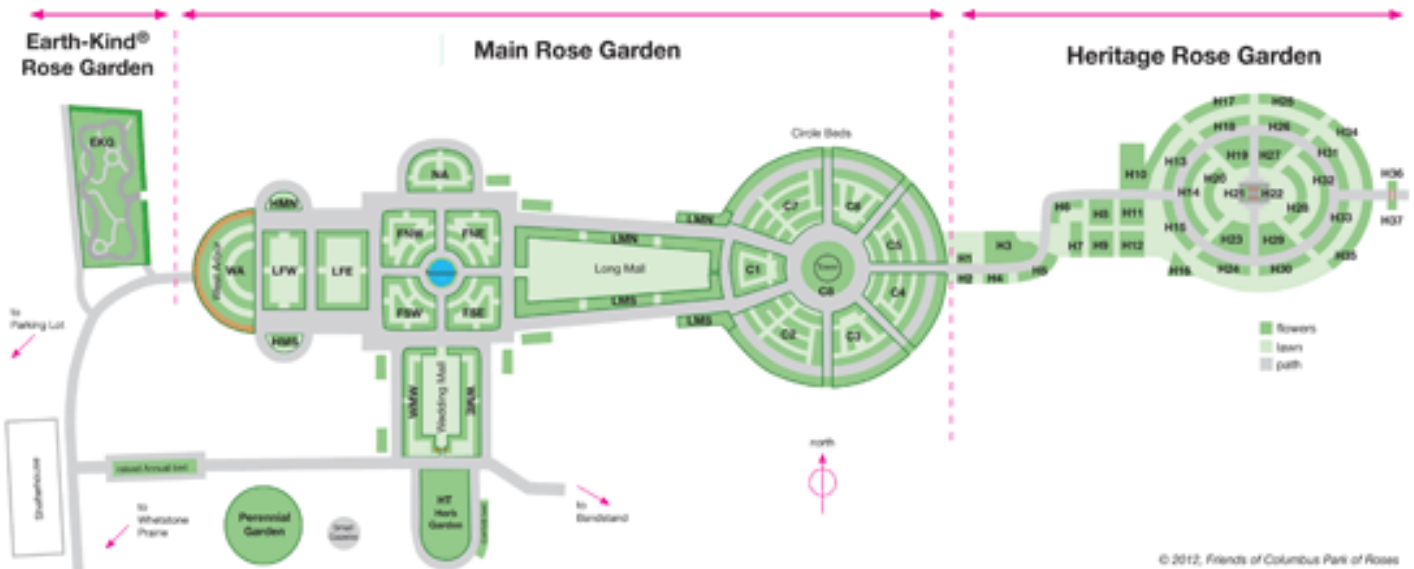
Photo credit: Whetstone Park

We took the sign as a good indication of things to come and headed down Hollenback Road from the library to Whetstone Park. As I drove, Sarah fired up her iPad and found the website <http://www.parkofroses.org/files/67344993.pdf> She explained that the Park has more than 136 acres, provides access to the Olentangy River Trail and is home to tennis courts, soccer fields, a pond, woods, and the 13 acre Park of Roses. We saw lots of bikers and dogs with their walkers as we entered the lower parking lot.



Photo credits: Columbus Park of Roses

Once parked, we walked up the hill to the east and headed behind the shelter house to glimpse what lay in front of us. At that point we just knew we'd hit the mother lode of rose gardens. According to their website the Park of Roses is one of the American Rose Society's Top Ten Public Rose Gardens. To begin we consulted a nearby kiosk and used the map below as a guide. The map is also available online along with the most current rose list.



Map credit: Friends of Columbus Park of Roses

The Park of Roses website offered loads of information including the following history:

In January, 1944, the city of Columbus purchased 149 acres which are today Whetstone Park. Used by local residents for victory gardens during WWII, the fields became the recreational park of the Clintonville neighborhood. In 1948, parts of the area were cleared, graded and planted, leaving the ravine and banks of the Olentangy River in a natural state. The name Whetstone Park was adopted in 1949, in reference to the whetstones early settlers collected from the river bed.

The Columbus Rose Club and Central Ohio Rose Society had long dreamed of a municipal rose garden. The American Rose Society wanted to move from its Pennsylvania location to one more centrally located to its national membership and close to an agricultural college. Columbus fit both criteria and a match was made. On April 19, 1952 the City Council passed an ordinance and issued bonds for the Park of Roses.

The formal opening of the Columbus Park of Roses was in 1953. In 1954 the American Rose Society Headquarters relocated from Hershey, Pennsylvania to Columbus, staying until 1974 when they moved to Shreveport, Louisiana. Today the Park of Roses contains three unique rose gardens, with over 350 different varieties, and a total of more than 11,000 rose bushes, as well as an Herb Garden, Daffodil Garden, Perennial Garden, annual display beds, and restored Ohio prairie.

With lots of Columbus to explore that day we decided to focus on the roses and began with a quick walk on the paths of the Earth-Kind Garden. This demonstration garden has an informal layout with a mixed planting of shrubs. Its purpose is to test winter hardiness of roses previously identified as fitting the Earth-Kind profile of very self-sufficient plants. Curious, we later searched for more on Earth-Kind gardens and found discovered the Texas A&M AgriLife Extension Service website at <http://aggie-horticulture.tamu.edu/earthkind/>



Photo credits: Columbus Park of Roses



As we headed from the demonstration garden to the Main Rose Garden the true scale of the Park of Roses revealed itself. The Park feels like a hidden secret in the middle of everything. A secret garden, if you will. If you've never been, you'll be shocked by the rows and rows, beds and beds of gorgeous roses. No wonder the park was inducted into the Great Rosarians of the World's Rose Garden of Excellence hall of fame in 2011.



Photo credits: Columbus Park of Roses

The Main Garden is an Italianate formal design with roses grouped into symmetrical beds surrounding a large water fountain. Most of the roses here are hybrid teas, floribundas, grandifloras and shrub roses and are well marked. An iron observation tower at the north end offered us a great place to view the full effect. Even in early October the park was absolutely gorgeous!



Photo credits: Columbus Park of Roses

There were very few plants of that weren't putting on a show of color. We spotted burgundy red, brilliant white, pale yellow, bright tangerine, salmon pink, ruddy orange, pastel pink, peachy yellow and many more. Even more than their gorgeous colors, we could have spent the whole day taking time to smell. Instead we sat on a nearby bench to soak it all in and with morning slipping away and the rest of Columbus calling we decided to visit again the next day. On our return afternoon we were delighted to see a large wedding party enjoying this absolutely perfect location. Although rain was on the way, we returned to the main garden to focus on smelling the roses. We were crouching over so many like goofballs describing favorite new finds.

Sarah and I had a great first visit to Columbus and the Park of Roses and although we ran out of time to tour the Heritage Rose Garden we plan to start there next time. It has been a few weeks since our trip and the rose that left the greatest impression on my heart and nose was

the Chrysler Imperial. I could not forget the gorgeous dark velvet red color or its amazing fragrance. The upright rose bush had very thorny canes and semi-glossy dark green foliage. With a search of Wikipedia I learned that the Chrysler Imperial is a multi-award winner and hardy in USDA zone 6b-9b. The rose opens into high-centered blossoms with a diameter of about 5 inches and can have up to 45-50 petals (which is a high number for a hybrid tea).



Photo credit: rosesingardens.blogspot.com



Image Credit: Vintage-Adventures.com

The rose even has a Michigan connection. In the 1954 Tournament of Roses Parade, 25,000 Chrysler Imperial roses covered the City of Detroit and Chrysler Corporation float.



Image credit: www.tcrores.org

The float theme was *Life of an American Workman* and featured the figure of an American Workman striding out from the pages of a book to strike a heavy hammer upon an anvil from which floral "sparks" flowed, their trains leading in several directions to various Detroit signature products: an automobile, a truck, an airplane, a tank, and a boat.

Whether you like to take things as they come or have a detailed plan in hand Columbus offers great green spaces to discover by chance or add to your travel itinerary. Although we experienced the Park of Roses twice in one weekend we are already talking about a return

visit to Columbus. The Park of the Roses will make you fall in love with Columbus, so stop in and smell the roses!

VISITING THE COLUMBUS PARK OF ROSES

Admission: Free

Park Hours: Dawn to dusk every day of the year

Best Viewing Time: Peak Bloom mid-June and mid-September

Tours: Guided tours are available for groups of 20 or more, on a limited basis.

Features: 13 acres of manicured gardens, 11,000 rose bushes, 350 varieties.

Herb & Perennial gardens, Daffodil garden featuring over 1,000 varieties.

Directions: From I-71, exit on North Broadway, proceed West to High St., turn North on High Street, proceed approximately 1.5 miles north to the Whetstone Park entrance located at 3901 North High Street, Columbus, Ohio 43214. Enter at this location, follow the park entry road Hollenback Road, to the lower parking lot.

The Park of Roses is easily located and well signed from the lower parking lot and is wheelchair accessible.

Map: [Park of Roses / Whetstone Park](#)

Parking: All parking is free; use the lower lot adjacent to the shelter house.

For Information: Contact Columbus Recreations & Parks, (614) 645-3350

—Submitted by Carla Spradlin

What's Wrong with Spruce?

Cathy and Frank Genovese who own Candy Cane Christmas Tree Farm presented a talk on diseases and insects currently affecting conifers. Diseases come and go, but the last ten years have been particularly difficult for tree growers.

Needlecast has reached epidemic proportions in spruce trees causing second and third year needles to fall. (It is normal for fourth year needles to fall.) Under the microscope, you can see the fruiting bodies of the several different kinds of fungi that are causing the needlecast. The spores infect the trees in the spring, but symptoms do not appear until late fall or the following season. Hot dry summers and not enough aeration are causative factors. Monoculture allows the disease to spread easily. Needlecast does not necessarily kill the tree – you can clean and cut off affected branches.

White pine weevil feed just below the terminal bud cluster and as the season progresses feeding will occur on lateral branch buds and bark tissue. Borers drill in from the top of the tree causing the affected branch to die. White pines also don't like car emissions. Scotch pine is a magnet for European sawfly. Spider mites attack spruce and pine.

Phomopsis canker causes shoot blight. You can use fungicide (they don't recommend this method) or cut and burn the affected branches.

What can we do to protect our trees from all these scourges? First, plant healthy stock from a nursery you trust. Make sure the trees get plenty of air circulation. Cut out any dead wood. Water and fertilize when needed. AND DON'T FREAK OUT!

—Submitted by Jean Gramlich

Edible and Ecological Landscaping

Trevor Newman from Roots to Fruits in Clarkston gave a fascinating talk on how to live on the land in an environmentally friendly way. He and his partner, Mark Angelini, design landscapes using a holistic vision. He hopes to counter our industrial agriculture that uses monoculture and depletes the land through practices like annual tilling and using artificial fertilizer.

Their designs try to use alternative energy, organic farming and sustainable regenerative practices that connect communities and individuals to sources of sustenance. There are hundreds of working models for food production in rural, suburban and urban areas. They hope to create a local “foodshed” of many small growers, homesteaders and artisans to build community resilience and adaptability.

A food garden should be visually appealing, integrating herbs, ornamentals, vegetables, and nut and fruit trees. Local foods grown organically are much more nutrient dense than foods grown far away in monocultures as nutrients diminish over the transport time. Local foods can offer a wide selection and cut costs through reduction of the use of fossil fuel. He uses no toxic chemicals and prioritizes the use of biological resources.

He increases fertility and plant health by using mineral accumulating plants like comfrey (he plants it around trees) and nitrogen fixing plants like cover crops. He uses foliar sprays and compost teas that feed the thriving colonies of beneficial organisms on the leaves of plants. He grows healthy soil by supporting healthy fungal networks.

Pest and disease control is achieved through various methods beginning with polyculture. He provides insect habitat to attract beneficial/predatory insects and foliar sprays for cuticle defense. Proper plant spacing is essential. He provides nest boxes for pollinators.

Water management is an important part of living responsibly on our earth. Collecting and storing rainwater can be done with rain barrels, rain-ponds, swales and catch basins for reducing surface run-off. Ponds and dams help us store water in the ground. Drip irrigation and heavy mulching are essential tools for water management. Ditches in contours are useful in some landscapes. He showed a picture of rice paddies in Vermont (!) in an area that was devastated by flooding from a hurricane. The rice paddies just caught the water and prevented the damage suffered by the surrounding area.

Waste management is another essential part of creating an ecological landscape. All waste should be recycled back into the system via composting, vermiculture and other methods. He gave an example of growing mushrooms on rotting wood. “Pollution is unused waste.”

Different plants have various functions in the landscape. Trees can be used for shade, for windbreaks and for food. Other plants can be used for erosion control and living paths as an alternative to lawns. A food forest can consist of large canopy trees (nuts); medium and small canopy trees (many fruits), shrubs (berries), herbaceous plants (lots vegetables and herbs), ground covers and root vegetables. Vertical spaces like walls, pergolas and fences can be used for vines like hardy kiwi and espaliered fruit trees. Multi-grafting can be used to harvest more than one variety of a fruit off the same tree.

Container gardens can produce edible plants, and an aquatic garden can produce watercress. Some people are able to create a microclimate and have a tropical garden. Ornamental vegetables include nasturtiums, asparagus, kale, Swiss chard and various varieties of peppers.

Season extension through the use of hoop houses and greenhouses allows us to harvest cool-season plants for most of the year. We currently depend mostly on annual crops, but many shrubs, vines and trees produce food every year and are easier to grow.

Designing an ecological landscape starts with a thorough site analysis and soil mapping. What does the site want? Useful websites: rootstofruits.biz; fruitnut.com; eatherenow.org.

—Submitted by Jean Gramlich

Detroit Then and Now – “Feet on the Street Tour”

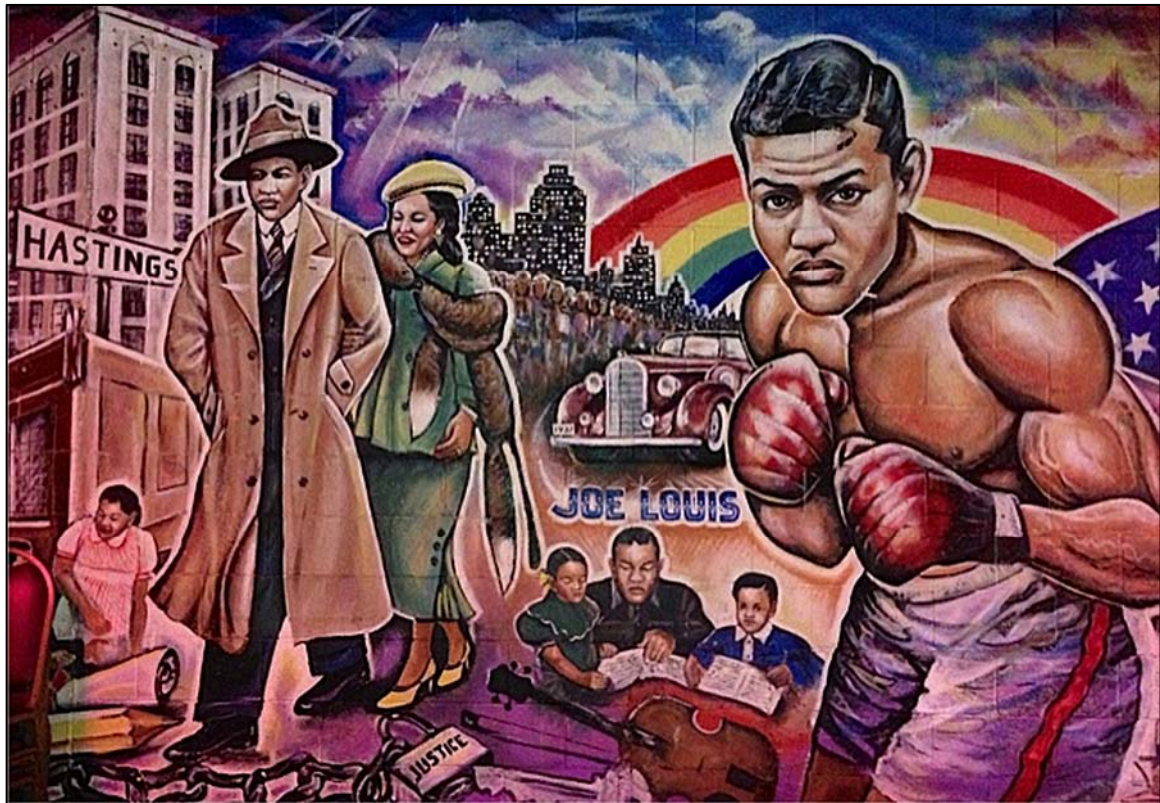


Linda Yellin, founder of “Feet on the Street Tours” (www.EnjoyTheD.com) was our guide through some of Detroit’s prominent gardens, as well as, nostalgic, historic and cultural tourism destinations on Saturday, September 7. Members of the Master Gardener Society of Oakland County enjoyed a glorious day of adventure via luxury coach through some of Detroit’s most interesting destinations.

The tour included many stops. The first was Lafayette Greens, started by Compuware to beautify downtown Detroit in an innovative and hands-on manner and to help downtown neighbors and visitors learn about and enjoy gardening. We also visited Earthworks Urban Farm, a program of the Capuchin Soup Kitchen where a small plot of land grew into a working study in social justice that now feeds the area’s needy. We visited their greenhouse (complete with bee hives) and learned about their food production and methods of distribution. They are always looking for volunteers!



Lunch was spent at Eastern Market and the Market Sheds where we also enjoyed perusing the many shops and a tour of Bert’s Warehouse Theatre. We also received a tour of his newly-painted murals depicting the history of Detroit.



The tour also included a “drive by” of the Heidelberg Project and we’re quite sure we spotted artist Tyree Guyton there!

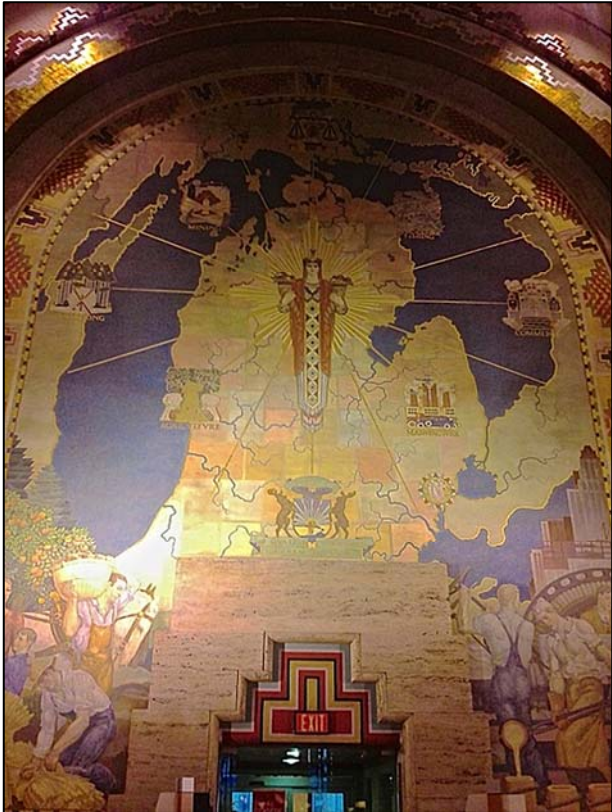


Part of our group then toured the Rivard Plaza and William G. Milliken State Park with its restored wetlands, intended to reproduce the riverine wetlands that once bordered the Detroit Wetlands that once

bordered the Detroit River. The Michigan DNR hopes that these wetlands will be an attractive location for migratory birds. Ninety-seven percent of the former Detroit River wetlands have been lost to development.



The other part of the group toured the beautiful Guardian Building featuring lavishly decorated mosaic, Pewabic and Rookwood tile.



This trip was so popular – look for more of these in the future where Master Gardeners will earn education hours, and have a great learning and cultural experience at the same time. Thanks to Denise Brown and the many volunteers who made this outstanding trip possible.

Linda’s dynamic personality and thorough knowledge of Detroit, as well as her portrayal of the positive image of the city of Detroit, helped re-acquaint us to the many gems in the Detroit area. We all felt great optimism for Detroit and its future after a day with Linda Yellin.



Left to right: Unknown, Linda Yellin, Denise Brown.

*—Photos Janie Grissom and Sally Bolle
—Submitted by Sally Bolle*

Drainage Solutions For Mature Landscapes

**By Douglas J. Golla
Advanced Master Gardener**

For those of us gardeners, who live on uneven land, change their landscapes or, have neighbors who send water your way, drainage can be an ongoing issue. Even well planned landscapes can develop drainage problems. And what seemed like a perfectly adequate planting bed can eventually become wet and soggy. This is especially true for more mature properties that have added beds and planting features over the years. This article will lay out some of the common drainage problems we experienced on our property and give practical and relatively maintenance free solutions. This is especially useful for mature landscapes that you don't really want to change except to make them less wet.

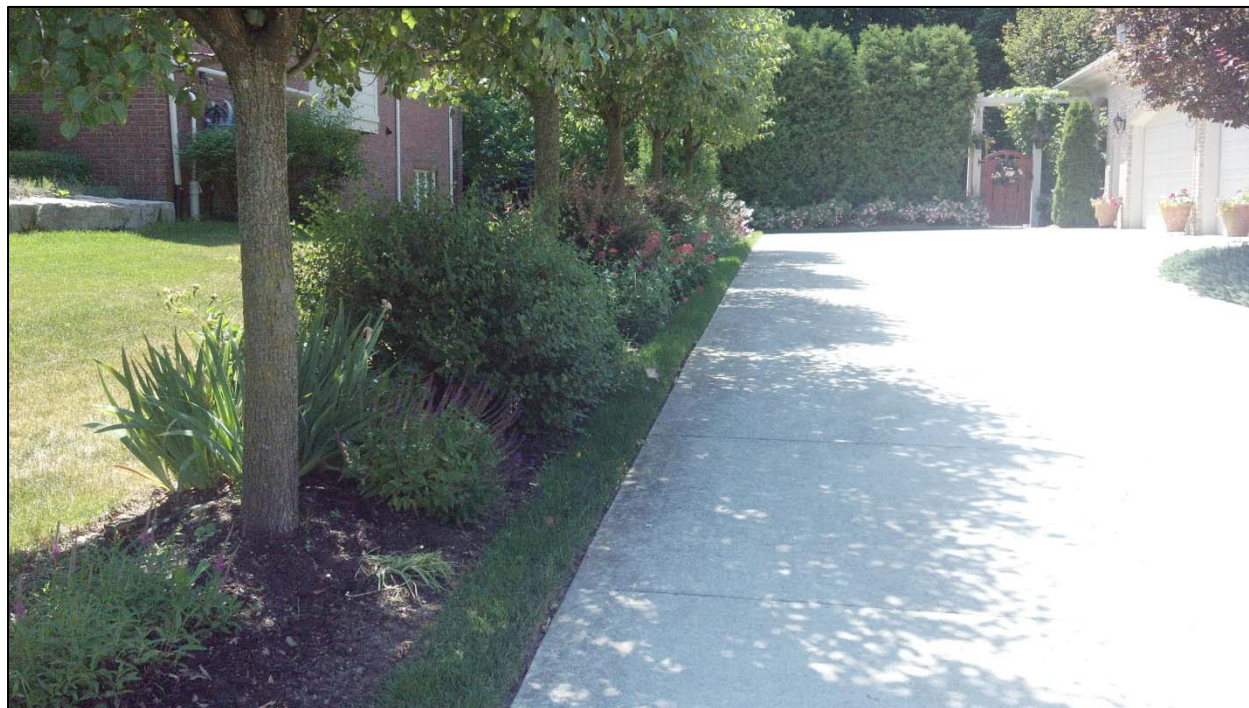
The symptoms of drainage problems can be quite diverse and you may often not realize there is a problem until real damage occurs to your plants and trees. While it is pretty easy to recognize squishy spots in your lawn and planting beds, trees and plants often suffer long before these spots become noticeable. Chronically excess water in the soil blocks oxygen to plant roots. Without oxygen, the roots cannot adequately metabolize nutrients in the soil and the plant becomes weakened and may even die. A common sign of problems can be yellowing leaves. But this can also be caused by a host of other reasons. In our yard, we had a combination of drainage and insect issues. However, a weakened plant is usually more susceptible to disease so it is likely that the drainage problems were contributory if not causative. I will discuss a few of the more serious ones we had to tackle.

Your Neighbor Wants to Share His Water

If your neighborhood is built on a hill or a new home is built next to you, you can often find yourself on the downhill side of things. So if you planned for just your water and rainfall, you will be unpleasantly surprised when you get a lot more than you bargained for. When our house was built there was a flat vacant lot next to it on one side. When the neighbor built on that lot, his builder stuck the house out of the ground by about 10 feet. Since the house on the other side of our new neighbor was also higher than his, this did not present a problem for anyone but us. We had a mature 60 foot driveway bed which bordered our new neighbor. This bed was planted with pear trees, boxwood, peony, lilac, barberry, arbor vitae and, various perennials. It took a while, but two of the pear trees, three of the arbor vitae along with one lilac and several peonies all died. And in the meantime, we accumulated some very vigorous water weeds in the bed which had always been weed free. Our neighbor did not do anything wrong, he did not overwater, his downspouts drained properly, it was just how the subdivision lots were laid out. So, since we liked our driveway bed, we had to find a solution that would work without disrupting the remaining trees and plantings.

Drainage solutions can often be very simple. In this case, we dug a straight line trench between the neighbor's yard and our driveway bed in order to lay 4 inch perforated corrugated black drainage tubing. We were lucky that our yard sloped down to the street so the water had someplace to go. We were able to incorporate large stretches of this trench into the existing edge of the driveway bed. The trench is about ten inches deep. Pebbles were placed around the perforated drainage tube especially on the top. And a filter sock was pulled over the tube and secured with plastic zip ties prior to installation

to keep the perforated holes clear of soil. A pop up was installed at the low end near the street. When we replanted the trees and shrubs, we made sure to elevate the root balls in the beds. Everything is thriving now five years into the project. Even the dwarf lilacs have grown well beyond their characteristic dimensions. If we had realized earlier that this was a serious drainage issue, we would not have lost so many trees and shrubs.

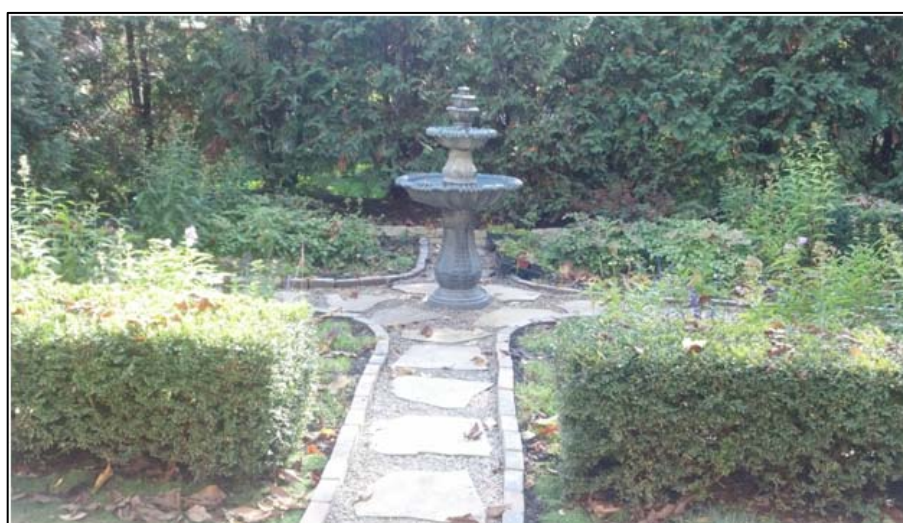


Elevated Beds and Retaining Walls

Now you would think that an elevated bed would not have a drainage problem but we were just lucky I guess. We decided to reclaim a side yard by creating a cutting garden. Unfortunately this was on the same side as the neighbor whose house is higher. But the land for the cutting garden sloped downward to the backyard and water flows downhill – right? However, the design required a level garden so this meant adding a retaining wall about two feet high on the down slope side. Even though we made every effort to incorporate the existing soil with the soil we added to avoid the clay bowl effect, the bed became soggy after the first year. Bordered on two sides by an arbor vitae hedge, on one side by a retaining wall and on the other side by a brick walkway to the backyard, the water in the cutting garden just did not seem to drain well at all. This limited the annuals and perennials we could plant which really put a kink in our cutting garden plans. And as a final gift from Mother Nature, the fieldstone paths in the cutting garden were always filled with water weeds. Our repeated attempts to grow creeping sage or thyme between the flagstones were met with strong resistance. In general, the garden had a few good weeks but became soggy in spring and did not dry out much until the end of summer. So only a few species of plants really thrived.

This year, when we decided to build a small half round patio at the backyard exit from the cutting garden, it was finally time to really solve the drainage problem in the garden itself. Like most projects in our garden, what started out to be a simple patio for two lounge chairs turned into the suburban

version of digging the Panama Canal - without the mosquitoes. We pulled up the flagstone path and stacked it. Initially, we only dug a trench the size of the drainage tubing and filled that in with pebbles. But after thinking about the problems of weeds between the flagstones and because we wanted a belt and suspenders drainage solution, we decided to excavate the entire path. We dug out all the soil from the path going down about 8 to 10 inches and installed 4 inch perforated drainage pipe with a filter sock. Then we backfilled the trench with small pebbles and re-laid the flagstones on top of the pebbles. We used leftover bricks from the patio to line the edges of the walkway to keep the soil in the planting beds and the pebbles in the walkway. It took over fifty of the forty pound bags of small pebbles to do the job. That's over 2,000 pounds – fortunately a bag at a time. We continued the drainage under the patio with a solid pipe. We connected this to two arcs of perforated pipe which were installed on either side of the arc of the patio (at the lowest end to catch the water). The solid pipe was extended past the patio about 25 feet downhill to drain into a natural swale through a pop up in the grass. We got one additional benefit from the large pebble path because the flagstones are rock solid level just by dropping them on the stones.





Water Flows Downhill Unless You Have Chipmunks

Being avid gardeners, we are always adding to our beds. When we bought our house there were elevated beds in the front yard. The beds were held in place with large rock walls. And the lawn sloped down to the street from these beds. So when we decided to add additional planting beds below the rock wall, we never thought we could have drainage issues. However, there are two simple equations. Woods + Rocks = Unlimited Numbers of Chipmunks and Chipmunks + Rocks = Lots of Tunnels. Not content to tunnel in the rock beds above where they were actually helping to break down the clay soil, the chipmunks decided the lower beds were even more desirable. Over time the lower bed became soggy despite the relatively steep slope downhill. So just when the lower bed had achieved its prime growth, we started to have problems with yellowing plants and dieback because the water was getting trapped in the swiss cheese chipmunk tunnels. We lost a prime rose bush and the rest of them became stunted. The boxwood hedge turned yellow and we lost a rose glow barberry. What had been a pretty dry area was now pretty squishy.

Since this is a mature bed and the spacing between plants is tight, we wanted to do minimal excavation to install drainage. We found a great product at a local home improvement store - a perforated drainage tube surrounded by a sock stuffed with foam peanuts. This reduced the amount of space needed for the



trench. At about fifty dollars per twenty five foot section this is a rather pricey option but it has its uses. It is compact and more importantly very light weight when you consider the alternative of adding pea stones. We installed two of the twenty five foot sections in an arc between the boxwood hedge and the barberry hedge at the very top of the lower bed below the rock wall. This was to carry off the water from the above raised bed. The exit point of the tubing was at the lowest edge of the lower bed and drained onto the grass. It took about forty five minutes to do the job including laying a small layer of pebbles on the top – just for good measure. This solution is virtually invisible in the lower bed even when looking down from the upper bed. We did not disturb any roots and it was super fast to install. The boxwood is now deep green and the roses and barberry are doing great.



Sometimes It Is Not The Brick Patio

We have a brick patio that developed a drainage problem as the surrounding landscape matured. The section of the patio that is bordered by a lawn and a planting bed was meant to drain into the grass except now it didn't do that anymore. Despite many efforts by us to divert the water and by brick patio experts to re-level the bricks, we had a chronic low spot on the patio that held water and grew moss. Now moss is fine if you actually want it but the rest of the patio is not mossy so this stood out in a very unattractive way. We had a large mature planting of blue rug juniper bordering this area and it did not seem that we could install irrigation into this bed. However, we eventually found three inch perforated tubing and adapters that allow you to connect it up to four inch tubing.

We were able to prune the blue rug back just enough to get a mini trench in place around the planting bed for the three inch tubing. And we found we could hook this up to a down spout drainage tube at the down slope end. We topped the trench with larger river stones which made a nice accent to the blue rug. And surprise – no more wet spot, mud and, moss on the patio bricks.



Remember Somebody Likes Excess Water

Even though we have had our drainage problems, it is good to remember that somebody always appreciates a little excess water. These moss pots are fine homes for our real frogs.



Some Information You Should Know

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**Currently Available Opportunities: Communications,
Education, Project Support, Volunteer Activities**

Mission Statement

It is the Master Gardener Society of Oakland County's Mission to assist, enable, and encourage its members to use their horticultural knowledge and experience to help the people of their communities, enrich their lives through gardening and good gardening practices.

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Roots & Shoots is a joint publication of MSU Extension-Oakland county and Master Gardener Society of Oakland County. Submit articles for publication to Dick Wanat rwanat155056mi@comcast.net by suggested deadlines below.

January 15 for February/March issue
May 15 for June/July issue
September 15 for October/November issue

March 15 for April/May issue
July 15 for August/September issue
November 15 for December/January issue

To help reduce mailing expenses, if you have Internet access we encourage you to read Roots & Shoots online at the Master Gardener Society website www.mgsoc.org.

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