May 2017-Vol 3. No.5

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Saving America’s Iconic Butterfly from Extinction

By Cate Whittington | May 2017-Vol 3. No.5

Researchers estimate that twenty years ago about one billion monarch butterflies formed black and orange clouds as they swarmed southward from the Eastern Rocky Mountains of North America and traveled up to

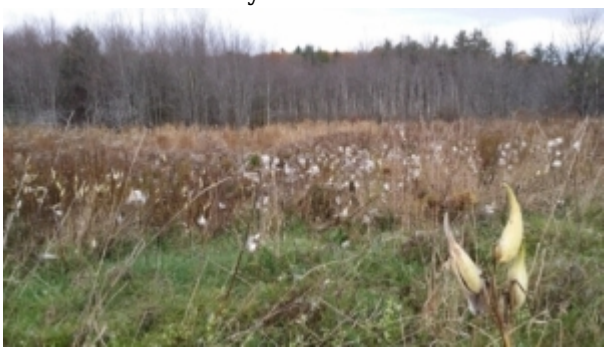
3,000 miles to Central Mexico's Oyamel fir forests. Another million overwintered on eucalyptus and fir trees in coastal California. Dubbed 'king of the butterflies,' the monarch (*Danaus plixippus*) continues its annual migrations, but its numbers have diminished greatly over the past two decades.

The U.S. Fish and Wildlife Service estimates that more than one billion monarchs — 90% of the entire population — have vanished in the last 20 years. Primary evidence of the declining monarch population comes from an annual study by Monarch Watch, a research and conservation organization. They evaluate the population of these iconic insects by measuring the number of hectares occupied by monarchs in Central Mexico's overwintering grounds. Their most recent status report, published in February 2017, shows a 27 percent decrease from last year's population.

These plummeting numbers have led some scientists to predict that the monarch butterfly is on the verge of extinction. But, as with any debate, there are naysayers, perhaps the most vociferous being Dr. Andrew Davis, assistant professor of ecology at The University of Georgia. In 2011, Dr. Davis wrote an article faulting the measurement tool that has led to such projections, stating that "even though the overwintering population is getting smaller and smaller, once they come northward in the spring they are able to recoup the numbers." The jury is out, but several valid hypotheses hold sway in the debate over the declining monarch population.

Possible Causes for the Dramatic Decline of Monarchs in Only Two Decades

- ***Destruction of Milkweed Habitat*:** As the ONLY host plant, milkweed is essential to the survival of the monarch at each stage of the life cycle. In recent years, female monarchs have found it increasingly difficult to find suitable plants on which to lay their eggs each spring. Once covered in grasslands, the American Midwest was a particularly ideal ecosystem for the monarch, providing an abundance of milkweed and nectar plants. Some scientists base their correlations of the 20-year decline of the monarch with changing land use.



    - Fields, once plentiful with milkweed, have been converted to corn and soybean production. A rise in these genetically modified, "Roundup Ready" crops, has effectively eradicated milkweed from the land. Not only farms and fields, but also roadsides across the country have been affected.

- Massive land development has turned fields into skyscrapers and parking lots. For more on the loss of breeding habitats for the monarch, visit the Monarch Joint Venture ("MJV") website, http://monarchjointventure.org/habitat-loss.

- ***Reduction of Migratory Monarch Population*:** Long-term surveys of adult monarchs in the summer months have not shown a decline over time, suggesting to scientists that problems may occur during the butterflies' transit to Mexico. Several explanations contribute to this theory.
  - **Changes in climate may be confusing to the monarchs**. If temperatures rise above normal in spring, it may throw off their flight patterns; monarchs have been known to leave their nesting grounds for cooler climates before the emergence of milkweed in their flight path. For a complete report on climate vulnerability and the monarch butterfly, visit the World Wildlife Fund website, www.worldwildlife.org/pages/monarch-butterflies-and-climate-change.
  - Well-intentioned, but uninformed, **humans may be interfering with the migration of the monarchs by planting 'the wrong type of milkweed' in their gardens**. In an effort to supply monarchs with milkweed, they have planted a widely available milkweed, native to the tropics. This tropical milkweed (*Asclepias curassavic*a) does not die back in warm winter climates, thus encouraging monarchs to stay put in the southern United States rather than continuing their migration to Mexico. This non-native milkweed poses an even graver risk to the survival of the monarchs. Tropical milkweed harbors an ever-present parasite (*Ophryocistis Elektroscirrha,* "OE" for short) that infects the monarchs, thus weakening them and shortening their lifespan. Most infected insects never complete their migration. For photographs and a comprehensive layman's discussion of this destructive parasite, visit http://www.wildones.org/wp-content/uploads/2015/04/Biology-Life-Cycle-of-OE-by-Monarch-Watch.pdf.

- ***Destruction of Monarch's Overwintering Habitat***: Logging, both legal and illegal, has resulted in the destruction of trees on many acres of land in Mexico's fir and pine forests. Land converted for farming has also led to forest degradation. Water, diverted away from the area for human consumption, has contributed to altering Mexico's distinct microclimate. Development and pollution in California has resulted in loss of habitat for this western population as well.

Government and Non Profit Efforts to Protect Monarch Butterflies

There is a plethora of initiatives by both government and private agencies to monitor and protect the beloved monarch butterfly. Monarch Joint Venture ("MJV") is a science-based partnership of over 50 federal and state agencies, non-governmental organizations and academic programs, dedicated to conserving the monarch migration in the lower 48 United States. Partners include the U.S. Fish and Wildlife Service, the U.S. Forest Service, the National Park Service, the Xerces Society for Invertebrate Conservation, and Monarch Watch, as well as many local foundations and conservancies, museums, botanical gardens, and more. They offer the general public many ways to become involved: monarchjointventure.org.

Community Efforts to Boost the Monarch Population, One Backyard at a Time

Chances are good that you first learned the four stages of a life cycle—egg, larva, pupa, adult—by observing the life cycle of a butterfly. And, chances are good that the monarch butterfly was one of the very first butterflies you were able to recognize. As an elementary school teacher, my students and I tracked the journey of these brilliant orange and black insects every year with a popular global migration program called Journey North. www.learner.org/jnorth/monarch/migration.

Monarchs and their phenomenal annual migration capture the imaginations of young and old across North America. For this reason, communities are banding together to learn what they can do to save our graceful fluttering friends from extinction. The National Wildlife Federation has a program called the Mayors' Monarch Pledge, designed to create habitats and educate citizens about the monarchs' plight. Communities all along the main migratory flyway between Austin, Texas and the Great Lakes are planting roadsides with native milkweed and nectar plants. St. Louis, Missouri and Charlotte, N.C. are both designated sanctuary cities for monarchs. Closer to home, the Loudoun Wildlife Conservancy has initiated a challenge to raise and release 2,000 monarch butterflies this summer in Loudoun County alone. loudounwildlife.org/habitat-restoration.

So, what can *you* do to help? The simplest answer — "Build a Monarch Way Station." A monarch way station is simply a garden that has **both** milkweed plants to feed the larvae and nectar plants to feed the adults.

How to Build a Way Station for Monarch Butterflies

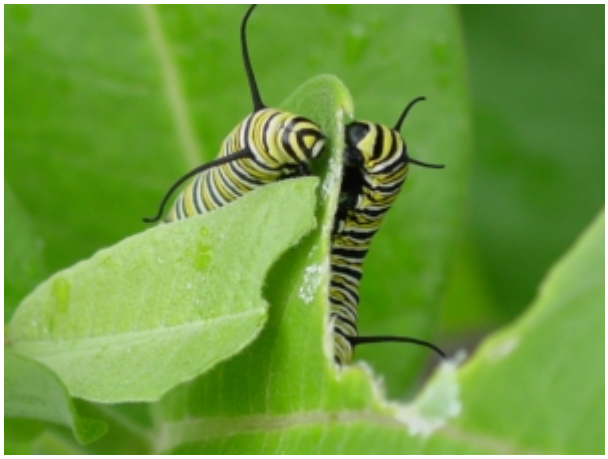
Location: Select a spot that receives at least six hours of sunlight per day.

Size: Scale it up or down to suit your space. Though not ideal, even deck containers may constitute a way station when space is limited.

Soil: Low clay soils are best, as good drainage will help prevent root rot.

Host Plants: It is recommended that you have at least 10 milkweed plants, preferably two species of native milkweed. Since different species mature at different times, you will increase the duration of monarch activity in your yard by increasing the number of species you plant.

Milkweed is essential to any monarch way station as the monarch larvae eats only milkweed. Females lay their eggs exclusively on milkweed plants, tasting the leaf to make sure it is suitable before laying their eggs. A newly hatched caterpillar eats its nutrient-rich eggshell before consuming the leaf, containing a toxic



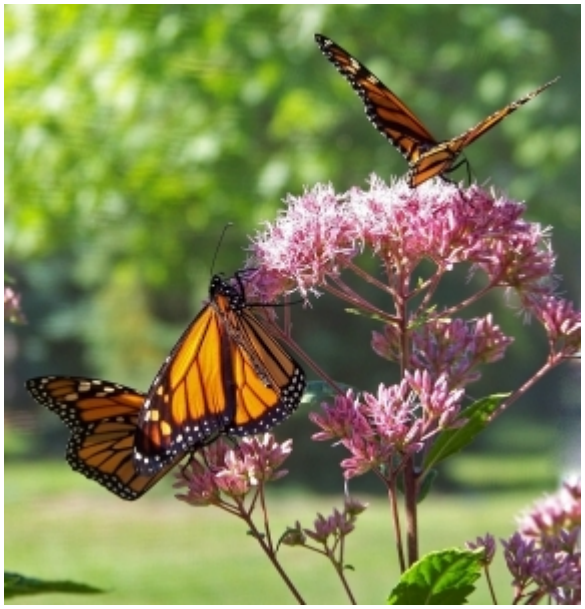
chemical that protects it from predators.

There are many varieties of milkweed, but you must select the species carefully. Most definitely do NOT plant the tropical variety that carries the insidious OE parasite! Choose milkweeds that are native to your area. According to nearby Loudoun County's website, the top three choices for our area are:

- *Asclepias syriaca* (common milkweed)
- *Asclepias incarnate* (swamp milkweed)
- *Asclepias tuberosa* (butterfly weed)

To learn more about the best species for your area and to purchase plants, visit the Xerces Society website at xerces.org/milkweed/which species to plant.

***Nectar Plants*:** Some sources say that goldenrods and asters are critical for adult monarchs, but there are many colorful options. Annual plants, such as Cosmos, Marigold, and Zinnia are good choices. Perennials include Joe-Pye Weed, Coneflower, Bergamot, and Mountain Mint. As with milkweeds, try to select both early and late season bloomers to attract the monarchs to your site from early summer through fall. Fruit-bearing trees are also welcome additions for butterflies' all-liquid diets. Consult the North American Butterfly Association for a complete listing of the best butterfly nectar plants in Central Virginia. This list is not



exclusive to the monarch, but specifies which plants attract which butt

There are many excellent guides to help you create a sanctuary for monarchs in your own backyard. To my mind, the single most important stop to make on the web is Monarch Watch.org. They will even provide you with a kit to get you started and walk you through the steps of certifying your garden. Their downloadable brochure, entitled *Creating a Monarch Waystation Guide,* contains step-by-step directions for the amateur gardener. www.monarchwatch.org/waystations. If you are a visual learner, watch a Youtube video of a monarch habitat created in Waterford, Virginia by Nicole Hamilton, president of the Loudoun Wildlife Conservancy, "How to Create Your Own Monarch Butterfly Rest Stop," How to Create Your Own Monarch Butterfly Rest Stop | National Geographic.

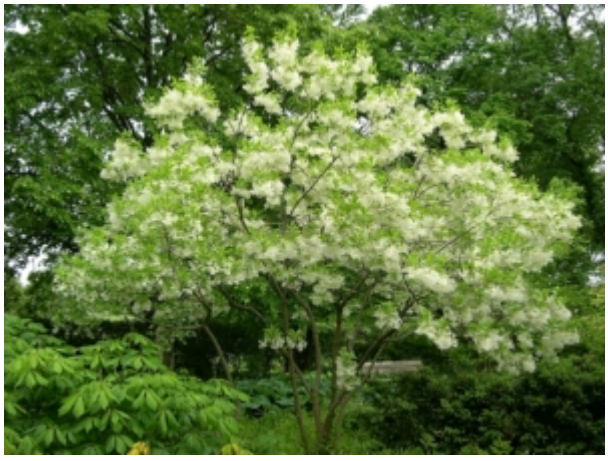
SOURCES:

"Monarch butterfly studies tell a perplexing tale,"
www.sciencemag.org/news/2015/08/monarch-butterfly-studies-tell-perplexing-tale

Fringetree — Slow to Bloom but Worth the Wait

By Patsy Chadwick | May 2017-Vol 3. No.5

When we consider flowering trees in the spring landscape, we naturally think of our favorites, such as redbuds, dogwoods, serviceberries, flowering cherries and plums. Yet another lovely tree belongs in that auspicious group. I'm referring to *Chionanthus virginicus* — our native fringetree.



Chionanthus virginicus in bloom at Morton Arboretum Photo Credit: Jason Sturner

In *A Natural History of Trees of Eastern and Central North America*, author Donald Culross Peattie, a mid-20th century botanist, naturalist, and prolific nature writer, wrote: "The Fringetree is as gracile and feminine-seeming as any that grows beside the rushing stream or climbs the warm slopes of the Blue Ridge under the shelter of sturdier growths." Peattie further mused: "… it is a raving beauty when in mid-spring it is loaded from top to bottom with the airiest, most ethereal yet showy flowers boasted by any member of our northern sylva." Wow! What an expressive choice of terms to describe one of the most enchanting spring-flowering trees in North America.

Dr. Michael A. Dirr, plantsman extraordinaire, has his own take on the value of the fringetree, recommending it for consideration in his *Manual of Woody Landscape Plants* "…as the national shrub for even dogwood does not carry itself with such refinement, dignity and class when in flower…."

Given Peattie's and Dirr's clear affections for this tree, it deserves to be better known and more widely used in the landscape.

FRINGETREE DESCRIPTION

In 1737, Linnaeus named this plant *Chionanthus virginicus* (pronounced kee-oh-NAN-thus ver-JIN-ih-kus), which is derived from a combination of the Greek words *chion* (snow) and *anthos* (flower). Its many common names include old man's beard, Grancy graybeard, flowering ash, white fringetree, or simply fringetree, which most people prefer. A member of the *Oleaceae* genus, fringetree is related to the lilac, privet, forsythia, jasmine, ash tree and olive tree.

Native to the United States, fringetree originated in Missouri and eventually spread throughout the eastern half of the country as far north as New Jersey, south to Florida, and west to Oklahoma and Texas. It has proven to be fairly hardy in USDA Zones 4 – 9 and, thanks to the nursery trade, has been planted throughout most of the New England states and points west. Historically, Native Americans used the bark and flowers for medicinal purposes to treat skin inflammations, sores and wounds.

A slow-growing, large shrub or small, deciduous ornamental tree, fringetree matures at 12 to 20 feet in height and 12 to 20 feet in width in the urban landscape. In the wild, the tree may grow 25 to 30 feet tall with a similar spread. At full maturity, the tree is typically broader than it is tall with a spreading, often irregularly shaped crown that is somewhat open in appearance. The crown is generally supported by multiple short trunks close to the ground, which gives the plant a shrub-like appearance.

Its appeal lies in its generous clusters of fragrant, fringed white blossoms, which appear in late spring after other spring-flowering trees have finished blooming. The fringetree is dioecious, meaning male and female flowers occur on different plants. The male flowers tend to be showier than female flowers, but both are lovely. Each flower is comprised of four long, narrow petals and occurs in drooping, 4 to 8-inch long clusters at the ends of the branches. When in full bloom, the delicate, airy-looking blossoms give the tree a cloud-like appearance. The flowers give off a delicate, sweet, spicy fragrance, making the plant all the more endearing in the spring landscape.

Chionanthus virginicus Blossoms

The narrow, elliptic 3 to 8-inch long leaves are medium to dark green with a waxy appearance. The leaves tend to emerge very late in spring after the flowers bloom and turn a dull yellow in fall. The pale gray or brown bark is smooth on young branches but becomes ridged and furrowed as the trunks and branches mature.

In late summer, the females bear fruit in clusters of grape-size, dark blue, fleshy drupes resembling olives. This is understandable, considering that olive trees are members of the same genus. The fruits are favored by birds, such as blue jays, cardinals, mockingbirds and wild turkeys.

CULTIVARS AND RELATED SPECIES

While the straight species is the primary form available commercially, a few cultivars are also available, including:

- 'Emerald Knight,' a male cultivar (flowers but no fruit) with an upright form, dense crown, and handsome, dark green, glossy leaves.
- 'Prodigy,' a smaller selection with a rounded habit and dense clouds of blossoms.
- 'Spring Fleecing,' another small selection that is very floriferous. An award-winning male cultivar, it has narrow, glossy dark green leaves.

A related species that is native to eastern Asia also grows in this country. *Chionanthus retusus*, or Chinese fringetree, was Introduced here in 1845. It looks very similar to our native species but is less hardy (USDA zones 6 to 8). By comparison, our native species tends to have a more open canopy whereas the Chinese species is denser in appearance. The Chinese species is a little larger (15 to 25 feet tall) than our native species but the leaves and flower clusters are smaller. Both species bloom at about the same time in late spring.

CULTURAL REQUIREMENTS

Fringetree is very versatile and adaptable to a wide range of soils and light conditions. It grows well in full sun but does better if given a little filtered shade as respite from hot summer sun. Although it prefers deep, acidic, moist, well-drained soil, it is fairly adaptable to drier soils.

Once it is established, fringetree requires little, if any, maintenance. If any pruning is needed, prune immediately after it flowers to allow the branches sufficient time to develop next year's flower buds. The shrub-like form can be shaped into a small tree form by pruning the lower limbs and foliage away.

Fringetree is relatively problem free. It may occasionally be bothered by scales, mites, or borers if grown in a dry site. There is some concern that it may be attacked by the Emerald Ash borer, since the tree is related to the ash tree.

LANDSCAPE VALUE

Fringetree is an enchanting asset to the late spring landscape when it displays its billowing masses of fragrant white blossoms. It is particularly effective when planted in front of an evergreen background. Use it:

- Wherever a very small understory tree or large shrub is needed.
- As a single specimen near a terrace or patio where its blossoms can be appreciated at close range.

- As part of a naturalistic planting featuring native species.
- In a mixed border with other shrubs or small trees.
- In the filtered shade of large canopy trees.
- In a grouping near the edge of a woodland setting.
- To attract birds to the landscape. According to the South Carolina Wildlife Federation website, fringetree fruits are eaten by more than 75 species of birds.
- In urban environments where air pollution is a problem.
- For its unusual and beautiful flowers in late spring.
- To perfume the air with its sweet, delicate scent.
- To support many pollinators, particularly bees.
- To serve as a host plant for two moth species: the Fawn Sphinx moth (*Sphinx kamiae*) and the Rustic Sphinx moth (*Manduca rustica*).

Although fringetree is slow to leaf out in the spring, the patient gardener will be rewarded with a shimmering display of exotic blossoms certain to make the neighbors green with envy.

SOURCES:

A Natural History of Trees of the Eastern and Central North America (Peattie, Donald Culross, 1948, copyright renewed 1977)

Bringing Nature Home (Tallamy, Douglas W., 2007)

Manual of Woody Landscape Plants, Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, (Dirr, Michael A., 1975, Revised 2009)

Native Plants of the Southeast (Mellichamp, Larry, 2014)

"Chionanthus virginicus," University of Connecticut College of Agriculture, Health and Natural Resources Plant Database (hort.uconn.edu)

"Chionanthus Virginicus Fact Sheet," Virginia Tech Department of Forest Resources and Environmental Conservation (dendro.cnre.vt.edu)

"Fringetree," Clemson Cooperative Extension Home and Garden Information Center (clemson.edu/extension)

South Carolina Wildlife Federation (scwf.org/native-plant-list)

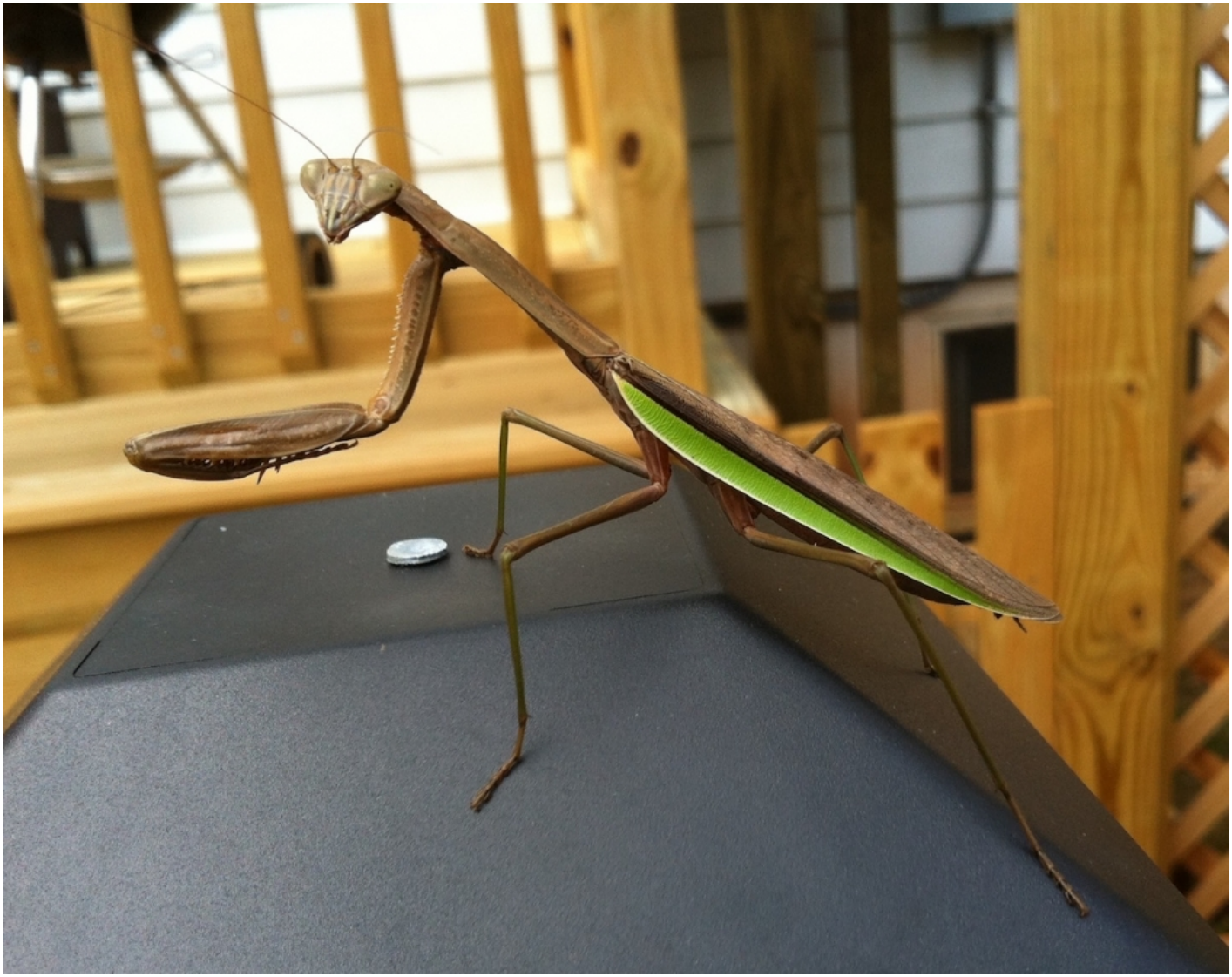
"The Fringe Tree and Its Far-Flung Cousins," by Rob Nicholson, The Arnold Arboretum of Harvard University (arnoldia.arboretum.harvard.edu).

"White Fringe Tree," Yale University website (naturewalk.yale.edu/trees)

"White Fringetree, Old-man's Beard," Virginia Cooperative Extension Publication 3010-1499 White Fringetree.

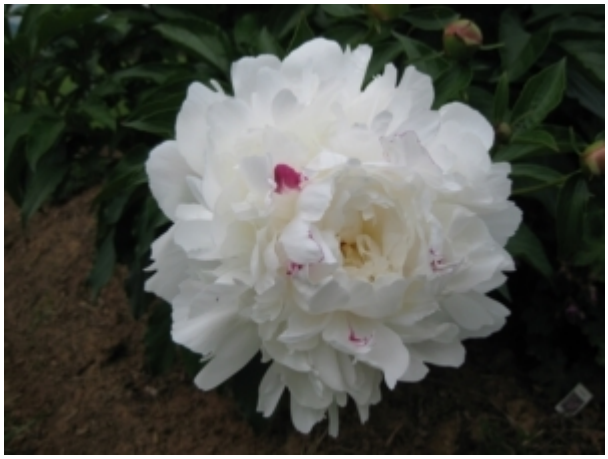
The Ornamental Garden in May

By Patsy Chadwick | May 2017-Vol 3. No.5



With warm weather comes the inevitable spring gardening chores – loosening and amending the soil for planting, pulling weeds, redefining the edges of flower beds, pruning, mulching, dividing plants, etc. While that sounds like a lot of work, it's all in preparation for the main event: planting the spring garden. This is what every gardener dreams of – that time of year when we can dig in the dirt, forget all the stresses of modern society, and focus on making something good and beautiful grow from the soil. So let's get the chores out of the way and have some fun, shall we?

Irises are at their peak this month, but the spent blossoms can turn to a gooey mess, especially after a rainstorm. As you snap off each spent iris blossom, be careful not to break off any unopened buds. Removing the spent blossoms not only tidies up the plant but also prevents it from setting seed. After the last flower starts to fade, cut off the flower stalk at the base with a sharp knife. Sterilize the knife between cuts to prevent spreading disease among the plants.



Peony 'Festiva Maxima' Blossom

Peonies are also at their glorious best in May. After they finish blooming, the foliage can continue to look attractive in the summer border provided you do a little maintenance. In late May or early June, cut back the spent flower stalks to improve the shape and appearance of the plant. Simply reach down inside the plant and snip off the stalk just above a set of leaves so that the cut end isn't visible. That keeps the plant looking tidy and diverts the energy from seed-making to growing a more vigorous plant.

Prune lilacs (*Syringa vulgaris*) after they finish blooming. Lilacs that have not been well maintained, particularly the common old-fashioned upright varieties, can become overgrown and awkward looking with age. In addition, older lilac stems produce fewer and smaller clusters of flowers. Because lilacs bloom on the previous year's growth, timing is important when it comes to pruning. Here are some tips on how and when to prune:

- **Rejuvenation pruning** – If the shrub is seriously overgrown, it may be best to cut the entire plant back to about a foot from the ground. The best time to do this is **late winter or early spring** when the shrub is dormant. The plant will recover within two or three years but the downside is that the plant may not flower in the meantime.
- **Selective rejuvenation pruning** – If you are loathe to sacrifice all of next year's floral display, then cut the shrub back in stages. Selectively cut back a third of the oldest stems all the way to the ground each year in **late winter or early spring**. While you are at it, remove all dead, damaged or diseased branches, as well as any crossing branches or small branches that are the diameter of a pencil or less. This will help open up the shrub, thus increasing air circulation.
- **Size maintenance or reduction** – To maintain or slightly reduce the shrub's size, prune the tips of stems back yearly to a pair of side shoots **immediately after the shrub finishes blooming**. This promotes new growth and allows the new shoots adequate time to set buds for next year's flowers.
- **Deadheading** — Cut off each spent flower cluster at its base **immediately after the shrub finishes blooming**. This diverts the plant's energy into growing new shoots and flower buds.

If pruning doesn't appeal to you, try one of the newer dwarf lilac varieties. They are much easier to maintain, requiring little, if any, pruning. As a bonus, some of them even rebloom during the growing season. For basic information on lilac species, see Virginia Cooperative Extension (VCE) publication 3010-1493, Lilacs, Syringa spp.

If you have **flower seedlings** to transplant, harden them off first before you plant them outdoors. Move them to a shaded spot, preferably on an overcast day, and then gradually introduce them to sunlight over a week or two. Once they are hardened off, plant them at the same depth as they were in the container and keep them well watered until they become established. Watch night-time temperatures and be prepared to protect the seedlings should the unthinkable happen and we have a late frost.

In you're tired of spreading mulch every year, try a more permanent – and prettier – solution. **Incorporate more ground covers into your landscape**. Like mulch, ground covers can shade the soil, hold it in place, and smother weeds. On top of the practical aspects of ground covers, they add an attractive layer of color and texture in the landscape. If you're interested in native ground covers, consider planting: wild ginger

(*Asarum canadense*), green and gold (*Chrysogonum virginianum*), Allegheny spurge (*Pachysandra recumbens*), *Sedum ternatum*, foamflower (*Tiarella cordifolia*), and blue-eyed grass (*Sisyrinchium angustifolium*). Most of these prefer shade to part sun.

Moss phlox (*Phlox subulata*) is a native ground cover that grows in full sun but will tolerate part shade. It's also deer resistant but rabbits may nibble it. Creeping phlox *(Phlox stolonifera)* is another phlox species suitable for full sun or part shade. Neither deer nor rabbits bother this species normally. Another interesting ground cover for full sun is lamb's ear (*Stachys byzantina*), a non-native but well-behaved plant. The low-growing, non-blooming 'Silver Carpet' cultivar spreads about a foot or so wide, adds a silvery element to the garden, and provides a pleasant, fuzzy texture. It's drought tolerant, deer resistant and looks good as an edging to a defined flower bed. Just give it full sun and very well-drained soil.

ANNUAL, BIENNIAL, PERENNIAL – WHAT'S THE DIFFERENCE?

Confusion often arises about the differences between annuals, biennials, and perennials. Even seasoned gardeners sometimes get confused. Global warming notwithstanding, part of the problem is that some plants are technically perennial in one gardening zone but must be treated as annuals in less hardy gardening zones. Variances within species don't help any. For example, most foxglove species (*Digitalis purpurea*) are biennial whereas *Digitalis grandiflora* is perennial. Scabiosa is another confusing species with an annual form (*Scabiosa atropurpurea*) and several perennial forms, including *Scabiosa caucasica* and *Scabiosa columbaria*. To add to the confusion, some annuals readily re-seed before they die and those seeds then germinate the following spring. If they germinated in the same spot as the original plant, the gardener may be tricked into thinking the original plant re-sprouted.

The following may help explain the differences among the three categories.

- **Annuals** complete their life cycle in **one growing season**. They germinate from seed in the spring, bloom and set seeds during the summer. The entire plant then dies with the onset of winter. In other words, annuals are not hardy. They cannot survive winter weather. Examples of annuals include bachelor's buttons, balsam, marigolds, petunias, statice, sweet peas, and zinnias.
- **Biennials** complete their life cycle in **two growing seasons**. In year one, they germinate from seed in the spring. In summer they form leafy plants, often in the form of a rosette, but they do not bloom the first year. The rosette goes dormant in cold weather but does not die with the onset of winter. In year two, the plant blooms, sets seeds, and then dies. Biennials include alyssum, rose campion, stock, sweet William, some hollyhocks, and most foxgloves.
- **Perennials** are hardy enough to survive winter weather and **live more than two years**. While the top part of the plant dies back in autumn, the plant's crown or roots go dormant in winter. In the next growing season, the plant sends up new foliage and flowers from the crown. The life cycle of perennials varies widely among plants. Peonies, ferns, and Baptisia are examples of perennials that can live for decades. In fact, peonies may live 50 to 100 years or more. Columbine, Shasta daisies, and Delphinium are examples of perennials that may live only a few years.

WHAT TO PLANT UNDER A BLACK WALNUT TREE

Although black walnut trees (Juglans nigra) are prized for their fine-grained wood and edible nuts, they pose a real dilemma in the urban landscape. Very few plants can tolerate the soil beneath a black walnut tree. All parts of the tree contain juglone, a toxic substance that inhibits the growth of anything planted either under or near it. If you have such a tree in your landscape, don't despair.

Black Walnut Tree Foliage and Nuts

To **reduce the effects of juglone**:

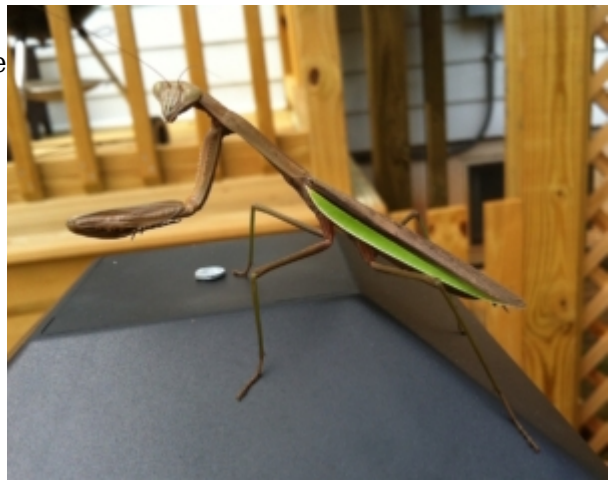
- Rake up all fallen leaves and nuts as they fall. Don't procrastinate. It's important to remove all debris before it has a chance to break down and be absorbed into the soil.
- Incorporate lots of organic matter into the soil beneath the tree. This supports a healthy microbial population, which can metabolize the juglone toxins.
- Install juglone-tolerant ornamental plants beneath black walnut trees. Luckily, some suitable plants include asters, monarda, day lilies, hardy geraniums, and hostas. For more information on plants that can tolerate juglone, see VCE publication 430-021, "The Walnut Tree: Allelopathic Effects and Tolerant Plants." Another good source of information is the Morton Arboretum's publication on Plants Tolerant of Black Walnut Toxicity.

INSECTS IN THE MAY LANDSCAPE – THE GOOD, THE BAD, AND THE UGLY

Along with the emergence of spring growth comes the inevitable hordes of insects – both good and bad. Several to watch for in May include:

GOOD BUGS:

If you spot a **praying mantis** in your landscape, leave it alone. Whether you think of it as friend or foe, it is one of the more interesting insects in the garden. Either green or brown, they are large, stick-like creatures that blend in well with their surroundings and are sometimes hard to spot. A member of the mantid genus, this fascinating predator gets its common name from the way it holds its prominent front legs at an angle, suggesting it is praying. In the fall, the female lays her eggs in a small tan, frothy-looking, hardened case (called an ootheca). The eggs overwinter in the case and then hatch out around early May. Young praying mantids eat small insects whereas the mature versions tackle big insects, such as crickets, grasshoppers, cabbage moths, and stink bugs. Unfortunately, they make no distinction between bad bugs and beneficial ones and

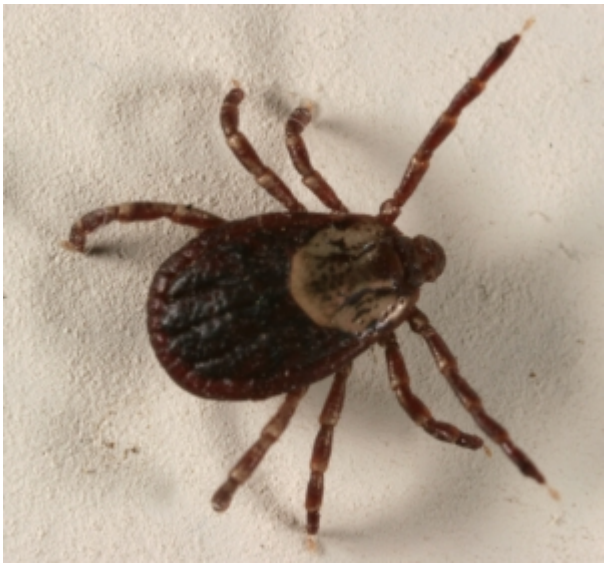


Praying Mantis

eagerly gobble up both. However, in general, they appear to do more good than harm in the environment.

BAD BUGS:

May to July is **prime tick season**. For a description of the four primary types of ticks found in Virginia, see VCE publication 426-066, "Gardening and Your Health: Ticks." In the meantime, you can take a number of steps to keep the tick population at bay:



Common Dog Tick

- Avoid letting your lawn get out of control. Ticks like the high humidity that tall grass provides.
- Install plants that are deer-resistant. Deer are major carriers of ticks.
- Eliminate brush piles, leaf litter, downed branches, and other debris that might appeal to ticks and their hosts (such as white-footed mice).
- Move picnic tables, swing sets, and other recreational equipment away from shrubs or wooded areas. Place children's play equipment on a bed of wood chips.
- When working outdoors during tick season, wear light colors, closed-toe shoes, socks, long pants and long sleeves. Tuck pant legs into socks.
- Install gravel or wood chip pathways between the house and any frequently used outside areas.
- Install a 3-foot wide wood-chip barrier along the perimeter of a wooded area.

THE UGLY: Eastern Tent Caterpillars are the larval form of an ordinary looking yellowish-tan to brown moth (*Malacosoma americanum*). In mid-summer, the adult moths lay their egg masses on twigs. The masses contain 150 to 400 eggs, which overwinter and then hatch out in spring. That's when things get ugly.

The larvae are 2- to 2-1/2" long, hairy caterpillars with a white stripe bordered by yellow-brown and a row of blue spots along their sides. After hatching out, the writhing masses of larvae move to the nearest branch crotch where they spin unsightly "tents" of silk webbing. The larvae spent their nights inside the tents. In the daytime, they emerge to feed on the host plant, stripping it of its foliage. This goes on for about 4 to 6 weeks, at which time, the individual caterpillars wander off to protected areas where they spin little cocoons. Three weeks later, they emerge as adult moths and the cycle begins all over again.

Insecticides are generally not effective when tent

caterpillars are inside their tents. The best way to control them is to snip off the twig (if it is small) containing the larvae inside the tent and burn or crush it, killing all the larvae inside. If the branch containing the tent is larger, insert a long stick into the tent. Twist the stick around so that the silken tent adheres to it. Pull the entire mass away from the branch and then burn or crush all the larvae.

VCE publication 444-274, Eastern Tent Caterpillar offers more information on this destructive pest.

Eastern Tent Caterpillar Larvae

STRATEGIES FOR KEEPING THE DEER AT BAY

For those of us who must contend with deer in the garden, spring can be a particularly aggravating time. As beautiful as these creatures are, they can do a devastating amount of damage to plants just as they are emerging or leafing out. This is when you need to **figure out ways to control deer damage**. Unfortunately, there's no one-size-fits-all solution. A deer's food preferences vary by season, the particular plant, the availability of other food, the weather, and the locality. Bottom line, the hungrier the deer, the less selective they are when grazing in your ornamental garden. A tall fence or other physical barrier is usually the most effective way to keep deer out of your garden. A dog that can roam freely on your property is also a good deterrent. However, if you don't have a fence or a dog, don't despair. Several other strategies, listed below, may help. Whatever measures you take will work best if exercised at the **first** indication of deer browsing. The idea is to prevent them from becoming accustomed to visiting your property.

- Grow plants with strong scents, tough or leathery foliage, and spiky or spiny foliage. Deer generally avoid such plants unless they are really hungry.
- Confuse deer by tucking vulnerable plants in among plants they normally shun.
- Install nylon or wire mesh fencing around vulnerable young trees and shrubs. Don't use flimsy bird netting. A deer can become entangled in it, which is neither good for the deer nor for you.
- Use repellents that either smell or taste bad to deer. Alternate their use so that the deer don't become accustomed to them. Repellents that have a sulphur-based odor of rotten eggs appear to be more effective than taste-based ones.
- Get creative. For example, I discovered that deer avoided my tall sedum if I left the dried flower heads in place all winter. Rather than cut the stalks down to the crown in spring, I merely snipped off the flower heads but left the stalks in place. The spiky flower stalks towering over the sedum crowns looked vaguely like something Salvador Dali might have painted. However, they protected the new spring growth from deer browse. Eventually, the new growth covered up the old stalks. By then, the deer, thankfully, had moved on to greener pastures.

If all else fails, adjust your thinking. Let's say, for example, that the deer nibbled your azaleas. That's the bad news. But if the shrubs needed to be pruned back anyway, then the deer merely helped. That's good news. So think of it as a win-win situation.

HOW TO ENTICE BLUEBIRDS TO YOUR YARD

Lucky is the homeowner who has bluebirds nesting nearby. There's no mistaking the identity of this bird with its exquisite, vivid blue foliage. It is not only beautiful but also useful because it helps keep insects under control in both the ornamental and the vegetable garden. Enticing bluebirds to your yard can be a bit of a challenge, however. They prefer open areas with a wide expanse of low grass as well as shrubs or small trees that offer them a place to perch as they scan the area for insects. To entice them to your property:

- **Provide nesting boxes.** Bluebirds generally produce two clutches of eggs per season, one in

spring and one in summer. They are cavity nesters and, in the wild, must compete with house sparrows and other cavity nesters for naturally occurring cavities in dead trees. So, offer them a nesting box built to their specific needs. Install it in an open area about 100 to 150 feet away from any wooded areas. Bluebirds are territorial, so if you build more than one nesting box, space them 300 feet apart. Position the box 4 to 6 feet off the ground with the opening at 5 feet (eye level) and facing east (toward open habitat and away from the prevailing winds). Download bluebird house directions from the Cornell Lab of Ornithology website Bluebird House.

- **Supplement their diet.** Between spring and fall, bluebirds eat mainly insects. For that reason, avoid using pesticides or other chemicals. Supplement their diet with mealworms, particularly in winter when insects are not available. Also, they like to round out their diet with berries from trees and shrubs, such as Eastern red cedar, flowering dogwood, holly, hackberry, elderberry, beautyberry, serviceberry, and blackhaw.
- **Provide a source of water**. Bluebirds appreciate a birdbath, but, if possible, provide them with moving water, which they prefer. A small fountain or even a dripper will appeal to them.

Learn more about bluebird habitat from VCE publication HORT-59NP, Creating Inviting Habitats or from "Managing Habitat for Eastern Bluebirds," Penn State Extension Publication Eastern Bluebirds**.**

TIME TO GIVE YOUR HOUSEPLANTS A SUMMER VACATION

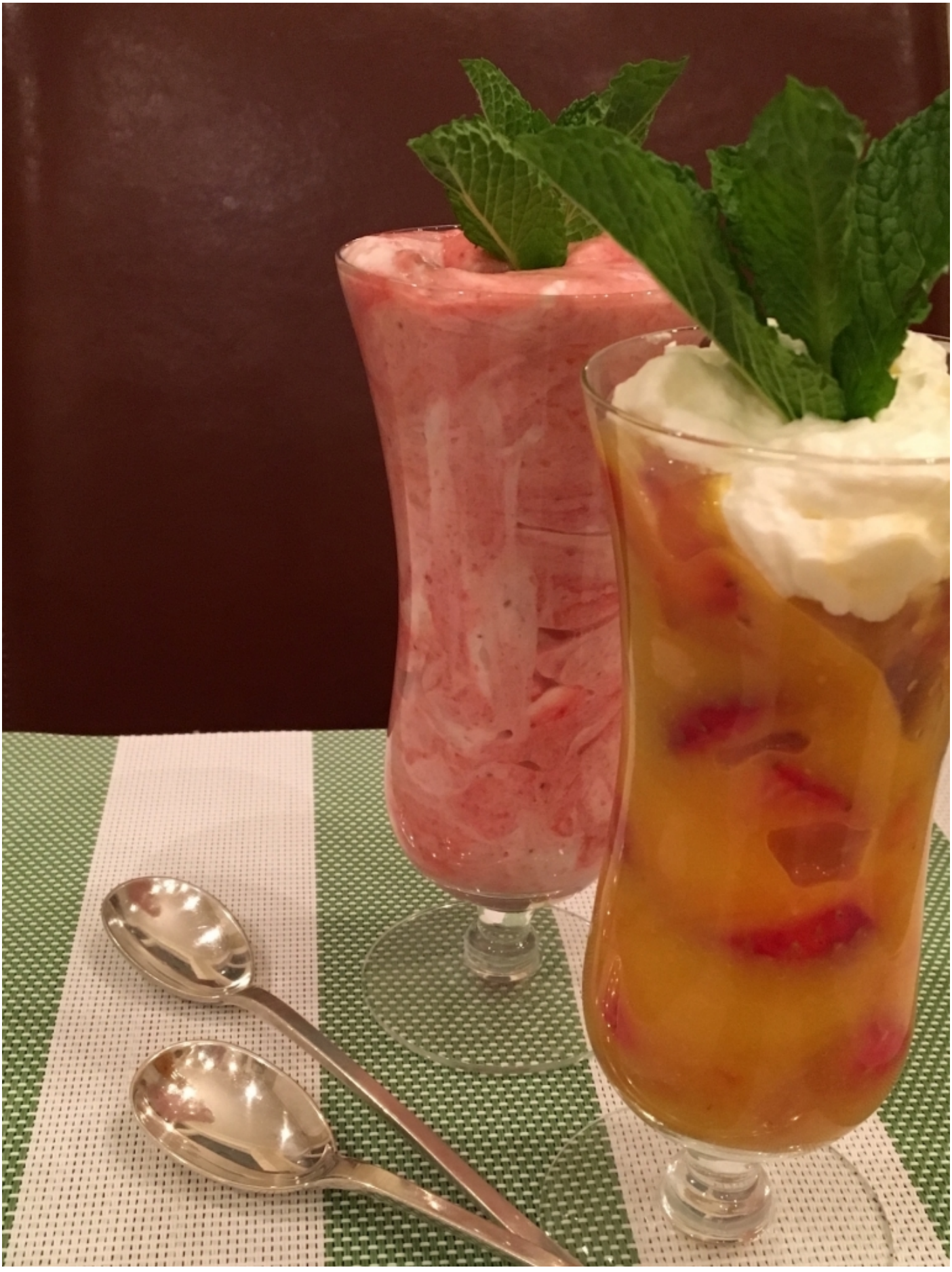
After the last frost date, **move your houseplants to a shaded area outdoors**. After being cooped up all winter indoors, they will be sensitive to both light and temperatures. So, gradually condition them to the higher light levels and warmer temperatures. This may take a week or two, depending on the weather. If the overnight temperatures drop below 50°F, either cover your plants to keep them from going into shock or return them to the indoors for the night.

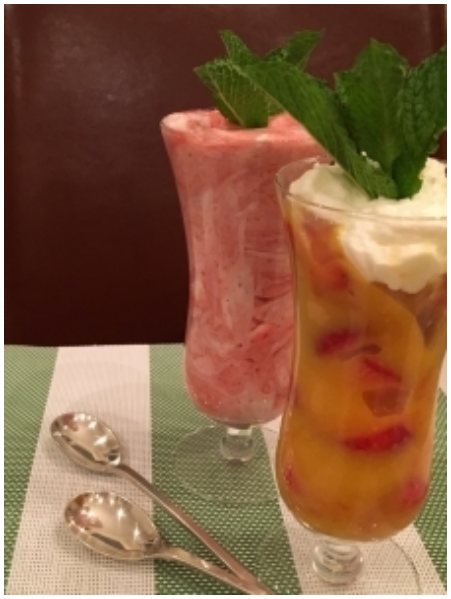
With fresh air and brighter light outdoors, your houseplants will enjoy a rapid growth spurt. Before that happens, **check to see if the plants need to be repotted**. If so, pot them in a slightly larger pot with fresh potting soil and give them some plant food to support their growth.

As your houseplants become acclimated to the outdoors, **check moisture levels daily**. Potted plants tend to dry out quickly, particularly once the weather turns consistently hot.

Strawberries, Slightly Adorned

By Cate Whittington | May 2017-Vol 3. No.5





Strawberries, like asparagus, peaches, corn and a few other joys of summer, are perhaps best enjoyed unadulterated, at least at the beginning of the season, when the thrill of their newness is fresh. Later on, when you're on your 10th quart, it's time to tinker. —Mark Bittman, American food journalist and author

I could not agree more with Mark Bittman's assessment of succulent and sweet strawberries, fresh from the vine. Unadulterated is always best. That said, a little tinkering never hurt anyone and the following recipes are proof of that. Both are light desserts that are easy to prepare and satisfy the need for "a little something sweet" after a meal. So don't fret when you have picked one (or 500) too many strawberries at one of the many commercial berry patches in our area. These two recipes should use up a few delectable pints for you and have your guests begging for more.

Strawberry Fool

by Mark Bittman

Yield: 4 servings

Ingredients

1 pint strawberries

½ cup sugar, or to taste

1 cup heavy cream

1 teaspoon vanilla extract, optional

Preparation

1. Hull strawberries. Wash them and chop into ¼-inch-thick pieces. Toss with half the sugar and wait 10 minutes, stirring occasionally, until they give up their juices.
2. Place half the strawberries and all the juice in a blender and puree. Pour puree back in bowl with the remaining chopped strawberries.
3. Whip the cream with remaining sugar and vanilla until cream is stiff and holds peaks easily. Fold berries and cream together and serve immediately, or refrigerate for up to two hours.

Strawberries in a Mango Sea

by Martha Rose Shulman

Yield: 8 servings

Ingredients

2 large or 4 small ripe mangoes

3 TBL fresh lime juice

2 TBL sugar

2 pints ripe, sweet strawberries, hulled and quartered

Fresh mint leaves for garnish

Preparation

1. Peel and pit the mangoes. Cut down the broad side of the fruit from stem end to tip end, slightly off center, with the knife following the edge of the pit. Cut down the other side of the fruit in the same way. Cut the flesh from the sides of the pit, cutting as close to the pit as possible. Lay each half, skin side down, on your cutting surface and score with the tip of your knife in a crosshatch pattern, down to — but not through — the skin. Lift each mango half, and press on the skin with your thumbs to turn the half inside out. Slice the cubes away from the skin. Repeat with the other half. Cut the strips from the sides away from the skin. Discard the skins.
2. Place the mango in a food processor fitted with the steel blade. Add half the lime juice and 2 teaspoons of the sugar. Purée until smooth. Scrape into a bowl, and set aside. You should have about 2 cups purée.
3. Toss the strawberries with the remaining lime juice and sugar, and let sit for 15 to 30 minutes, in or out of the refrigerator.
4. Spoon about 1/4 cup of mango purée onto each dessert plate or into wide dessert bowls. Place a spoonful of strawberries, with juice, in the middle. Garnish with mint and serve.