



NATIVE PLANTS, NATURAL LANDSCAPES

SOUTHEASTERN PENNSYLVANIA CHAPTER

November 2023 Newsletter

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November Meeting Highlights

Chapter Business

Chapter elections took place at the November meeting. Members' votes were also accepted via email through November 15. The slates for Board of Directors and chapter officers were approved unanimously.

Board of Directors: Judy Balock, Susan Caughlan, Denise Everett, Jessie Shiffler, Marilyn Smith, Richard Smith

President: Richard Smith

Treasurer: Denise Everett

Secretary: Susan Caughlan

Membership Chair: Judy Balock

Recordings of past meetings can be viewed on our [Youtube channel](#).

Program -- The Gardener's Guide to Prairie Plants, by Neil Diboll & Hilary Cox

Wild Ones National webinar, presented by authors Neil Diboll and Hilary Cox and hosted by Professor Doug Tallamy

This comprehensive book is a treasure trove of knowledge for gardeners looking to incorporate native prairie plants into their landscapes. The authors draw from their extensive experience with prairie planting and design to share rich historical and ecological insights about prairie ecosystems while showcasing stunning images of prairie flora.

This book, 20 years in the making, provides all the inspiration and information necessary for eager native planters from across the country to welcome these plants into their landscapes.

Detailed photographs depict prairie plants at various stages of their growth. The authors photographed not only the plant's flower, but its leaf, the emerging seedling, the mature plant, and the seed. The text also dives deeply into the plants' historical and ecological roles in prairie ecosystems. This prairie species field guide is a comprehensive photographic catalog of prairie plants that will be especially useful in identifying emerging plants and seedlings during a restoration or a new project.

One of the biggest challenges for native plant gardeners is how to add prairies or meadows to residential landscapes. A well-designed prairie is a community of plants working together to create a mini-ecosystem that supports a wide diversity of insects, pollinators, soil organisms, and everything else along the food chain.

Prairie restoration efforts have undergone considerable refinement since the start of the movement almost 100 years ago. Originally, large sections of prairie sod were removed and transplanted to new locations, with varying degrees of success, because the differences in soil, water, and light conditions were not addressed.

Seeding prairie plants in place has proved to be a more effective method of recreating or restoring prairie habitat. Periodic burning for weed control is recognized as a critical element in prairie planting and restoration. Fire has always been a part of prairie ecology. Some plants require fire for their seeds to be released. Others thrive when fire removes more competitive species.

Understanding the ecology of plants in the garden is important to a successful planting. Approximately two-thirds of the living biomass of prairie plants, particularly the grasses, is underground. The dense root systems help to prevent open soil, which is where weeds get started. This is one reason native

gardens typically require less maintenance.

Designing a prairie starts with site selection and preparation. Converting a lawn into a prairie garden is a popular technique that works well for homeowners. The book offers many different designs for prairie gardens, including rain gardens, deer-resistant gardens, and pollinator gardens, each with a table of suitable plants.

Before starting to plant, determine the soil type, soil drainage, and light conditions of the site. Soil moisture, pH, and nutrients are all important factors. Compacted soil must be addressed, but sandy or clay soil can be managed by planting species that have evolved to thrive in these conditions.

Techniques for establishing a successful prairie meadow are discussed. Planting a small prairie garden isn't much different from plantings any other perennial garden. Restoring a prairie or planting a prairie from seed is more complicated, because of the larger scale. Site preparation is key. The authors discuss seeding prairie plants into former lawns, crop fields, old agricultural fields, and newly disturbed soil. Different techniques are presented for each situation, including techniques appropriate to larger sites.

Maintenance of prairie plantings is a multi-year undertaking. As a newly planted prairie matures, the density of certain types of plants may need to be controlled, and perennial weeds can become an issue.

The book's section on propagation from seed includes information on harvesting seed and growing plants from seed. Seed germination techniques are explained for both indoor and outdoor propagation. Starting plants from seed can give a gardener the option of planting specific plants over large areas, which otherwise would be cost-prohibitive.

Vegetative propagation is also discussed. Working with root division and stem cuttings may seem daunting, but the authors give detailed instructions for success with these techniques.

The purpose of restoring or recreating prairie habitat is to help preserve the insects that sustain wildlife. Many birds raise their young almost exclusively on a diet of insects, which contain the protein, fats, and other nutrients needed for juveniles to develop into healthy adults. Without enough insects, bird populations can't thrive. The prairie food web starts at the invertebrate level, where native prairie

plants provide the quantity and quality of food necessary for insects to live, breed, and raise their young.

In large prairie restorations, grasses tend to become dominant over forbs because of the absence of grazing animals. In a native prairie, bison and elk would feed on the grasses and keep them in balance with other flowering plants.

Some gardeners balk at including grasses in their prairie planting, but warm-season grasses are an essential part of native prairies. They provide important habitat for certain insects and perform the essential task of covering bare soil to prevent the emergence of weeds. Grasses don't have to be 6 feet tall -- little bluestem, side oats gramma, and bottlebrush grass are all under 4 feet in height and have attractive flowers and foliage.

Simple adjustments to a standard prairie seed mix, such as concentrating on shorter plants, can make prairie plantings more acceptable in residential and even urban neighborhoods.

The book presents many different prairie seed mixes. Tables list each plant species along with the amount of seed needed per square foot to create a balanced prairie habitat. Selective mixes, such as the deer-resistant short prairie mix for medium soil, are not as species-diverse as a native prairie would be, due to the selection for specific characteristics. However, each mix still contains enough different species to provide a range of color, bloom times, and habitat.

The book's table of deer-resistant prairie plants will be a welcome source of information for many gardeners. One strategy for dealing with deer is to focus on plants that are not favored as browse, to discourage deer from visiting the property. Some gardeners use these plants as a barrier around more vulnerable plants. This can work if the barrier plants are large enough and retain enough biomass in all seasons to protect the vulnerable plants. Most grasses are not favored by deer and can act as effective shields for more vulnerable species.

The authors recommend using wheat straw or fallen leaves as mulch if a covering is needed to protect newly seeded beds or transplants from severe weather. Bark is not a naturally occurring material in prairies. The authors do not recommend using bark mulch because prairie plants have not evolved in a habitat containing mature trees.

Tree of the Month -- Umbrella Magnolia

Umbrella magnolia (*M. tripetala*) is an understory tree, growing 15 to 30 feet in height, and is native to rich, moist woods, slopes, and streams in the Appalachian and Blue Ridge mountains. This species is an indicator of moist soil and is intolerant of dry soil and excessive heat.

The extremely large leaves (to 2') grow in a whorled cluster at the tips of stems, resembling the spokes of an umbrella.



When planted in the open as a multi-stem tree, the umbrella magnolia has a full, rounded form.



Large creamy white flowers appear in mid-spring but are not fragrant. Beetles are the primary pollinators. The foliage of magnolias hosts at least 21 species of Lepidoptera, including the eastern tiger swallowtail butterfly.



Pinkish-orange cone-like fruits mature in the fall. The seeds are covered in a fleshy, high-fat exterior that provides food for many small mammals and birds, especially those seeking high-energy food sources for southern migration.



Umbrella Magnolia Quick Facts

Size	15-30 feet tall
Habit	often multi-stem
Sun & Soil	part to full shade; moist, well-drained, slightly acidic soil
Flowers	large white bowl-shaped flowers
Leaves	large oval leaves clustered in whorls
Fruit	large, colorful cones studded with red seeds
Habitat	moist woods, ravines, slopes, stream banks, protected from strong winds

Prepare for Spring -- Kill Some Lawn Now!

Late fall is a great time to expand your native planting areas so they're ready for more plants next year. During the year, you might have decided that you can eliminate some areas of lawn to create new beds, or remove some lawn around existing beds to expand them. Smothering is a great technique to use in the fall to get larger areas ready for next year. A shovel or hand trowel is great for removing a strip of lawn around an existing bed to expand your planting area. Here are some details for both techniques.

Smothering Lawn Areas

This technique works well to create new planting beds or to significantly expand existing beds.

Lawn grass doesn't have very deep roots compared to most native plants, but when removing lawn, it's important to remove or kill all the roots of lawn grass and accompanying weeds. Otherwise, they will reappear in your new bed next season. Grass is accustomed to going dormant under stressful conditions -- summer drought and winter weather -- and regrowing with the return of rain and mild weather. Fall smothering takes advantage of natural winter dormancy to weaken the energy stored in the roots, to prevent grass and weeds from re-sprouting next spring.

1. Weed-whack the area, removing vegetation right down to the soil. This destroys the plants' ability to make more food to store over the winter. You can leave the clippings in place or compost them elsewhere.
2. Cover the area completely with a layer of cardboard, making sure there are no gaps between the pieces. The cardboard will create a dark, moist environment that's protected from drying winter winds and temperature extremes -- perfect for helping dormant grass and weeds sur-



vive the winter. In the spring, the grass and weeds will try to resprout. They will find their way through any gaps that allow light to penetrate. For this reason, layers of newspaper might not be effective in smothering lawn areas, unless the newspaper is topped with several inches of weed-free soil or wood chips.

3. Cover the cardboard with a thin layer of weed-free soil or wood chips, just enough to hold it down. Commercial mulch is not recommended because it tends to pack tightly, preventing water from getting to the cardboard and underlying soil. You want water to start breaking down the cardboard so you can dig through it next spring to plant. Tightly packed mulch creates a dried layer of soil under the cardboard.
4. If you have tree saplings or shrubs on hand, you can plant them this fall by moving the soil or wood chips aside and using a soil knife to cut a hole through the cardboard to dig planting holes. By spring, the cardboard will have decomposed enough that you should be able to dig planting holes with a trowel for your potted perennials or plugs.
5. For ease of maintenance, edge the new bed with bricks, rocks, or branches. To prevent grass from sneaking back into the bed, dig out a shallow trench at the edge of the bed, just wide enough to accommodate your edging material and no deeper than a couple of inches. Settle the edging material into this trench -- it will sink in and prevent most incursions from the adjacent lawn. It's easy to run a string trimmer along the edging to keep it neat, but if you have ground ivy in your lawn, watch out for this weed sneaking under the barrier.



Branches are used to edge this bed and separate it from the lawn.

Expanding a Bed Around the Edges

This is an easy way to expand your planting areas without creating new beds.

1. Take up your edging material a few feet at a time and move it onto the lawn just beyond where you want the new edge of the bed to be.
2. Use a shovel or hand trowel to remove the grass between the bed and the new edge. You can compost everything you remove, or shake off the soil from the roots and leave it in the bed if your soil is thin.
3. Make a sharp cut at the new edge of the bed. Settle your edging material firmly against this cut to prevent grass from encroaching into the bed. If you sit the edging material on top of the grass edge, the grass will creep back into the bed.
4. You can plant this new section immediately or let it settle until spring. Either way, rake plenty of leaves from the lawn onto the new area to protect the soil from erosion over the winter, or cover it with a thin layer of wood chips.



The bed on the left has been expanded further into the lawn. The larger, established plants are in the center of the bed. The new, expanded area at the edge of the bed has been planted with plugs and covered with wood chips.

Why Reducing Lawn Is So Important

“In the past, we have asked one thing of our gardens: that they be pretty. Now they have to support life, sequester carbon, feed pollinators, and manage water.” Professor Doug Tallamy, founder of [Homegrown National Park](http://HomegrownNationalPark.org).

Lawns do not perform any of these important functions. More often than not, lawns degrade the local watershed. Their shallow roots don't allow water to infiltrate, resulting in runoff that carries sediment, fertilizer, pesticides, and herbicides into our streams. Lawns provide virtually no food for native pollinators or the insects that sustain our native birds, amphibians, reptiles, and mammals. Turf grass provides very little carbon capture, because

every time we mow, captured carbon is released.

Six years ago, the back yard shown above was all lawn grass. The grass has been replaced by a tall-grass meadow (right) and a large bed of native trees and shrubs (left) bordering a small woodland. The lawn has been reduced to paths that connect the native plantings.

Transforming our properties to provide ecological benefits instead of deficits is a process. Every time we create a new native planting area, we provide more food and habitat for native insects and animals, and our landscape moves closer to becoming a positive ecological force rather than a negative one.

Spotlight on Plants with “Weed” in the Name -- Joe Pye Weed

Joe Pye weed (*Eutrochium* spp.) is a large plant whose clouds of pink to purple blooms in late summer attract lots of pollinators. Whether your garden is in sun or shade, there’s a species of *Eutrochium* to fit your habitat.

Rich, well-drained soils are ideal for *Eutrochium*, but the plant is somewhat adaptable to other soils. With that in mind, most species prefer consistent moisture throughout the growing season, making them good plants for rain gardens.

At 6 to 8 feet high by 3 feet wide, Joe Pye is a major presence in the garden. Plants are most vigorous when they have more moisture. Once established, they will survive brief periods of drought, but they may experience some leaf scorch. Stems can be pinched back early in the growing season for shorter plants and more flowers.

The flowers are loaded with nectar and pollen that attract native bees and butterflies. In the fall, many species set copious amounts of seed that’s ornamental as well as useful for attracting and feeding small seed-eating songbirds. The plants are highly resistant to browsing deer and rabbits.



The narrow, lance-shaped leaves of spotted Joe Pye, *E. maculatum* (left), can be up to 10 inches long and are whorled along the erect stem. The huge, flat-topped flower clusters are composed of multiple branches bearing tiny vanilla-scented pink flowers that are magnets for butterflies in late summer.

Hollow Joe Pye, *E. fistulosum*, has a mostly hollow, dark purple central stem and may grow a foot taller than *E. maculatum*. It has green stems and dome-shaped flowers clusters in muted pink to purple.

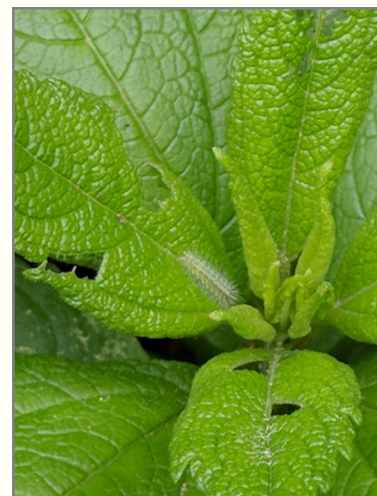
Perfect for shady butterfly gardens, sweet Joe Pye weed, *E. purpureum*, thrives in semi-shade and woodland edges. The frothy crowns of large pink

vanilla-scented flowers (below) are a favorite nectar source for monarchs, swallowtails, and other butterflies.



Joe Pye is easy to dig up and divide in late spring, right after the plants emerge from the ground. Plants will also seed readily. Joe Pye is not known as a vigorous spreader.

The leaves of *Eutrochium* are an important food source for the larvae of many butterflies and moths. Caterpillars will eat holes in the leaves in mid-spring, but the plants have adapted to recover quickly and are able to produce large flower clusters by mid-summer.



Joe Pye is not difficult to grow from seed. The seeds require cold stratification for 30 to 60 days at 40 degrees F, and the seeds of some species need light to germinate.

The thick stalks of Joe Pye provide good habitat for over-wintering insects. Leave them standing in the garden until new growth appears in the spring.

Invasive Plant Alert -- Bush Honeysuckle

Bush honeysuckles (*Lonicera* spp.) were introduced into the United States from Europe and Asia in the 1800s as ornamental shrubs and for erosion control. These shrubs thrive in full sunlight but will tolerate some shade, making them aggressive invaders of abandoned fields, roadsides, woodland edges and interior open woodlands. They reproduce by seeds spread by birds, and existing shrubs expand via root sprouts.

Bush honeysuckles can form dense thickets that shade out desirable native woodland species. They are among the first plants to green up in spring and the last to lose their leaves in fall. For this reason, late fall is a good time to identify and remove this invader from your property.

You can recognize mature bush honeysuckle plants easily in late fall by their sprays of bright red berries. Although the fruit is abundant and rich in carbohydrates, it lacks the high-fat and nutrient-rich content that most native plants provide for migrating birds.

Mature bush honeysuckles can be identified by their form -- a dense, multi-stem shrub 5 to 20 feet



high with arching stems originating at ground level. Stems can be up to several inches thick. The grayish-brown bark of the stems is distinctly striated. The stems of all species have a hollow center, or pith.



Leaves are oval, opposite, smooth-edged, and 2" to 3" long. Flowers appear in pairs in the leaf axils in spring and can be white, yellow, or pink.

The three most common bush honeysuckle species in our area are tartarian (*L. tatarica*), amur (*L. maackii*), and morrow (*L. morrowi*). All three are listed on the PA Department of Agriculture's list of Noxious Weeds, meaning they cannot be sold or propagated in Pennsylvania.

Controlling Bush Honeysuckle

Small plants (up to 2') can be pulled by hand, as the roots are not deep. Anything larger will require clippers, loppers, or a saw. Plants will resprout if the stump is left in the ground, so be consistent in your follow-up for the next few seasons to remove any sprouts. Stems can be cut below the crown for more effective control.

Prescribed fire can be moderately effective for controlling non-native honeysuckle when used in the spring. Combining prescribed fire with grazing goats has been shown to be effective.

Resources

[Bush Honeysuckle](#)

[Honeysuckle Invasive Species Profile](#)

[Invasive Species Highlight: Bush Honeysuckles ... Not for the Birds!](#)

Protecting Invertebrates Even When We Can't See Them

As fall begins, we see fewer insects on our plants and flying around. They're still here, just less visible, hidden below an insulating layer of leaves or in hollow stems. Many invertebrate species overwinter exactly where the adults spend the summer – right in our yards.

Native bees, wasps, fireflies, beetles, and ants spend a significant portion of their lives in or at the soil surface. Their eggs and larvae generally develop in the soil and pupate underground. Because these insects spend so much of their life cycle near the soil, they are especially vulnerable to pesticide applications to the soil, such as broadcast lawn treatments.

Insecticides are sometimes included in multipurpose lawn fertilizer products, often called “weed-and-feed.” Highly toxic insecticides are often used in lawn treatments to kill beetle grubs. Chemicals used include pyrethroids, neonicotinoids, and chlorantraniliprole, a newer insecticide. These insecticides are broad spectrum, meaning they are deadly to many insects in addition to the target species.

You can make your property a haven for native insects to nest and over-winter, simply by planting native trees, shrubs, and forbs (flowers and grasses), and not using pesticides to manage your property. Insect “damage” on plants can be viewed as evidence that native insects are using these plants as they were intended to be used. Leafcutter bees use pieces cut from leaves to build a nest. If you see circular holes like the ones in the photo at left, you know your plants are helping leafcutter bees survive!



Native plants can survive this kind of cosmetic damage, as they've done for thousands of years. Just as we've learned to leave the fallen leaves to provide habitat for overwintering insects, we should learn to view leaf “damage” as a sign that native insects are at work.

Resources

[Smarter Pest Management: Protecting Pollinators at Home](#)

Educational Opportunities

- Nov 29** [Bare-Root Tree Planting](#). ELA webinar, 5:30-6:30 p.m.
- Nov 30** [Perennials for Late Season Interest](#). Mt. Cuba Center, 3120 Barley Mill Road, Hockessin, DE. 10:00 a.m.-12:00 p.m.
- Dec 1** [2023 Ecological Plant Conference](#). Brooklyn Botanic Garden, 990 Washington Ave, Brooklyn NY, or virtual. 8:30 a.m. - 4:30 p.m.
- Dec 7** [In the Life of Monarchs East of the Rockies: Biology and the Great Migration](#). Xerces Society webinar, 1:00-2:00 p.m.
- Dec 8** [Elegant Container](#). Mt. Cuba Center, 3120 Barley Mill Road, Hockessin, DE. 1:00-3:00 p.m.
- Dec 9** [Elegant Container](#). Mt. Cuba Center, 3120 Barley Mill Road, Hockessin, DE. 10:00 a.m. - 12:00 p.m.
- Dec 12** [Humanity for Habitat: Saving Nature at Home](#). ELA webinar, 6:00-7:00 p.m.
- Dec 14** [Common Sedges of Pennsylvania](#). Pennsylvania State Univ. Herbarium, 10 Whitmore Lab, University Park, PA, or virtual, 7:00-8:00 p.m.
- Jan 10** [Wild Plant Culture](#). Mt. Cuba webinar, 6:00-7:00 p.m.