May is a month for making plans. While we make plans for our own gardens this month, also make plans to attend our May 27 general meeting at 6:30 p.m. at the Community Building at the Fairgrounds at 5700 W. Airport Road. Both you and your garden will benefit.

In a change of meeting format, we will have a pot luck dinner in honor of our graduating interns, their guests, and our members. We all enjoyed our fall dinner and the exceptional food provided by our members, so our planning committee thought this would be a wonderful opportunity to extend the celebration for the interns. We are asking that you bring one dish to share (appetizer, main, salad or dessert). The refreshment committee will provide plates, cups, plastic utensils, and a variety of drinks. Members of our committee are Chair Cindy Benson, Laramie Wilson, Mary Cusack, Tom Lovell, and Peggy Rees-Krebs. We will need additional help to set up and cover the tables, set up the chairs, and of course, to take it all down at the end of the evening. If you can spare some time, please call or email me (812-339-5914 or smlovell@indiana.edu). We will begin setting up at 5:00 p.m. The more hands we have, the easier the work.

Finally, our May general meeting is also the time for our annual plant swap. This is where your garden benefits! The swap is fun for all, and we will arrange the plants on the outdoor patio for browsing before the swap. Come with plants, such as perennials, vegetables, bulbs, and shrubs or more that you would like to swap, and take home a new treasure for your garden. Please remember to mark your items with name, sun/shade requirements, and height/width. An easy way to create plant markers is with magic markers and inch-wide strips cut from castoff cardboard or plastic drink containers or bottles. Remember to bring something to carry your new treasure home. Hope to see you all there!
Sing along, why don’t you?

Getting to know you, Getting to know all about you.
Getting to like you, Getting to hope you like me.

Oscar Hammerstein said it so nicely when he wrote those lyrics for The King and I in 1951. The catchy tune describes our experience at the Garden Fair this year. Master Gardeners getting to know Master Gardeners, Master Gardeners getting to know vendors, getting to know visitors, getting to know how much fun it is to work at an event like that alongside people with whom you share a common interest. It appeared that every Master Gardener who was not out of the county for some reason that day was at the Armory on April 5. If you did not participate this year, plan on joining us next year. It is very rewarding!

May 27 general meeting is at the Fairgrounds Community Building

Looking for more fun? Come celebrate the graduation of the 2014 interns at the May 27 meeting. Held at the Community Building at the Fairgrounds, the highlights of this meeting are the annual plant swap—see the April Roots and Shoots, page 3, for plant-swapping instructions—and a pitch-in dinner to enjoy with the interns and their guests. Susan Lovell’s article on page 1 has more information about the dinner. It is always a good time!

Master Gardener intern classes reach into the community

The intern classes are always filled. The interest shown in these classes represents this community’s interest in all kinds of gardening and this organization’s reputation for providing good information. It is always good to be reminded of gardening issues other than those clamoring for attention in your own back 40.

On mcmga.net, click on Upcoming Events

Be sure to check our website for Upcoming Events. The events are up-coming so fast that it is hard to keep up. Already come and gone was the sale of native plants at Spring Mill State Park, and Brown County State Park will host a sale of native plants, as will the Hinkle Garton Homestead, before you see this issue. The MCMGA board will try to do its best to keep you informed of all these many opportunities, but some will be missed. If one comes to your attention, please forward it. A thank-you to Penny Austin who forwarded information on the LDHS trip to the Chicago Botanical Gardens. (continued on page 3)
Global Climate Disruption and Local Food Security
Submitted by Amy Thompson

WHAT: Spring Quarterly Meeting and Talk
WHEN: April 15 at 6:30 p.m.
WHERE: Indiana University's Hilltop Gardens
WHO: You! All of our meetings are open to the public, and please contact us at bfpc@bloomingtonfpc.org if you have any questions about the meeting.

Bloomington Food Policy Council Chair, H. Michael Simmons, will present "Global Climate Disruption and Local Food Security," an overview of some potential effects of climate change on the local food system. The talk will include suggestions for adaptive and mitigative strategies for local growers as well as proposals for helping the local food system respond effectively to the challenges and opportunities presented by the changing climate. Between 6:30 and 7:00 p.m., there will be a tour of Hilltop's new Phenology Garden, which will help us monitor climate change locally. Following the tour, we will conduct normal meeting business, including working group updates.

Volunteers needed
By Amy Thompson

On Saturday, May 24th, an event, Ready, Set, Grow, sponsored by The Rooftop at Middle Way House, will be held at the Farmers Market. This event is intended to spread helpful information on home gardening and sustainable living to fellow Bloomington community members. I am looking for volunteers to represent the Monroe County Master Gardener Association at this event. The tables for the event will be set up from 9:00 a.m. -12:00 p.m. The extension office will provide a display and resource materials, and the volunteers will set-up, staff the table to answer questions, and pack-up. I need to confirm our participation by May 9 so if you are interested in volunteering, please let me know (afthompson@purdue.edu, 812-349-2575) prior to that date.

Member news (continued from page 2)

When you are on our website to access Roots and Shoots or Upcoming Events, jump down to the link to Facebook. Click on the photo you will see there of the Callery pears and then read the article. You will never see your neighborhoods through the same eyes again. Good information.
Garden Fair a success by all measures

By Nancy White

Our 2014 Garden Fair has come and gone, and committee chairs and members are reflecting on activities leading up to and those activities that took place during the Fair.

Garden Fair ’14 Fast Facts

Attendance—over 700 were counted coming in the door

Education sessions attendance—a total of 76 attended our education sessions with an average attendance of 19 for our four sessions

Vendors & booths—Fair featured a total of 30 commercial vendors and seven non-profit vendors, including two MCMGA booths

Booth availability—all available booths were taken; some prospective vendors could not get booth space

Café—informal conversations indicated that coney dogs and desserts were very popular; hotdogs sold out before the end of the day

New Fair items—free shopping bags donated by Bloomingfoods East Garden Center; fine art photography offered by vendor Marilyn Brinley (Master Gardener); a handmade wood products vendor; an additional education session bringing the total to four; a record number of over 60 door prizes awarded; and a hydroponic growing system displayed by a new vendor

Special Fair items—five sponsors, Fowler Tree Service, Bloomingfoods East Garden Center, Bloomington Hardware, The Preen Company, and Mid-America Farm Credit, provided special items

Event brochure—contained 29 paid advertisements

Fair posters—over 100 publicity posters were displayed in Monroe, Lawrence, and Brown counties

Yard signs—36 yard signs were placed in members’ yards and in high traffic areas

This year’s Garden Fair compared to our other Fairs—achieved the largest attendance and the most profit for our grant program

Volunteers—over 60 Master Gardeners served on committees for the ’14 Fair

Survey results are especially revealing

The Garden Fair surveys, taken before and after, have been tallied. The vendors report that the best things about the Fair this year were the friendly staff, steady traffic, great turnout, wonderful customers, and the variety of vendors. Almost all vendors surveyed felt the Fair was good for their business. (continued on page 5)
Send your favorite gardening tips and recipes
By Paula Perron

Now that spring time has finally arrived, some of you will run across some gardening tip ideas that you’d like to share in our Master Gardener Garden Tips and Cookbook. Perhaps it’s a garden idea that you heard from someone else, but since you have tried it, you’d like to pass it on. Please email us as you think of a neat gardening tip. We want to include tips in the book.

Also, since you are all bringing something delicious to our May pitch-in dinner and meeting, please take a moment to email us your recipe that you’d like to share with others. Go to mgrecipebook@yahoo.com and email the garden tip and recipe. Or you can bring a recipe copy to the May pitch-in dinner. We’ve gotten several great recipes but no gardening tips yet.

Garden Fair a success by all measures (continued from page 4)

Some suggestions for next year from the vendors include larger booth spaces, more social media advertising, more parking, and more outdoor booths.

Attendee surveys indicated that many would be contacting our vendors after the Fair. They also mentioned the good networking opportunities, great products, handy shopping bags, free shrubs, and the wealth of information available. Attendees’ suggestions include expanding to a two-day event next year, adding some chairs for resting, and adding vendors with houseplants and terrariums.

Nine Garden Fair committee chairs survey indicated that the whole room looked more colorful and appealing for visitors. Additional positives included many volunteers, satisfied vendors, helpful Armory staff, and wide variety of vendors. Chairs also felt the vendors had improved the displays and provided more merchandise for sale, including many plants. Friday’s early set-up day went well and made Saturday less hectic. Good weather was a plus, and H-T’s article helped the attendance. Chairs suggested that we might consider offering more free shrubs, reassess the door prize system, offer more outdoor booths, work on our publicity, and research ways to include non-profits in the Fair.
Pruning evergreens
By Rosie Lerner, Extension Consumer Horticulturist

Evergreens require a bit different manner of pruning than other landscape plants. Although a plant is not likely to die from improper pruning, it is important to note that most evergreens cannot replace lost growth the way that deciduous plants can. So while other landscape plants might be able to outgrow an errant pruning job, evergreens can suffer permanent disfigurement.

Individual plants should be assessed for pruning needs. Evergreens that have been sheared into formal or artificial shapes require frequent pruning. However, many evergreens may rarely need pruning.

As with other plants, the first objective of pruning is to remove any dead or damaged wood. Prune back to a branch that is pointed in the direction that you want the new growth to go, always making sure to cut back into healthy wood.

The term evergreen is used to refer to many different kinds of plants and all are not pruned in the same manner. Trees such as spruce and pine have very different pruning requirements than shrubs such as yew and juniper.

Some evergreen shrubs should be thinned occasionally to prevent lower branches from dying back due to heavy shade from upper growth. You can improve light penetration to overgrown shrubs by using a technique known as thinning. Remove selective branches at their point of attachment, rather than giving a "haircut" to several branches at once. Proper thinning should not mar the plant's natural beauty and does not stimulate excessive new growth.

The best time to thin evergreens is in late winter or early spring before new growth begins. Light pruning may be needed later to shorten branches, especially if shrubs are in formal shapes or hedges. Broad-leaved evergreens that flower in spring should be pruned after they have bloomed. Spent flowers should be removed to prevent seed formation and encourage new growth. Overgrown, broad-leaved evergreens that have become bare at the bottom can be rejuvenated by pruning several of the oldest branches to the ground each year in early spring. This practice encourages new growth at the base of the plant. After repeating this procedure for several years, you'll have a completely rejuvenated shrub. (continued on page 11)
Plants deer avoid

By Helen Hollingsworth


Bloomington isn’t the only location with abundant deer. Author Ruth Rogers Clausen lives and gardens in Westchester County, New York, where deer abound so she’s had plenty of deer experience, but reading her book shows she’s also done a lot of deer research. She highlights 50 plants of various types that are least favored by deer and provides plant information, plant companions, and garden design tips for deer resistant gardening.

Experts say that deer will eat anything if they are hungry enough, and no plants are absolutely deer-proof. Clausen reports that deer are likely to ignore plants with these characteristics:

♦ plants that have fuzzy leaves, such as lamb’s ears, licorice plant, and lady’s mantle (plant hairs likely irritate the tongue)
♦ plants that contain compounds poisonous to mammals, such as spurge, Lenten roses, castor oil plant, and monkshoods (instinct leads them to seek other plants)
♦ plants with strong foliage or floral fragrance, such as sages, rosemary, thyme, allium, lilac, sweet alyssum, and lily-of-the-valley (deer dislike strong scents)
♦ plants with tough, leathery, or fibrous-texture foliage, such as ferns, ornamental grasses, pachysandra, peony, and Siberian iris (not easily chewed)
♦ spiny or bristly plants, such as yucca, poppies, rugosa rose, globe thistle, and barberry (unpalatable to deer)

Clausen gives the 50 plants she selected a deer resistance rating ranging from 7 to 10, with 7 indicating deer sometimes nip flowers but leave foliage alone and 10 indicating deer usually avoid the plant. Her strategies to make a yard less interesting to deer include barriers, changes in terrain, plant cultural techniques, elevated bird feeders, and limb removal on trees likely to be browsed. She cautions against over-fertilization (deer prefer lush plants) and watering in late afternoon or evening (deer prefer moist plants over dried ones).

Clausen claims that roses, hydrangeas, lilies, and tulips are not the only gorgeous plants and that we can have spectacular gardens composed of plants that deer usually ignore. Plants she recommends are hardy in our zone. You’ll find this book is an interesting read.
Hilltop happenings

Submitted by Lea Woodard

Signs of spring are showing at Hilltop. There are a few daffodils blooming and hundreds more ready to open in “Libby’s Border.” Libby’s border, named after Libby Frey, a long time Hilltop supporter and volunteer of more than 50 years, established the garden in 1980. The Hilltop planting has varieties of daffodils that bloom from early March to mid-May, depending on the weather, with great diversity in form and color, from tall golden trumpets to miniatures only several inches high. Community members are encouraged to come to Hilltop to view the beautiful display of flowers in Libby’s border from the early spring daffodils through the summer display of daylilies and irises.

NEW! Family Gardening Program at Hilltop starts May 13

The Family Gardening Program at Hilltop will provide a fun, interactive, garden-themed learning environment in which families will learn and work together to gain the know-how and confidence to grow their own productive gardens for years to come! The garden program will mainly focus on growing common edible plants, including fruits, vegetables, and herbs; however participants will be introduced to a variety of perennial gardens located at Hilltop. Registration is taken on a first come, first served basis. Space is limited, so register early! Registration will be open until all garden plots are full. Please contact Lea Woodard, Hilltop Coordinator by email, hilltop@indiana.edu or phone 812-855-8808 to register.

Searching for a perfect Garden Walk date

By Mary Jane Hall

The Garden Walk committee is postponing our traditional June Garden Walk because this year, June is especially full of gardening and family activities. When plans are made, the new date will be announced through email and Roots and Shoots, so watch for it. And if your garden is available to be on the Garden Walk, please call Mary Jane Hall at 812-345-3985 to volunteer.
### Volunteer opportunities

*Compiled by Nancy White*

<table>
<thead>
<tr>
<th>Location</th>
<th>Time</th>
<th>Jobs</th>
<th>Contact</th>
</tr>
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<tbody>
<tr>
<td>Hilltop Gardens</td>
<td>year around</td>
<td>various</td>
<td>Charlotte Griffin, 345-8128</td>
</tr>
<tr>
<td>MG Demonstration Garden</td>
<td>seasonal</td>
<td>various</td>
<td>Herman Young, 322-5700, Jeanie Cox, 360-3587</td>
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<tr>
<td>MCMGA Garden Walk Committee</td>
<td>year around</td>
<td>select gardens and plan picnic</td>
<td>Evelyn Harrell, 339-0572</td>
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<tr>
<td>Bloomington Community Orchard</td>
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<td>various</td>
<td>Stacey Decker, getinvolved@ bloomingtoncommunityorchard.org</td>
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<tr>
<td>Cheryl’s Garden at Karst Farm Park</td>
<td>summer</td>
<td>design and maintain</td>
<td>Linda Emerson, 345-2913 (cell)</td>
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<tr>
<td>T. C. Steele SHS</td>
<td>seasonal</td>
<td>various</td>
<td>Davie Kean, 988-2785</td>
</tr>
<tr>
<td>Flatwoods Park Butterfly Gardens</td>
<td>seasonal</td>
<td>various</td>
<td>Cathy Meyer, 349-2575</td>
</tr>
<tr>
<td>MCMGA Horticulture Hotline</td>
<td>year around</td>
<td>inquiries &amp; research</td>
<td>Amy Thompson, 349-2575</td>
</tr>
<tr>
<td>MCMGA Speakers Bureau</td>
<td>year around</td>
<td>various</td>
<td>Amy Thompson, 349-2575</td>
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<td>MCMGA Newsletter</td>
<td>year around</td>
<td>write articles</td>
<td>Helen Hollingsworth, 332-7313</td>
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<tr>
<td>MCMGA Web Site</td>
<td>year around</td>
<td>various</td>
<td>Stephen Anderson, 360-1216</td>
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<tr>
<td>MG Program Committee Member</td>
<td>year around</td>
<td>plan MG programs</td>
<td>Sandy Belth, 825-8353, Susan Lovell, 339-5914</td>
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<tr>
<td>Middle Way House</td>
<td>seasonal</td>
<td>various</td>
<td>Clara Wilson, 333-7404</td>
</tr>
<tr>
<td>Wylie House</td>
<td>year around</td>
<td>various</td>
<td>Sherry Wise, 855-6224</td>
</tr>
<tr>
<td>Mother Hubbard’s Cupboard</td>
<td>year around</td>
<td>education, resource</td>
<td>Kendra Brewer, <a href="mailto:garden@mhcfoodpantry.org">garden@mhcfoodpantry.org</a></td>
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<tr>
<td>WonderLab Garden</td>
<td>2 times monthly</td>
<td>various</td>
<td>Nancy White, 824-4426</td>
</tr>
<tr>
<td>Hoosier Hills Foodbank</td>
<td>year around</td>
<td>various</td>
<td>Nicole Richardson, 334-8374</td>
</tr>
</tbody>
</table>

**Remember to wear your badge when volunteering and keep a record of your hours. Keep a copy of any volunteer records forms you submit to the extension office.**
To admire a peony in full bloom is not only a fitting way to celebrate our full arrival into spring, but also shows a hint of the colors that summer will bring to our gardens. Although it is native to the Orient, rather than the United States, the peony has become a staple of the Midwestern flower garden. So much so, in fact, that it is recognized as the state flower of Indiana!

Peonies are hardy perennial plants that adapt easily to average garden conditions without much maintenance. There are two basic types of peonies that can be grown in the Midwest—garden (herbaceous) peonies and tree peonies. Garden peonies have thick, bushy foliage that reaches 2 to 4 feet in height and dies back to the ground each winter. Tree peonies are not truly tree-size, but are generally larger than garden peonies and produce their annual growth from woody stems. They are generally a little less winter hardy then the garden types.

Though there is a vast array of cultivars available, most gardeners are only familiar with the large, double-flowered garden forms in white, pale pink and magenta. In addition, garden peonies are available in single-flowered, semi-double, Japanese, and anemone-type blossoms. Other colors include yellow, cream, and red.

Tree peonies also come in single, semi-double, and double-flowered forms, and the color range extends to include several shades of red and purple. Depending on the cultivar and weather conditions, peonies will blossom as early as April or as late as June.

Peonies grow best in well-drained, sunny locations, but can adapt to a wide range of soils. Garden peonies can be purchased as either potted plants or divisions of the tubers (underground stems). The more buds on the tuber, the faster the plant will make a good showing in the garden. Planting depth is critical for good garden performance. The buds of the tuber should be set no deeper than two inches below the soil surface. Peonies planted too deep will produce foliage each year, but they may never bloom.

Tree peonies are propagated either by seed or by grafting a certain cultivar onto a vigorous rootstock. Seed-grown plants usually require six or more years to become mature enough to flower. Grafted tree peonies generally bloom several years earlier.

Late summer or early autumn has long been the recommended planting time for both types of peonies. This allows the plants the opportunity to establish new root growth during the cooler, moister conditions. Spring planting is possible, but be prepared to pamper the plants throughout the stressful (continued on page 11)
BOGA plant swap

Submitted by Jen Cook

The Bloomington Organic Gardeners Association (BOGA) will host a free plant swap on Saturday, May 10, from 8:00 a.m. to 1:00 p.m. at the Bloomington Farmers' Market. Native plants, tree saplings, and seeds are encouraged, but all non-invasive plants are welcome.

Pruning spruces (continued from page 6)

Pine, spruce, and fir trees generally require less maintenance pruning than other evergreens. Pruning is generally limited to removing dead or damaged branches close to their point of attachment or just beyond a healthy branch. These trees produce all of their yearly growth in condensed shoots called "candles." To encourage more compact growth, the tips of the new candles can be cut back halfway, before the needles unfold. Candling usually occurs between late April and mid May, depending on the weather. Cutting the shoot tips after the needles have developed will result in a misshapen plant, as these trees cannot replace their growing tips. To preserve their natural beauty, pine, spruce and fir trees should be planted where they will have ample space to grow naturally.

Peony: Indiana state flower (continued from page 10)

summer with about an inch of water per week and perhaps protection from hot afternoon sun.

Double-flowered forms often get so top heavy from the weight of the blooms that they bend over the ground and sometimes even break off the stem. The flower stalks can be supported by tying them to a stake or surrounding them with a wire cage or other support.

Peonies make excellent cut flowers for arranging indoors. Cut the stems early in the morning or late in the evening, when stems are filled with water. Choose stems with flower buds that are just beginning to show color; flowers that are already open will not last long in the vase.

The flower buds are loaded with fragrance and often have sticky sap, both of which help to attract pollinating insects. Unfortunately, the stickiness also attracts ants, which you may not want to bring indoors. Some gardeners believe the ants are needed to open the flower buds! Although the ants do not perform any particular service for the flower, they do not cause any harm. Apply a sharp spray of water from the garden hose to wash the ants away before bringing the flowers indoors.
What is mycorrhizal fungi?

Mycorrhizal fungi are very common soil microorganisms that colonize the roots of the majority of plants, including crop species. Together, the plant and fungus form a symbiotic association called a mycorrhiza, which means “fungus root”.

Mycorrhizal fungi produce structures called hyphae that allow them to forage for some nutrients more effectively than roots alone. The fungi transfer some of these nutrients to the root and receive carbohydrates from the root. The site where this exchange takes place is called an arbuscule. In some cases this nutritional relationship is essential for the plant. The relationship is always essential for the fungi because plants are their only source of energy.

From http://extension.psu.edu/plants/crops/cropping-systems/documents/