



Southeastern
Pennsylvania

September-October 2026 Newsletter

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Planting a Tiny Forest

Presented by Rick Smith and Jessie Shiffler, Wild Ones of Southeastern PA

The gold standard for restoring native habitat on our properties is to recreate the vegetative community that would be here if humans had not intervened. For much of southeastern Pennsylvania, this would be primarily an oak-hickory forest, with eastern red cedar temporarily filling gaps where canopy trees had fallen.

Restoring this mix of tree species on your property could take many decades to reach maturity. Or you could follow the Miyawaki method of replanting a forest, which produces much quicker results.

Pioneered by Japanese ecologist Akira Miyawaki, this method of replanting a forest involves using native plants on a much denser spacing than conventional planting. Miyawaki plantings can be seen in many parks and urban lots worldwide. However, if you're looking to plant on an even smaller scale -- say, just one spot on your property -- this method can still produce a quick nanoforest with all the benefits of a larger planting.

Basics of the Miyawaki Method

The most obvious benefit of this method, using plants native to the area, was novel when Professor Miyawaki pioneered it in the 1970s, but it's a core tenet of the Wild Ones approach to planting. What's different about the Miyawaki forest is the way it's planted. Professor Miyawaki's goal was to restore forest cover and soil quality on what were often highly degraded sites. He accomplished this by using native tree species chosen for their compatibility with the planting site and their ability to form a cohesive plant community.

The result was a mature pioneer forest in 20 to 30 years instead of the usual 200 years. Proper site preparation, when necessary, is combined with dense planting of tree seedlings with a mature root system. Planting at a density of 3 to 5 seedlings per square yard fosters competition among the seedlings and the development of a phytosociological community in which the seedlings' root systems actually assist each other in obtaining nutrients.

How To Start a Miyawaki Nanoforest

1. The key to success in establishing such a forest is soil preparation. Start with a soil survey of your site. Determine your soil type(s) -- clay, sand, loam, or a mix. Most important, look at how well your soil holds water and drains. Choose species that thrive naturally in the soil conditions you have, rather than trying to re-engineer your site to match your list of desired species. In urban areas, soil contamination from industrial activities is a possibility.
2. If soil has been compacted by vehicles over the years, plan to incorporate lots of organic matter to increase water retention and kick-start the growth of beneficial microorganisms.
3. Calculate the number of plants you will need based on a density of 3 to 5 plants per square yard. From the list of native trees and shrubs that thrive in your ecoregions and soil type, 25% should be canopy trees, 25% sub-canopy species, 25% understory trees, and 25% shrubs.
4. Planting density is important in the Miyawaki

WO SEPA 2026 CALENDAR

Nov. 12, 7:00 p.m. Chapter elections; Shade-Loving Perennials, presented by M. Cuba. Via Zoom.

method. Dense planting forces canopy trees to grow tall quickly, closing the upper canopy, which shades the ground and reduces weed competition,. Shade also keeps the ambient temperature in the planting cooler and increases humidity, which builds rich leaf litter quickly.

The [Pennsylvania Natural Heritage Program](#) is a resource that can help you determine which tree and shrub species are compatible with your ecological community. An ecological community is characterized by species with similar habitat requirements. These species may also benefit each other by unlocking key nutrients and making them available to other species. For example, dogwoods absorb calcium from soil and rocks and concentrate the mineral in their leaves and wood. When the leaves fall in autumn, this calcium becomes available to other plants, most of which are unable to absorb calcium directly from the soil.

Planting Guidelines

You can design your nanoforest as one area or several smaller areas that eventually will become connected as the plants mature. Especially with smaller planting areas, you can incorporate paths through the planting so you can access it during all seasons.

Choose your location carefully -- the tree seedlings will grow quickly and should not be planted on your property line or too close to buildings.

For a small planting area, choose one to three hardwood single-trunk tree species with a mature height of 20 to 30 feet. The larger the mature tree, the larger the space you'll need for the finished nanoforest. Some possibilities are sweet gum, shagbark hickory, and black cherry.

Understory trees should have a maximum height of 15 to 20 feet. If you choose suckering species, they will fill in quickly. Examples are viburnums (*V. prunifolium* and *V. letago*), staghorn sumac, and grey dogwood (*Cornus racemosa*).

For the shrub layer, choose from the smaller viburnums (e.g., arrowwood), *Clethra*, native raspberry, coralberry, *Fothergilla*, and spicebush. These species will grow in part shade under the taller trees and in gaps between the canopy trees.

The forb layer will transition from sun-loving species to shade dwellers as the trees mature and create

more shade. You can still maintain sun lovers like bee balm and mountain mint along the sunny edges of the beds.

For ground cover plants, many sedges grow happily in shade, along with penstemon, skullcap, blue mist flower, foamflower, coral bells, golden ragwort, woodland phlox, wood aster, and violet. Virginia creeper is a fast-growing ground cover as well as a climber.

Plant more densely than you normally would. At first, the sun-loving forbs might be taller than the tree seedlings, but the trees will quickly catch up. Plan quick replacements for any plants that don't thrive.

The soil around newly installed plants should be protected from drying out with a layer of wood chips, which will degrade and contribute to soil health. Once a ground cover layer has been established, additional mulching shouldn't be needed. The denser planting should provide plenty of fallen leaves after the first season. If desired, you can rake leaves from the lawn into the new planting.

The ultimate spread of the suckering shrubs could determine where your paths will end up. Be willing to relocate paths if needed to allow suckering trees and shrubs to spread to their full size. Wherever the paths end up, keep them mowed or weed-whacked so you can visit and monitor your plants. Paths can end up shrinking as the plants mature, so plan accordingly.

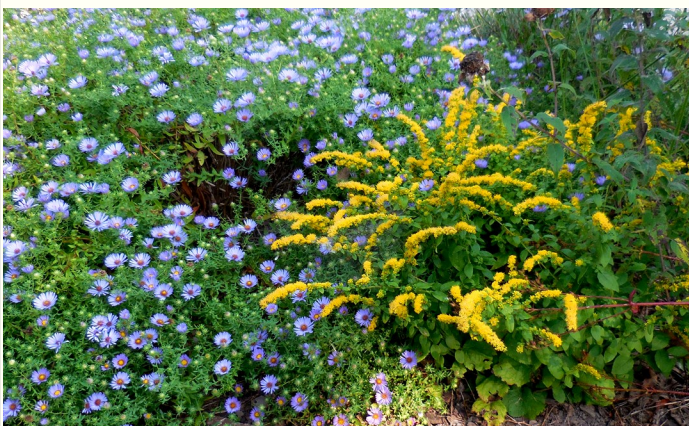
Keep a sharp eye out for invasives. They can pop up quickly, especially if the area was the site of mature trees. The seeds deposited by birds can stay in the soil for years, and when sunlight is restored after mature nonnative trees are removed, it can seem like every seed of multiflora rose, Japanese honeysuckle, bush honeysuckle, Asian bittersweet, and Russian olive is sprouting in your new forest.

Finally, watch which native plants volunteer in your new planting. They can be a great addition to your planting diversity and might tell you something about your site. Palm sedge volunteering in what you thought was a dry location could indicate the presence of perched groundwater, an unexpected bonus for deep-rooted native plants. Be prepared to edit volunteers that could be too enthusiastic for your plans. Pokeweed, poison ivy, and snakeroot come to mind.

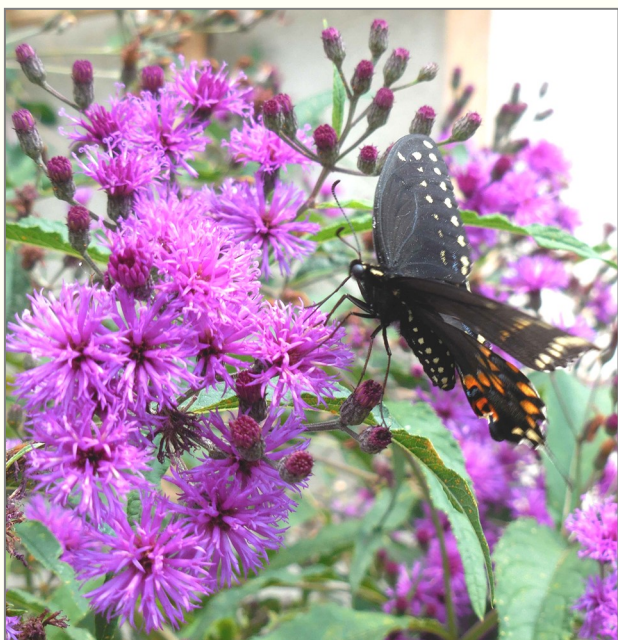
Powerhouse Plants To Feed Migrating Insects

Milkweeds (*Asclepias* spp.) might be the only food source for monarch butterfly caterpillars, but adult monarchs rely on many late-flowering plants to supply the energy needed for their fall migration. Most native butterflies spend the winter locally, under leaves or bark in their pupal or adult form. These species also need to stock up on nutrients to survive through the winter.

Native plants that flower in fall, when many other natives have folded up their flower and are setting seed, are crucial to sustain migrating and overwintering insects. Many of these plants offer a lot of pollen for the size of the plant. Asters, goldenrod, ironweed, and Joe Pye all have large flower heads or clusters of flowers all along their stems, providing lots of opportunities for insects to feed.



Aromatic aster and goldenrod 'Golden Fleece' above. Swallowtail nectaring on New York ironweed, below.



Above, calico aster and goldenrod 'Golden Fleece' blend well at roughly the same height and level of competition.



The delicate fronds of blue-stem goldenrod (above) are set off by the last of the nearby great blue lobelia's flowers. Below, a swallowtail enjoys the generous blooms of Joe Pye.



Powerhouse Plants To Feed Migrating Insects, *continued*

You might think of goldenrods and asters as sun-loving plants, but both species have members that prefer part or full shade. Stiff goldenrod (below right) volunteered along the edge of a north-facing bed that gets only late afternoon sun.

Along a woodland trail that alternated between part sun and full shade as it wound along a creek, large colonies of zigzag goldenrod (*Solidago flexicaulis*), below,



(*S. caesia*, bottom left) appeared in the shady areas.

Blue wood aster (*Symphio-trichum cordi-folium*), below right, and white wood aster (*Eurybia divericata*) are two other shade lovers that will re-seed to light



Lights Out at Night

Millions of birds pass through eastern and central Pennsylvania every fall on their way to their winter resting grounds to the south. According to Audubon, over 500 species of birds use the Atlantic Flyway. Millions of songbirds, shore birds, birds of prey, and waterfowl follow the flyway every spring and fall. The flyway isn't limited to birds, either -- this route is also used by some species of butterflies, bats, and dragonflies.

Many species of migratory songbirds evolved to migrate at night, when the skies are safer. Science shows that the birds navigate using cues in the night sky, including the light of the moon and stars. They also use topographic cues, such as coastlines, river courses, and mountain ranges, to guide their flight.

The problem -- light pollution has created havoc in our night sky. Brightly lit buildings and landscapes can disorient birds, confuse their internal navigational system, or make it harder for them to discern navigational cues amid the overwhelming input of artificial lighting.

In areas with concentrations of buildings, like cities and industrial parks, the consequences are catastrophic: 1 to 2 billion birds killed by collisions each year in the United States. In suburban areas, unnecessary landscape lighting from individual properties combines to create a pool of illumination that reflects off cloudy night skies and obscures the stars as well as geographic cues on the ground.

Simply turning off excessive and unnecessary outdoor lights each night between 11 p.m. and 6 a.m. will help reduce risks for migratory birds.

Make a commitment TODAY to turn off your unnecessary indoor and outdoor lights every night from **11 p.m. to 6 a.m.** during the fall migration -- mid-August through the end of November. When you switch off extra lights, you reduce your energy bill, save money, lower your carbon footprint, help protect migrating birds, and improve your views of the night sky.

**Take one simple action for the birds
tonight -- turn out the lights!**

Spotlight on Partridge Pea

By Rick Smith

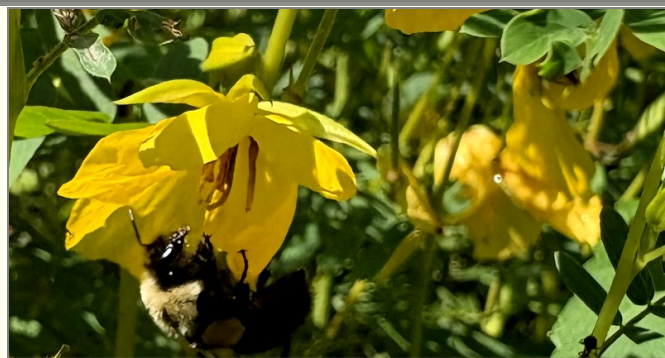
About 5 years ago I purchased a few pounds of various PA Ecotype Seeds from a reputable seed company here in PA. I wanted to quickly add ground-cover to an area where I had removed mountains of invasive vines and bushes. The plan was to have native annuals fill the space as a placeholder while I replanted slowly with perennials and shrubs. I was still new to the world of native plants and wasn't fully aware that 5 pounds of seeds for a 10' by 20' area was overkill. Some of the grasses sprouted, but by late summer the showstopper was partridge pea (*Chamaecrista fasciculata*), and if you do not already have a patch of it in your yard, I am willing to bet you will want one by the end of this page.

August Buzz

As I walk past the patch in my side yard every morning with the dog, those yellow flowers are covered with native bumble bees (*Bombus* spp.). The experience is not only visual, it's audible. Partridge pea requires buzz pollination, a fascinating dance in which a bumble bee clasps the flower and rapidly vibrates its flight muscles. The vibration creates a distinct, high-pitched hum that triggers the flower to release a shower of bright pollen. On a warm August afternoon, standing next to a patch of partridge pea feels like standing inside a lively, humming orchestra.



If you look closely at the base of the leaf stems, you will also spot tiny nectar glands called extrafloral nectaries. They produce little droplets of sweet nectar that attract predatory ants and beneficial wasps—nature's very own garden security crew keeping pest populations in check!



September Magic

As September arrived and the yellow petals begin to drift away, narrow seed pods took their place, quickly turning from soft green to a rich, woody brown.

Partridge pea is an annual, completing its life cycle in a single year. But it leaves behind a wonderful farewell show: ballistic seed dispersal. As the dry September sun heats up those brown pods, tension builds inside them. Stand near your patch on a dry afternoon and you will actually hear tiny snaps and pops as the pods twist open and fling their seeds several feet into the surrounding soil.



This is nature's way of planting next year's garden for you. Even better, those fallen seeds linger through the chilly months ahead, providing crucial winter meals for our local songbirds, wild turkeys, and small wildlife.

Partridge pea is easy to add to your yard. It loves full sun and thrives in poor, lean, or clay soils where other plants might struggle. As a member of the legume family, it even enriches your soil by fixing its own nitrogen, making it a generous neighbor to the surrounding natives.

To bring this cheerful native to your garden, simply scatter a handful of seeds across bare soil in late fall or early spring. Before you know it, you will be enjoying the golden blooms, the August hum, and the September snaps in your own back yard.

Tree of the Month -- Dogwoods

Native dogwoods are important components of natural landscapes in the eastern United States. These understory species play an important role in enhancing biodiversity and restoring ecosystems from upland forests to wetlands.

The dogwood's fibrous root system, particularly in shrubby species like silky and red osier dogwood, helps anchor soils prone to erosion, reducing sedimentation in waterways and protecting water quality and aquatic habitat. Reintroducing dogwoods into degraded wetlands creates habitat for a diverse range of insects, birds, and small mammals.

Dogwoods also play a key role in the calcium cycle of the forest. Calcium is an essential nutrient for both plants and animals. Dogwoods, unlike most other plants, have the ability to absorb calcium from soil and rocks. The trees concentrate the mineral in their leaves and wood. When the leaves fall in autumn, this calcium becomes available to the rest of the plants and animals in the forest.

Silky Dogwood, *Cornus amomum*

Silky dogwood is a medium to large, typically multi-stem shrub in the dogwood family. In addition to root suckering, silky dogwood forms thickets when stems root where they touch the ground. This plant is a useful addition to wet areas in woodlands and can control erosion along the banks of streams and ponds.

Identification

Leaves are the classic medium to large, oval dogwood leaf, with tiny silky hairs on both surfaces, giving the shrub its common name. Leaves sometimes turn maroon in the fall, but this dogwood is not known for its fall color.



Large, flat-topped clusters of tiny, creamy white flowers bloom in late spring, followed by blue drupes that ripen in late summer.

This is a multi-stem shrub that needs space to develop into a lovely thicket that will feed an shelter wildlife. It can root from branches that touch the ground as well as sending up root shoots. Plants can be propagated by layering or taking cuttings, including live stakes in early spring.

Habitat

In the wild, silky dogwood grows in wetlands and at the edges of swamps, streams, and ponds. It prefers well-drained medium to wet acidic soil. It tolerates a wide range of light, from full sun to almost full shade. Moisture is the most important requirement, and its roots must be kept cool and moist during the summer. Groundcover plants are ideal for this. In shade, choose from *Packera* spp, wild ginger, creeping phlox, sensitive fern, Jacob's ladder, green and gold (*Chrysogonum virginianum*), and sedges. In sunny locations, use *Penstemon* spp, golden Alexanders, Jacob's ladder, and sedges.

Silky dogwood is a good choice for a rain garden, in moist woodlands, and along the banks of streams and ponds.



Quick Facts -- Silky Dogwood

Size	6-12 feet tall and wide
Sun	Full to part sun
Soil	Well-drained medium to wet, acidic soil
Water	Does not tolerate drought; keep roots cool and moist in summer
Habitat Value	Host plant for spring and summer azure butterflies. Berries feed birds in fall.

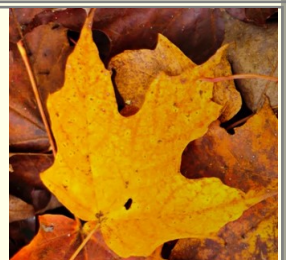
Events and Educational Opportunities

- Oct. 10** [The Wetland: A Unique Ecosystem](#). Morris Arboretum, 100 E Northwestern Ave, Philadelphia, PA . 10:00 a.m.
- Oct. 10** [Lesser Known Native Shrubs for Your Garden](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 1:00 p.m.
- Oct. 11** [Seed Saving Workshop](#). Jenkins Arboretum, 631 Berwyn Baptist Rd, Devon, PA. 1:00 p.m.
- Oct. 13** [Summer Invasive Plant Introduction & Identification](#). Blue Ridge Prism webinar, 1:-00 p.m.
- Oct. 14** [Fall Invasive Plant Management & Control](#). Blue Ridge Prism webinar, 1:-00 p.m.
- Oct. 15** [Cultivating Conservation and Community Engagement](#). Ecological Landscape Alliance webinar. 12:00 p.m.
- Oct. 15** [Ecological Restoration for Backyard Habitats](#). Jenkins Arboretum webinar. 7:00 p.m.
- Oct. 17** [Gardening for Ecological Resilience Tour](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 10:30 a.m.
- Oct. 17** [Designing with Native Grasses](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 1:00 p.m.
- Oct. 22** [Grow Your Garden for Less with Seed Collecting](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 10:30 a.m.
- Oct. 24** [Oaks of the Mid-Atlantic Tour](#). Morris Arboretum, 100 E Northwestern Ave, Philadelphia, PA . 11:00 a.m.
- Oct. 31** [Gardening for Ecological Resilience Tour](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 10:30 a.m.
- Oct. 31** [Succession Planting](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 1:00 p.m.
- Nov. 11** [Weed by Name, Native by Nature](#). Brandywine Conservancy webinar. 6:00 p.m.
- Nov. 14** [Gardening for Ecological Resilience Tour](#). Mt. Cuba, 3120 Barley Mill Rd, Hockessin, DE. 10:30 a.m.



REMINDER TO LEAVE THE LEAVES

DO [Rake Leaves from the Lawn](#). Go ahead and rake them up, but put them in your planting beds, not in the trash or compost. Fallen leaves protect soil and roots, hold moisture, and feed the organisms that keep your plants healthy. Keep leaves a few inches from tree trunks so air and water can reach the roots.



DON'T [Shred the Leaves!](#) Shredding destroys the insects living inside. Fallen leaves give wildlife more usable structure and still break down well over time.

DON'T [Bag the Leaves!](#) Bagged leaves are full of life headed for the landfill. The fireflies, caterpillars, beetles, and everything else sheltering inside won't have a chance of survival. Moving leaves into beds or under trees helps keep that life intact.

DON'T [Stress About Mess!](#) If you rake leaves off the lawn and tuck them under trees and shrubs, everything will look tidy, and the leaves will look like they belong there, which they do! Keeping fallen leaves where they do the most good -- under trees, around shrubs, and in garden beds -- helps protect overwintering wildlife, which will make your yard a healthier place for your plants and you, next year.