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Michelle Wallace, Consumer Horticulture Agent—Durham County and
EMGV Coordinator,
North Carolina Cooperative Extension Service



Good Landscape Plants	
For the Spring	p. 1
Ramblings	p. 4
GS: Drought Tolerant	
Plants that Attract Wild Life	p. 5
Coffee Grounds	p. 8
<i>Euscaphus japonica</i>	p. 8
ZM: Using Mulch to Control	
Weeds	p. 9

Durham County Center
721 Foster Street
Durham, NC 27701
MGV Desk: (919) 560-0528
Hort. Agent: (929) 560-0526
Fax: (919) 560-0530

Good Landscape Plants for the Spring

Bobby Mottern at Sarah P. Duke Gardens gave an interesting series of presentations on “Good Landscape Plants for the Spring.” Since I was the only EMGV who took the course I thought that the list might be of some interest. The shrubs he chose to discuss were of particular interest. All require well draining soil unless otherwise noted.

Calycanthus floridus grows between 6-8 feet tall, thrives in either sun or shade. This is a plant that once established tolerates dry shade. Check the flower color as some cultivars produce red flowers while ‘Athens’ has yellow flowers. According to Michael Dirr, the scent



from the flowers is strongest in the evening.¹ The shrub has a suckering habit that is very pleasing. *C. 'Venus'*, the 2011 Showstopper, has white flowers and while fragrant, is not as fragrant as the mother plant.

Chaenomeles speciosa—A member of the rose family, Quince fortunately is deer resistant. It also has a suckering habit, similar to *Calycanthus*, and there is a large selection of bloom color, ranging from red→orange→white. Because it has thorns, this is a plant that Bobby suggests should go in the back of the border. It needs full sun but will perform in sun/shade. This is one of the earliest blooming shrubs in the spring and should be pruned after flowering. Prune out the old canes and if flowering is sparse it may be pruned back to 6-12 inches.² Plant in full sun. There is no appreciable fall color.

Daphne genkwa—This deciduous *Daphne* is gorgeous in the early spring when it is covered with pink flowers. Unlike other *Daphnes*, this one has opposite leaves. While it is “temperamental in the garden,” [318] don't pull it out if it should die as many times the roots will generate new growth. This *Daphne* blooms on old wood. To propagate take cuttings when the new growth is soft.

Deutzia gracilis is a great substitute for the ubiquitous azalea. This 3-4 foot tall shrub bears slightly fragrant white flowers in late April and does well in a shrub border. There is little fall color. This problem free shrub benefits from a gentle annual pruning.

Loropetalum chinense—This member of the Witch Hazel family has either green or purple leaves, depending upon the cultivar. Unlike many plants that start off with purple leaves, *L. var. rubrum* maintains its color through the year. There are many cultivars, some with larger leaves, some grow much taller than others so research is recommended before putting this shrub in the garden. Growing in full sun to part shade, it is drought tolerant once established.

Michelia figo is the Banana Shrub with a dense, mounding shape. Flowers, appearing in April, are exceptionally fragrant. Reaching a height and width of ten feet, this is not a small shrub.

Philadelphus coronarius is also known as the Mock Orange. This old-fashioned shrub will grow to 10-12 feet, with long arching branches. Bloom time is April with very fragrant blossoms. Dirr states it is more commonly found in European gardens than it is here [703]. The plant looks best in the sun and is drought tolerant once established. There is no fall color. Prune out the older canes.

Pieris japonica—This deer resistant evergreen shrub also has some variegated cultivars. Height depends upon the cultivar—and there are many cultivars. This shade plant can have pest issues and is slow growing.

Rhododendron canescens—The Piedmont Azalea, one of thirteen native Azaleas, can reach a height of ten feet. The fragrant flowers appear in late March. This slow-growing deciduous shrub maintains a pleasing irregular shape, prefers a wetter location and can grow in both full sun and part shade. The leaves are slightly sticky so that deer prefer the oriental azaleas to this native. 'Phlox Pink' had long sta-

¹ Dirr, Michael A. *Manual of Woody Landscape Plants* (Stipes Publishing, LLC, Champaign, IL, 1998), p. 166. Future references will be in brackets [].

² Trilpp, Kim E. and Raulston, J.C. *The Year in Trees: Superb Woody Plants for Four-Season Gardens* (Timber Press, Portland, OR, 1995), p. 31.

mens that are particularly attractive. Bobby also recommended *Rhodendron austrinum*, the Florida Flame Azalea, which has intensely fragrant orange blossoms.

Spiraea thunbergii, typically the first Spirea to flower, is also known as the Baby's Breath Spirea. This Spirea is one with good movement and has good fall color. It grows 3-5 feet in height and can be heavily pruned if it becomes ratty looking. This Spirea also looks good in a mass planting. *Spiraea nipponica*, the Snowmound Spirea, is an old-fashioned Spirea with arching canes that performs well here.

Syringa meyeri—This lilac is a slow grower, has a mounding silhouette, is mildew resistant, and is a nice alternative to *Syringa patula* 'Miss Kim'. The latter is more upright than *S. meyeri*, while the former is according to Dirr "extremely floriferous" [981]. To offset *S. meyeri*, place in front of an evergreen background. *S. meyeri*, unlike 'Miss Kim', flowers before leaf formation. Neither of these lilacs require the long cold period before flowering that other lilacs do.

Bobby listed three Virburnums: ***V. burkwoodii***, ***V. macrocephalum***, and ***V. plicatum***. *V. burkwoodii* is semi-evergreen, needs full sun, and has incredibly fragrant flowers in early April. *V. macrocephalum* is the Snowball Virburnum, also semi-evergreen, has huge white balls of flowers while *V. plicatum* 'Shasta' has the most amazing flowers that appear in two distinct rows down most branches.

Weigelia florida has an interesting shape. Deciduous, this shrub has little fall color. Related to forsythia, it has a loose shape with very attractive pink, rose, or white flowers. There are many cultivars and Bobby particularly recommended 'Wine and Roses', 'Pink Poppet', and 'Red Prince'. This is an old-fashioned shrub that does well in a mixed border.

The trees he also chose were interesting:

Aesculus pavia—Red Buckeye, native to the Carolina coastal plain, bears the first bloom in spring that attracts the hummingbird. Reaching a height of 15-20 feet, it has large palmate leaves that are 8-10 inches across. Another advantage of this tree is that it will bloom while still quite young. Although it can grow in full sun, the tree will exfoliate its leaves in late summer. The nuts cause little problem as squirrels love them. This tree has an extensive taproot, is drought tolerant once established, and is deer proof. Do not confuse this tree with *A. hippocastanum*, the Horse Chestnut, which "is not a good choice for small properties."³ Fall color is negligible.

Amelanchier arborea—Serviceberry has white flowers that, like those of the Bradford Pear, have an unpleasant odor. However, this tree has something to offer for all four seasons: the white flowers in spring are quite attractive, the birds love the resulting drupes in the summer, the fall color is excellent, and in the winter the gray bark is an asset. This tree is an excellent alternative to the dogwood, and will grow in sun or part shade. They will tolerate many different kinds of soils, including clay. Two popular cultivars are 'Princess Diana' and 'Autumn Brilliance'. The fruit on this plant is both edible and tasty, similar to blueberries. There is one in the EMGV Demonstration Garden.

Cercis canadensis—Our native Eastern Redbud has much to recommend it. A member of the pea family, it produces edible flowers in the spring, ranging from pink to lavender, and even offers decent fall

³ Raulston, p. 21.

color. It differs from *Cercis chinensis* in that it blooms only on its new growth while the showier *C. chinensis* blooms on the whole length of its branches. However, *C. canadensis* develops a more interesting silhouette than *C. chinensis*. There are many cultivars available including 'Forest Pansy', the weeping 'Traveller', 'Hearts of Gold', and 'Rising Sun'. It is an undemanding tree but must have well-draining soil.

Chionanthus virginicus—The dioecious Fringetree produces wonderful white lacy flowers that almost appear to embrace the tree in a halo in April—there is no ignoring a Fringe Tree when it is in full bloom. The male trees reputedly have showier blooms while the females produce the fruit. This is a pioneer species, one of the first to enter a disturbed area. It needs full sun, a moist well-draining soil, but is tough once it is established. They will reach a height of 15-20 feet. *C. retusus*, the Chinese Fringetree, blooms a bit later than our native and bear smaller flowers and leaves. There are no cultivars because “vegetative propagation is practically impossible.”⁴ At the JC Raulston Arboretum it is possible to observe *C. virginicus* and *C. retusus* as they are planted side by side.

Cornus florida—The white or pink flowers of our native Dogwood are actually bracts circling the true flowers in the center. While there are lots of cultivars available, it is perhaps best to go with the hybrids created by Rutgers University. Rutgers has, after twenty-five years of testing, created a *Cornus florida* that is both stronger and more disease resistant, released under the names of the 'Stellar Series'® and the 'Jersey Star'®.⁵ All the Rutgers dogwoods have *Cornus kousa* in their background.

Halesia tetraptera—The Carolina Silverbell has both a nice form and interesting white pendulous flowers that turn into equally interesting fruit, which lies hidden in its foliage. This tree reaches a height of 30 feet, grows slowly, needs full sun or part shade. This understory tree is easy to grow and also has attractive bark. This tree is one that is underutilized in our gardens.

Magnolia ashei—This deciduous magnolia resembles *M. macrophylla* but its leaves are a bit smaller. Native to Appalachia, *M. ashei* grows well here, will reach a height of 25 feet. The large white flowers—between 6-10 inches—are very fragrant. Best of all, this magnolia will flower while very young. For the home landscape this is a better choice than the larger *M. macrophylla* according to Dirr [608].

Malus sargentii—The crabapple is a lovely, albeit, messy tree. If you buy one, buy a cultivar that produces small fruit as the birds love the small fruit. The larger fruiting *Malus* create problems in the garden as its fruit is too large for the birds and when lying on the ground fermenting will attract yellow jackets.

Stewartia pseudocamellia—the Sasanqua-like flowers of *Stewartia* are exceptional. Bloom time is in May and June. The tree grows 20 feet tall, has exceptional fall color and outstanding bark for winter interest. This Japanese *Stewartia* needs morning sun but avoid the strong afternoon summer sun. It demands well draining soil. *Stewartia pseudocamellia* is worth growing but is finicky—the Japanese *Stewartia* is easier to grow than our native species, according to Bobby. Dirr disagrees, stating that he's had better luck with our native *S. ovata*. Propagating *Stewartia* is extremely difficult [969].

Styrax japonica—This *Styrax*, which grows very well in the South, has lovely white flowers similar to those of the Carolina Silverbell. Reaching a height of 20-25 feet, it will grow in full sun or part shade and,

⁴ Raulston, p. 33.

⁵ More information is available at: <http://agproducts.rutgers.edu/dogwood/history.html>.

once established, is drought tolerant. The JC Raulston Arboretum recently released an exciting cultivar, 'Emerald Pagoda', found by JC Raulston on his 1985 trip to Korea, to the public. The native *Styrax americanus* is more upright—Dirr prefers *S. japonica* [977].

CM: Ramblings

The official opening of the Briggs Avenue garden site on April 9 was a big success in spite of cool, wet weather. Officials from Durham City, Durham County and Durham Tech were on hand to help cut the ribbon, along with representatives from NC A&T, the county Ag Extension office and the State office. There were tables and booths set up with exhibits on local soils and soil prep, container gardening, vermiculture, vegan eating and others. Plus, there was a seedling plant giveaway table. The turnout was surprisingly good given the weather, and everyone seemed to enjoy themselves and enjoy learning about the garden.

If you haven't seen the garden site, take time to get over there. The Briggs Avenue garden site is located on (you guessed it!) Briggs Avenue only a short distance north of Lawson Street. If you go on the freeway, follow the Durham Tech signs and get off at that exit, then come straight along Briggs Ave. Access is also easy by picking up Lawson Street from Hwy 55 just behind the NCCU campus, then turning right on Briggs. The entire plot available to the County Extension office is 45 acres, only a small fraction of which has been developed so far for planting beds.

When I was completing my Master Gardener class in 2009, the whole project was just in the planning stages. Now, thanks to an enormous effort by Michelle Wallace, support from Durham Tech, NCSU and other agencies, and tons of volunteer hours there are 60+ small garden plots either ready for planting or already in cultivation. Volunteers built raised bed structures, moved topsoil, erected a perimeter fence designed to keep deer out, and even made the official sign that's out front, but Michelle's enthusiasm and leadership really moved the project into reality.

The motivation for the garden is to provide an urban area where people can grow vegetables for their own consumption. For some, this will be their first introduction to food raising, for others it will provide a space to take up again those skills they haven't had a chance to exercise since they became "city folks." In remarks by speakers at the opening, there was much emphasis on the physical health benefits of growing even a portion of your own food. But the mental (even spiritual, some would say) benefits are equally important.

Things to be Learned from Gardening: Patience—It doesn't matter how many visions of ratatouille are dancing through your head, the tomatoes, peppers and eggplant are going to grow at their own pace; learn to relax and go with the flow. Planning—It's amazing how quickly an avid gardener can fill up a planting space. Before you know it you're out of room and still have ten packets of seeds unopened. Plan to rotate early spring crops out in time to move in mid-summer ones. Think ahead to August when it will be time for the fall garden to go in. Persistence—If weather, insects, or critters decimate one crop, keep trying, don't throw in the towel at the first reversal. Pride—The quiet kind. Just realizing that I had a hand in growing a good crop of garlic, or the spring peas, whatever, gives me a good feeling.

Of course, in addition to all the good nutrients and flavors from your garden, you get lots of good exercise, fresh air and sunshine. And, you develop a kinship of sorts with other living things. I admit it, I talk to my plants. I encourage them, give them a big hand when they produce, and a big "thank you" when

they've completed their cycle and I'm pulling them out. And I pay attention to other plants, watching them more closely as they go through the year.

I feel very fortunate to be able to garden. If we had more places like the Briggs Avenue garden plots, maybe more people could be as fortunate.

GS: Using Drought-Tolerant Perennials Attract Butterflies, Hummingbirds, Bees, and Other Pollinators

Home gardeners particularly take pleasure in seeing colorful flowers, butterflies, and birds in their garden and nothing is more fascinating than watching a hummingbird at work. However most gardeners—particularly those who live in urban areas—don't give much thought to the importance of these charming garden guests as pollinators. Worldwide, pollinator populations are in serious decline and therefore one important contribution the home gardener can make is to plant a pollinator-friendly garden. This can best be accomplished by making a garden plan that emphasizes nectar and pollen-rich plants. Concentrate on perennials, hardy vines, shrubs, and trees that are known to attract butterflies and other pollinators. Native plants that thrive in your plant hardiness zone are generally a safe choice. Plan and plant a garden that will have a variety of plants in bloom or producing berries from early spring through late fall so food for butterflies and other pollinators will be available throughout the growing season. Be sure to include plants like goldenrod, aster, dill, and fennel that butterfly larvae feed on. Many pesticides—even organic ones—are toxic to pollinators and other beneficial organisms. All things considered, it is both safer and more effective to apply simple principles of ecological plant protection such as:

- Do a soil test and amend the soil *before* planting. Repeat the soil test and amend the soil every 2 – 3 years.
- Choose plants that are either tolerant of insects and diseases *or* are cultivars that have insect and/or disease resistance.
- Choose the right plant for the right place. For example, in the Piedmont area of NC, plants should be chosen based on their ability to grow in clay soil and frequent periods of drought. Two other problems, both in the city and in the country, are deer and rabbits.
- Consider planting drought-tolerant, pollinator-attracting perennials, shrubs and trees in the chart below, remember that **NO** plant is totally deer or rabbit proof. Deer and rabbits will eat almost anything once their favorite plants are depleted. They will also eat almost anything in the spring when new growth is tender. Some plants are *not* deer and/or rabbit resistant until they are several years old and well established.
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Butterflies, birds, and other pollinators all need water. Butterflies, which cannot drink from open water sources, are attracted to damp soil or rocks, which they will flock to for salts and nutrients as well as water.

DROUGHT-TOLERANT PERENNIALS THAT ATTRACT BUTTERFLIES

Plants that require full sun to partial shade (areas of dappled or spotted shade throughout the day or at least 3-4 hours of morning sun.). There are many other drought-tolerant, butterfly-attracting perennials that require full sun.

Plant Name	Deer Resis-	Rabbit Resis-	Attracts Birds	Bee s	Cut Flow-ers	Heigh t

	tant	tant				
<i>Dianthus plumarius</i> 'ItSaul White' – Cottage Pinks	√	√			√	6 – 8"
<i>Eurybia divaricata</i> – White Wood Aster (FULL SHADE)	√		√	√	√	1.5'
<i>Allium cernuum</i> – Wild Nodding Onion (Native)	√	?	Humming-birds	√	Cut/ Dried	1 – 2'
<i>Smilacina racemosa</i> – Solomon's Plume (FULL SHADE)	√	√	√	√	√	1 – 3"
<i>Echinacea purpurea</i> – "Kim's Knee-High" (PP#12242) (Native)	√	√	√	√	√	1.5-2'
<i>Baptisia tinctoria</i> – Yellow Wild Indigo (Native)	√	√		√	Cut/ Dried	2 – 3"
<i>Helenium flexuosum</i> – Purple Headed Sneezeweed (Native)	√	√	√	√	√	2 – 3"
<i>Lobelia siphilitica</i> Great Blue Lobelia (Native)	√	√	√	√	√	2 - 3'
<i>Symphotrichum shortii</i> – Short's Aster (Native)	√	√	√	√	√	2 – 4'
<i>Solidago caesia</i> – Bluestem Goldenrod (Native)	√	√	√	√	Cut/ Dried	3'
<i>Symphotrichum cordifolium</i> – Blue Wood Aster (Native)	√	√	√	√	√	3'
<i>Echinacea purpurea</i> – Purple Coneflower (Native)	√	√	√	√	√	3 – 4'
<i>Symphotrichum laeve</i> var. <i>laeve</i> - 'Bluebird' – Smooth (Native)	√	√	√	√	√	3 – 4'
<i>Solidago odora</i> – Sweet Goldenrod (Native)	√	√	√	√	Cut/Dried	3 – 4'
<i>Lespedeza thunbergii</i> 'Pink Cascade' – Pink Bush Clover	√	?	√		√	3 – 5'
<i>Rudbeckia triloba</i> – Brown-Eyed Susan, Three-Lobed Coneflower (Native)	√	√	√	√	Cut & Dried	3 – 5'
<i>Passiflora incarnate</i> – Passion Flower (Native)	√	?		√	√	10-20" Vine

<http://www.caes.uga.edu/departments/ent/bees/pollination/plants-year-round-forage.html>
<http://chatham.ces.ncsu.edu/growingsmallfarms/BeePlantsMay2010.pdf>
http://ucanr.org/sites/MarinMG/Reports/Wildlife_Value/
<http://entweb.clemson.edu/eiis/pdfs/bb2.pdf>
http://www.ces.ncsu.edu/depts/hort/consumer/quickref/flowers/perennials_drought.htm
<http://www.ces.ncsu.edu/depts/hort/consumer/quickref/shrubs/shrubs-drought.html>
<http://www.clemson.edu/extension/hgic/plants/other/landscaping/hgic1717.html>
<http://www.extension.umn.edu/distribution/horticulture/components/08464-deer-resistant-plants.pdf>
<http://pender.ces.ncsu.edu/files/library/71/Deer%20Resistant%20Plants.pdf>
http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/birds/text/hbird_shrubs.html
<http://extension.psu.edu/search?SearchableText=rabbit+resistant+plants&x=0&y=0>
<http://wdfw.wa.gov/living/rabbits.html#plants>

Coffee Grounds

In 1995 Master Gardeners from the Washington State University Extension in Thurston County decided to experiment with composting coffee grounds as they couldn't find any information on the subject. They used roughly 270 pounds of coffee grounds, feeding 60 pounds to worms while composting the remaining 210 pounds. The only problem with their experiments was that the coffee grounds attracted fruit flies. The worms took to the coffee grounds with relish, producing "excellent compost."⁶

Putting coffee grounds in the compost pile is the equivalent of putting grass clippings in the pile as the carbon-to-nitrogen ratio is 20:1. Consider coffee grounds as a "green" contribution to the compost heap. When *Sunset Magazine* studied the efficacy of using coffee grounds as a soil amendment, researchers found that coffee grounds had the fertilizer grade of 2.28-.06-.6 as contrasted with cow manure, which has a grade of 2.1-.3-.3. The pH level was 6.2 for coffee grounds.⁷

The EPA recommends having no more than 25% of the compost material consist of coffee grounds and it is important to mix it well into the compost pile. Because fruit flies are attracted to coffee grounds it is best to refrain from applying them on houseplants.⁸ Slugs apparently have a hard time travelling over coffee grounds so several articles on the Internet recommended using coffee grounds as a light mulch around slug-candy plants such as hostas. Apparently it is the caffeine in the grounds that makes life difficult for slugs.⁹

While there is a lot of hyperbole about the miracle of using coffee grounds in the garden, it appears that it is beneficial to add to the compost heap and the worm compost and that there might be an advantage as deterrence to slugs.

Euscaphus japonica

The April issue of "The Avant Gardener" highlighted a cool plant that I, for one, had never heard of: *Euscaphus japonica*. Having lived innumerable years in blissful ignorance as to the very existence of this tree, I knew I immediately needed one. A quick Google search revealed that very, very few nurseries had the tree I for needed instant gratification. A Google search indicated that very, very few nurseries offered this JC Raulston introduction. As luck would have it, "The Avant Gardener" cited a nearby nursery as a potential source although neither their catalogue nor their website listed it.

Why was I so determined to acquire a specimen? The small tree—twenty feet—bears insignificant flowers, which turn into "leathery heart-shaped seed capsules that become cherry-red and split to reveal shiny black beads."¹⁰ The nearby nursery fortunately held a couple of open houses in the spring so when I went there I inquired about *Euscaphus japonica*. The owner, looking slightly dazed as he had been del-

⁶ <http://gardening.wsu.edu/stewardship/compost/coffee.htm>, p. 1.

⁷ www.helium.com/items/1805813-benefits-of-using-coffee-grounds-as-a-fertilizer, p. 1.

⁸ www.hort.purdue.edu/ext/groundsforgardening.html, p. 2

⁹ www.seattlepi.com/default/article/Give-your-garden-a-jolt-with-coffee-grounds-1126438.php, p. 2.

¹⁰ Powell, Thomas. "The Avant Gardener" (April 2012), p. 42.

ugged with inquiries for this rare tree, responded that he had a seven foot specimen that could not be shipped and it was mine if I wanted it.

When I arrived home I called Sara Wilson of Sugar Lake Nursery who helps me with my garden and smugly told her I'd acquired a *Euscaphus japonica*. She immediately responded that she had planted several for clients, that they were amazing in the garden, and *she happened to have one*. Of course I did what any decent plant collector does: I grabbed it. And this is how I went from being ignorant of the very existence of *Euscaphus japonica* to owning two specimens within two days.

JC Raulston discovered this tree when he was part of the US National Arboretum expedition to Korea. The expedition brought back many seeds and cuttings of “hundreds of exciting plants” to the US, including a cutting of *Euscaphus japonica*.¹¹ The bark is quite attractive with white striped veins running the length of the violet-chocolate colored bark. But, of course it is the clusters of red heart-shaped seed pods that are its real claim to fame; they split revealing black seeds during the winter. Raulston goes on to say that the tree is tough as it has survived both droughts and wet periods in its testing area at the JC Raulston Arboretum in “some of the worst clay soils the southeastern Piedmont can dish up” [84]. The tree is hardy to Zone 6.

In case those black seeds sound potentially invasive, rest assured. One reason that this tree is not widely available is precisely because it is very hard to propagate. “The seed requires multiple, varied treatments before it will successfully germinate” [84]. Slowly—very slowly—nurseries are learning how to propagate this tree. Sara Wilson told me of another local nursery, which has four specimens. Interested? Contact me and I'll give you the name.

ZM: Learning to Manage Weeds by Mulching

Spring is the start of the gardening year and begins with cleaning out shrubbery, the germination of weeds that we will live with throughout the summer, and ends with the flowering of two of the most well known lawn weeds, violets and dandelions. Spring is also the time to teach about weeds, because so many of them are emerging. Having lived with weeds as a suburbanite, I have come to think of weeds as a constant companion, like relatives who visit occasionally and remind me of who I am and where I came from.

Weeds perform a number of valuable ecological services. They reduce greenhouse gasses by using carbon dioxide in photosynthesis, they soak up storm water, which is a big issue in our cities, and they stabilize soil from erosion. Weeds are also part of the diversity of food for wildlife, providing seeds eaten by a number of birds and small mammals. They serve as food for various beneficial insects. Many of these insects rely on small weedy flowers as a food source for their nectar and pollen.

The presence of weeds is completely consistent with a lawn's purpose. Many of us buy homes with lawns so we can have a place to relax, and weeds are in indication of relaxation. However, having a successful weed control program is essential in managing weeds. Since being a part of the EMGV program

¹¹ Tripp, Kim E. and Raulston, JC. *The Year in Trees: Superb Woody Plants for Four-Season Gardens* (Timber Press, Portland, OR, 1995), p. 83.

and finding all of the open spaces I have created by “weeding,” the use of mulch has become an essential part of my weed management program. Also, learning the life cycles of weeds, summer annual, winter annual or perennial, and the germination and method of reproduction, has been helpful in my ability to control them.

No single weed prevention program works better for me than applying a thick layer of mulch, approximately 3 inches deep, over exposed soil. Any more can be a problem resulting in the passage of air and water and providing a perfect cover for mice and insects.

Mulch serves many purposes, which include cooling the soil, reducing soil compaction, conserving soil moisture and reducing runoff. It also smothers many weed seedlings that would be a problem in a mulchless garden. Adding organic matter to the soil when it decays, mulch also covers disease spores on the ground, keeping them from infecting nearby plants. A fresh layer of mulch gives the garden a fresh and finished look.

Resources:

Nancy Gift, *A Weed by Any other Name*, Beacon Press, 2009

Southern Living, *Garden Problem Solver*, Southern Living, Inc., May 1999