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Garden Club of Madison

Horticulture Bulletin

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This is the 11th quarterly bulletin. Previous issues can be found on our GCM website: www.gcmct.org. On the front page, click on MEMBER LOGIN. The username is: "member" and the password is: "123123". Click on MEMBER in the header of the next page. Horticulture Bulletins are at the top of the 3rd column.

Spotlight on Native Plants

To help promote the Horticulture Committee's theme of ***Educating and Encouraging the Use of Native Plants***, this "Spotlight" will be a regular feature in our quarterly bulletins. Here are two native flowers that bloom in spring and are beneficial to pollinators.

Golden Alexander (Zizia aurea)

Golden Alexander is native to Connecticut, with a native range in Eastern Canada and the Eastern United States [zones 3-8]. It is naturally found in meadows, fields, edge of woodlands, as well as near rivers and lakes.

Airy flat-top clusters of yellow flowers bloom in May-June. They grow 18"-30" tall in full sun to light shade, in average soil. Each blossom has compound umbels, consisting of 20 individual tiny yellow flowers. The jazzy genus name honors German botanist Johann Baptist Ziz.

Golden Alexanders are attractive to many pollinators such as bees, butterflies and other beneficial insects. They support 70 bee species and 130 insects, especially benefiting short-tongued bees. As a host plant, Golden Alexanders are an essential food plant for the larvae of the Black Swallowtail Butterfly and the Woodland Swallowtail Butterfly [their caterpillars feed on the leaves].

Best suited for an informal setting and in native plant gardens, Golden Alexanders will self-seed forming non-aggressive clumps. Also, they are deer resistant.
Interesting note: The Meskwaki indigenous peoples used this plant to treat fever and headache.

Common Violet (Viola sororia)

Do not consider violets as weeds, and please do not use herbicides. Violets are beneficial to us and valuable to pollinators!

Common Violets, also known as Woolly Blue Violets, are native to Connecticut and Eastern North America. Bluish-purple flowers with heart-shaped leaves are a great source of early spring color. They bloom throughout spring and occasionally into summer. A perennial native ground cover, Common Violets grow 3"-8" tall, in light shade to part shade. They will tolerate sun if grown in moisture-retentive soil.

These adorable flowers are best massed together and allowed to spread undisturbed in open woodlands, naturalized areas, native plant/wildflower gardens, along walkways, and under shrubs. Common Violets attract many butterflies and support a large number of pollinators. They are the larval food source for 14 species of Greater Fritillary Butterflies [genus *Speyeria*], and 16 species of the Lesser Fritillary Butterflies [genus *Bolloria*]. These fritillary butterflies will ONLY lay their eggs where there are violets for their larva to feed upon. The Great Spangled Fritillary is one notable example of the butterflies that require the Common Violet. In addition, Common Violets are the host plant for the mining bee [*Andrena violae*] – a specialist pollinator common to the Eastern U.S. that ONLY visits violets! Plus, violets provide critical early forage for queen bumble bees.

The Common Violet is edible for us, too. Common Violet leaves are high in Vitamin A & C and can be used in salads or cooked as greens. The flowers can be made into candy and jelly. Yet fortunately, they are deer resistant.

On a personal note, violets remind me of my father. He loved violets and saw them as a sign of spring. My parents allowed violets to grow wherever they wanted to be – in the lawn, under trees, and in shady areas. My father did not mow the areas where the violets congregated. I, too, allow the violets to multiply in my yard and in some garden areas. They are "happy" little flowers!
Provided by Denise Forrest

Why Plant Native - Pathway for Pollinators

We now know that many types of wildlife are in decline, particularly our native pollinators. And that's bad for us and our planet, as about a third of our crops and many of our flowers require insect and animal pollinators to reproduce. One of the causes of this problem is the fragmentation of land. And one of the steps we are taking to overcome this is to plant native plants in our gardens, so there is a Pollinator Pathway for insects.

But what does the term "native plant" mean. What is native?

We're talking about ecosystems here. An ecosystem is all of the plants, insects, and wildlife (all of the living things) that interact with all of the physical non-living things (soil, water, air, sunlight). Ecosystems over the ages become balanced if left alone, the plants, insects and wildlife have adapted to live in relative harmony with one another. (The problems start when we bring in outsiders, such as chestnut blight and Dutch elm disease.)

Some people say that a native plant is one that was here before the colonists arrived. But that's really a shorthand way of saying that the plant has been around so long in a locale that it lives in harmony with others.

We could take the whole of the USA as our ecosystem and say that a plant is native to the USA. But that's too big a region, as some plants that are well-behaved in one part of the country don't work well with plants in another part of the country. So we generally take the area as plants native to New England.

You can also view your garden as its own small ecosystem. We then have choices as to what plants we put in our garden along a continuum from those that are really bad for wildlife, to those that are better, to those that are the best possible choices for wildlife conservation and biodiversity.

Simply stated, the more locally native plants we have in your garden, the more wildlife we will attract.

Taking the First Step
Habitat loss is the number one cause of declining wildlife populations. With our zeal for constant development, we have simply left no place for wildlife to go. Each of us can make a difference by doing just one thing for wildlife.

So to that end, one native plant is good. Three of that same plant is better. A garden full of a wide variety of many different types of native plants that provide for wildlife year-round is best. That is what will help to preserve the biodiversity of each of our local regions.

Having made the decision to go native, the next problem is just how to judge what is really native. I attended a seminar recently on native plants and the speaker said that although Echinacea is known as a native plant, the cultivated double version is not good for pollinators as it has little pollen and the breeders have bred out the natural Echinacea shape so that it no longer provides a resting place for insects. A case of buyer beware.

Denise's article below gives more information on the topic of identifying what is a good native plant.

Source: (Ecosystemgardening.com text used in some places)
Provided by: Catherine Ferguson

Straight Species of Native Plants versus Cultivars

Your garden is connected to a local, regional, and global ecosystem. Connections between plants, insects, and animals resulted from countless generations of evolution. Biodiversity in our gardens begins with choosing a majority of native plants, specifically the straight species of natives, if available.

Straight species native plants have grown in a particular area or ecoregion for hundreds or even thousands of years, are open-pollinated, and grow true to seed. The straight species of the plant evolved through natural selection and thus differs from the varieties that humans have cultivated. Uli Lorimer, Director of Horticulture at Native Plant Trust, believes that no one gardens better than Mother Nature — her designs are exquisite and provide genetic richness.

The word cultivar means a cultivated variety. To meet the definition of a cultivar, the plant must be bred asexually — manipulative breeding by humans. Cultivars are developed for attractive characteristics such as striking flower colors; shorter, bushier forms; altered color or variegated leaves; winter hardiness; and improved disease resistance. You can recognize a cultivar by the way the name is written, ending in a non-Latin name appearing in single quotes after the genus and species, such as *Clethra alnifolia 'Hummingbird.'* Cultivars make up the majority of natives sold in nurseries. Unfortunately, many plants marketed as "natives" in garden centers have never grown naturally in the wild.

Locally collected, seed-grown plants are the gold standard in genetic variety. The way in which we propagate plants also plays a role in their ecological value. Cultivars are achieved only by cloning. Therefore, cultivars have less genetic diversity as a result of clonal propagation, less able to adapt to changes in the environment. However, it might be possible that seed-grown native plants could be capable of surviving climate change. This is an argument for preserving as much genetic diversity as possible. But growing plants by seed on a commercial scale is extremely difficult. And, it is crucial to not over-harvest seed from natural populations. Gratefully, "Seed-Saving" programs are expanding in various regions.

Douglas Tallamy, noted entomologist and author of several books, including *Bringing Nature Home* and *Nature's Best Hope*, has been conducting research for many years. He emphasizes that gardening for wildlife, such as butterflies, birds, and bees, requires plants that can support juvenile stages of insects, not just the nectar-sipping adults. Attracting more native insects into our landscapes is critical to build healthier ecosystems.

Plant relationships with insects are especially crucial, because insects are food for so many different animal species, including songbirds. Existing studies have shown that to successfully reproduce, 96% of all songbirds require insects to feed their young. Plants host those insects, so clear connections exist between native species that support the greatest diversity of insects and the future generations of our songbirds.

Tallamy and other researchers have found that yards with a minimum of 70 percent native plants are capable of sustaining greater insect and bird diversity than yards with a smaller percentage of natives.

Here are other findings:

- The more altered the cultivars are from their straight native relatives, the less the pollinators prefer them. For example, double-flowered cultivars are gorgeous for us to look at, but they provide nothing for insects. In selecting for more petals, pollen and nectar are sacrificed.
- Invisible traits of cultivar plants, such as nectar quality, pollen quality and pollinator health consequences, are still being studied.
- Plants in which the foliage color was drastically altered [such as from green to red or purple] do not support the insect life that their original straight species do.
- Changes to create variegated leaves make the plants unpopular with insects.

- Enhanced berry size supports some insect species but are problematic for birds.
- Non-seed-producing cultivars provide nothing for seed-eating bird populations.
- Plant habit/structure greatly matters to nesting birds.
- Although the cultivars in certain studies are less attractive to pollinators than the native species, cultivars are still visited by some pollinators.
- Disease-resistant cultivars could be a good sign for specific plants, such as the American Elm which was decimated by Dutch Elm Disease.

Conclusions thus far suggest that cultivars of native plants should be evaluated on a case-by-case basis. Choosing a cultivar that is **as close to the native species as possible - in habit, bloom time, and color -** is going to increase the likelihood that it is a comparable substitution for a straight species plant. This means we should try to learn the species' characteristics and how much the cultivar has been altered.

Much more research is needed to answer the question of how cultivars compare ecologically to straight species. Weighing these concerns is difficult. The cultivar of a native species is far better than a non-native plant or a known invasive one. But **the use of straight species, when available, supports the greatest amount of biodiversity and is something to strive for.**

A terrific retail nursery in Connecticut that sells genuine straight native plants:
- Earth Tones Native Plant Nursery, 212 Grassy Hill Road, Woodbury, CT

For exclusively native seeds:
- Wild Seed Project, Portland, Maine: info@wildseedproject.net

For more information about the value of native plants and studies of cultivars, look at these sources:
- *The Northeast Native Plant Primer: 235 Plants for an Earth-Friendly Garden* by Uli Lorimer, Director of Horticulture for Native Plant Trust
- *Bringing Nature Home* by Douglas Tallamy
- *Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard* by Douglas Tallamy
- *Native Plants for New England Gardens* by Mark Richardson and Dan Jaffe
- www.nativeplanttrust.org
- www.ecolandscaping.org
- www.piedmontmastergardeners.org
- www.ecobeneficial.com/audio/are-native-cultivars-ecologically-beneficial-an-interview-with-dr-doug-tallamy/
- www.ecobeneficial.com/videos/native-cultivars-vs-native-plants-annie-white/
- www.humanegardener.com/flower-power-a-qa-with-annie-white/

Provided by Denise Forrest

Did You Know?

- You can frustrate squirrels at your hanging shepard's hook birdfeeder by putting a 'Slinky Coil ' around the pole. As the squirrels try to climb, the coil is stretches down and then bounces back up.
- Peaches, pears, apricots, quinces, strawberries and apples are members of the rose family. So are ornamental species such as spirea, mountain ash, goatsbeard, and ninebark.
- The average oak tree produces over 10 million acorns over its lifetime and a mature tree can drop as many as 700,000 leaves every year.

- A sunflower is not just one flower. Both the fuzzy brown center and the classic yellow petals are actually 1,000 – 2,000 individual flowers, held together on a single stalk.
- There are at least 10,000 varieties of tomatoes. Over 60 million tons of tomatoes are produced each year, making it the world's most popular fruit. The second most popular fruit is the banana.
- World Naked Gardening Day is celebrated on the first Saturday in May. It aims to promote harmony and peace with nature.
- Gardening can help you improve your balance, because it requires you to bend down and stand back up while planting or picking flowers. Research has shown that gardening also helps strengthen hand-eye coordination and motor skills. This is because it involves a lot of hand work, such as pruning, weeding, and planting seeds.
- Last but not least, did you know that gardening can have positive effects on mental health? Gardening has been found to reduce stress and improve mood, among other benefits. So why not add some plants to your yard or windowsill for some mental health boosts?

Provided by Judy Whitehead

How to Convert Lawn to a Pollinator Garden – Lessons Learned

Ideally, a pollinator garden should have 3 plants each of 3 different native species for each of the 3 summer bloom periods (that's a minimum of 27 plants). Some of those plants should be native trees and shrubs to create a layered habitat. There are many sites that provide native garden plans to help you design your garden and select plants. One site is https://aspetucklandtrust.org. While this rule of 3's is ideal it is by no means required. You can choose a much simpler design using native plants you like.

I created a native pollinator garden last Spring by converting over 700 square feet of lawn and purchasing 100+ perennial plants & plugs, a witch hazel and an elderberry tree and some blueberry bushes. It was a HUGE learning experience! 1) I didn't prep the bed properly, and 2) it was very expensive because I didn't use seeds including from the native plants I already have. So, here's how can you avoid making my mistakes:

1. **Timing / planting the shrub layer:**
    a. The best time to create a pollinator garden if you are starting perennials from seed is in early September so you have time to get the tree and/or shrub layer established before winter. Early fall is the best time to plant this layer so they don't get stressed by the summer heat and drought.
    b. Place trees and/or shrubs according to the plant directions allowing enough space between them to reach their mature growth. Keep them watered until the ground freezes.
    c. If you are only planting native perennial seeds you can start in October or early November. Pick plants that will do well in the location. Is this garden primarily in the shade or sun, moist or dry? If you are installing seedlings, plugs or mature plants, you can begin in late Spring/early Summer.

2. **Prepping the bed:**
    a. Mow the grass as short as you can. This is also called scalping if you are trying to put a garden into an area overgrown with weeds. If it's an area with invasives, you may need to smother the area with a thick layer of wood chip mulch for a 1-3 years before planting. In

any case, what you will be doing is a "no-dig" method of gardening as you will be building your garden on top (with the exception of digging in trees and shrubs).

b. Draw an outline of the bed using string or spray paint and edge the entire perimeter.
c. Cut the remaining grass around your shrubs into strips and turn them upside down, cover with a layer of newspaper 3-4 pages thick, wet the newspaper thoroughly and cover the wet newspaper with 3-4 inches of composted soil (more of a leaf compost versus a manure compost) or use a clean mulch. Acer sells a great composted soil.
d. Or, you can just cover the grass (without turning it over) with a thicker layer of newspaper or cardboard, wet it thoroughly and cover with 4-6" of composted soil.
    i. I don't recommend removing the grass layer altogether. Why lose the nutrients and biotic life in that important top layer. For this reason, I also don't recommend solarizing the lawn first as that will kill this valuable biotic life.

3. **Sowing native seeds**:
    a. In mid-October to late-November spread your native perennial seeds in the remaining soil in your newly created bed. Most native seeds need to "cold stratify." This means they need to go through a period of cold dormancy before they will germinate, i.e. through the winter. Therefore, they need to be planted in the late Fall, certainly no later than early February, to germinate and grow when the weather turns warm. Sowing directly into the soil, allows you to thin plants in place if you over seeded.
    b. Some seeds need to be covered with a thin layer of soil while others (these tend to be the smallest of seeds and look like small dots) need light to germinate. Press them firmly into the soil (whether they are covered or are sitting on top). It's important that the seeds make good contact with moist soil. You can also stomp around your garden. Walking on top of them won't hurt them.
    c. Another way to sow native seed is in a "milk or water jug". Instead of sowing seeds directly into your garden, you can create mini greenhouses using milk jugs. Using this method, you can sow with the number of cold dormancy days in mind. Some seeds only need as little as 30 days versus those that need 90+ days. Kellie Brady gave a demonstration on how to plant in a milk jug in one of her Master Gardener Clinics in the Scranton Library and we will post her directions on our Garden Club of Madison website.
    d. The advantage to sowing seeds in this manner is you can see exactly how many seeds germinated and place the seedlings where you want them in your existing or new gardens. It's best if you only put one species per jug and label them inside and out with permanent ink.
    e. The disadvantages of this method are that the seedlings will be very fragile when you try to transplant them and you will need a lot of jugs if you are trying to grow enough plants for a new garden.
    f. Another method to cold stratify seeds is to put seeds in a damp paper towel in a plastic bag in the refrigerator for the required number of days. The disadvantage of this method is the seed sprouts will be planted indoors and will need to be hardened off when its warm enough to put them outside.

4. **Harvesting native seeds:**
    a. In harvesting my own seeds this past Fall, I learned that native seeds are viable for a year. Some may last longer but the germination rate will decrease over time. They are best if used

within a year (unlike weed seeds that remain viable for decades!). To harvest seeds, cut off the seed heads or pods which are the part of the flower that's left after the petals fall off and keep them dry in a paper bag in a cool, dark location until you are ready to sow them. I kept my bags of seeds in the garage on a rack.

5. **Two other options to reduce lawn:**
    a. Create a mini meadow by letting part of our yard go natural; keep it looking neat and your neighbors happy by simply mowing around the perimeter so it looks planned.
    b. Replace part or all of the lawn with clover or other ground covers including no mow grasses.

Remember new plants sleep year 1; creep year 2 and leap year 3. Patience is a virtue especially when starting from seed but so worth the effort!
Provided by Sue Kelley

Your Vegetable Planning Guide for Madison, Connecticut

On average, your frost-free growing season starts May 7 and ends Oct 16, totaling 162 days.

A Spring Planting Strategy:
Cool crops like broccoli, cauliflower, and cabbage can be direct seeded into your garden around March 26, assuming the ground can be worked, but it's better to start them indoors around February 27 and then transplant them into the garden around April 17. Do the same with lettuce and spinach.

Plant onion starts and potatoes around March 8. Sow the seeds of peas (sugar snap and English) at the same time. If the ground is still frozen, then plant these as soon as the ground thaws.

Do you want to grow tomatoes, peppers, and eggplants? Start these indoors around February 27. Then, around May 3 you should start watching the weather forecast and, as soon as no frost is forecast, go ahead and transplant those into the ground.

For all the summer vegetables like beans, cowpeas, corn, squashes, pumpkins, cucumbers, watermelons, gourds and sunflowers, you should plant those seeds directly into the ground around May 7, or once the soil is near 60° F in temperature. Having said that, we note that your location has a shorter than average growing season. Many summer vegetables need more days to mature than your area will provide. For that reason, we recommend you get a head-start by starting these summer vegetables indoors around April 17, and transplant those seedlings out after the danger of frost is past.
Source: National Gardening Bureau
Provided by Judy Whitehead

Future Issues

If you would like to submit information for a future Horticulture Bulletin or have a topic you would like us to research, please send them to **SUE KELLEY at kelleys4@gmail.com.**

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