



Support Pollinators with Native Shrubs

BY JAMES GAGLIARDI AND HOLLY WALKER

Provide a pollinator smorgasbord through the seasons with these adaptable, deciduous plants.

POLLINATORS ARE an integral part of our gardens and ecosystems. However, loss of habitat, reduction in the number and quality of food sources, and indiscriminate use of pesticides and herbicides have taken a heavy toll on pollinator populations everywhere. Gardeners can be part of the solution by creating landscapes that support pollinators of all kinds.

While pollinator or “butterfly” gardens consisting of just annuals and herbaceous perennials are quite common, the addition of shrubs, trees, and vines greatly enhances their habitat value. In the Smithsonian Gardens in Washington, D.C., where we work, we use all these plant types to draw pollinators year-round. But among the most versatile workhorses are the deciduous native shrubs that support a wide range of pollinators as well as some very specialized ones.



Top: A mix of perennials, shrubs, and trees in the Smithsonian Gardens provides an ideal habitat for a variety of wildlife in the heart of Washington, D.C. **Bottom:** Thriving in a sloped bed bordering a parking lot near the Bird Garden, ‘Henry’s Garnet’ Virginia sweetspire draws butterflies and bees with its fragrant spring blooms. **Opposite page:** The spherical, white blooms of buttonbush grab the attention of passersby and pollinators alike.

From a gardening perspective, not only are these tough shrubs relatively unfussy about growing conditions and adaptable to gardens across most of the country, they provide multi-season interest to the landscape in the form of flowers, berries, bark, and fall color. The following species

help us to serve pollinators throughout the seasons, from early in spring when the first insects emerge from dormancy to fall when they start preparing for winter.

SPRING BLOOMERS

Virginia sweetspire (*Itea virginica*, USDA



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Red chokeberry features dainty spring blooms (left) that are followed in autumn by small red fruits (above), which become palatable to birds after exposure to low temperatures.

We love pairing it with oakleaf hydrangea (*Hydrangea quercifolia*, Zones 5–9, 9–1), another native shrub that thrives in similar growing conditions along a woodland edge and also has colorful fall foliage. After fothergilla has completed its blooming, oakleaf hydrangea will continue the show with large, white, pyramidal panicles of flowers from May to July that will draw in flower flies and wasps along with bees.

Running serviceberry (*Amelanchier stolonifera*, Zones 4–8, 8–4) is another plant that has the benefit of showy white blooms in May for pollinators, edible berries in summer, and striking fall foliage. As its name

Hardiness Zones 5–9, AHS Heat Zones 9–1) is a versatile plant in the Smithsonian Gardens. It is prominently featured in an understory planting at an entrance and beside a nearby parking lot where it helps retain a sunny slope. It thrives in both locations, but the blooms are best in full sun. Its spires of fragrant, white blossoms draw nectar-loving insects like butterflies and bees. The plant's rich red-to-purple fall color, especially showy in a mass planting, will persist into the winter in southern areas where sweetspire is semi-evergreen. If you notice some of the foliage looking chewed, it might be caused by caterpillars of the American holly azure butterfly (*Celastrina idella*) for which this plant is a preferred host.

Red chokeberry (*Aronia arbutifolia*, Zones 4–9, 9–1) supplies a great deal of value to wildlife in our gardens. From March to May, butterflies and native bees such as mason bees, mining bees, and bumblebees enjoy its clusters of white flowers. The foliage provides a food source to some hairstreak butterflies and several moths, and its fall color is stunning. True to their name, red chokeberry fruits, which are produced in summer, have a dry, astringent taste. After exposure to cold weather, however, the fruits become more palatable to birds, just when other food sources for them become scarcer. The fruit's persistence through late winter also adds some interest to gardens during this less colorful season. Both red chokeberry

and black chokeberry (*Aronia melanocarpa*, Zones 3–8, 8–1) are useful for mass plantings or for mixing into a naturalized perennial border.

Dwarf fothergilla (*Fothergilla gardenii*, Zones 4–8, 8–1) has showy, scented bottlebrush inflorescences that emerge from March to May before its leaves. Bees find a sweet nectar reward once they get past the flowers' dense tangle of anthers. Ornamentally, fothergilla is a lovely three-season plant with foliage that turns brilliant shades of yellow, orange, and red in fall.



Dwarf fothergilla produces fragrant, nectar-rich blooms that attract bees in spring.

suggests, running serviceberry is a stoloniferous shrub and grows about four or five feet tall and wide. Compared to more commonly used serviceberry species—which often develop as multi-stemmed small trees—the size of this species makes it perfect for gardens where space is at a premium.

Those on the West Coast all the way up to Alaska should consider western or saskatoon serviceberry (*Amelanchier alnifolia*, Zones 4–9, 9–4), which can reach a size of 12 feet or more but the cultivar 'Regent' selected for its compact habit

and abundant fruit will grow to only four to six feet.

SUMMER STARS

The summer-blooming shrubs in the Smithsonian Pollinator Garden keep the pollinator buffet going through the hottest months. Lead plant (*Amorpha canescens*, Zones 2–9, 9–1) mixes nicely into perennial borders because of its small habit. Growing only one to three feet tall, it features gray foliage and spiked clusters of iridescent purple flowers that are quite



unique for a member of the pea family. Individual flowers are composed of a single petal wrapped around 10 stamens, and provide nectar to bees, beetles, butterflies, and ants. It is especially important in prairie ecosystems where it supports native solitary bees as well as the endangered Karner blue butterfly (*Plebejus melissa samuelis*). Its cousin, California false indigo (*A. californica*), is one of the host plants of the California dogface butterfly (*Zerene eurydice*), the state butterfly of California.

Starting in June, buttonbush (*Cephalanthus occidentalis*, Zones 5–9, 9–1) produces captivating, fragrant, spherical flower heads that are a magnet to several species of bees and butterflies. They also grab the attention of passersby, so we have placed this shrub



Two summer-blooming pollinator favorites are sun-loving lead plant, left, and bottlebrush buckeye, above, which prefers shade.

at the entrance to the Pollinator Garden. Round, reddish-brown fruits follow, which can last into winter. This plant gets six to 12 feet tall, and though it is adaptable to most growing conditions, it does best in a damp, partly shady location.

Another great option for shady, consistently moist areas is bottlebrush buckeye (*Aesculus parviflora*, Zones 5–8, 8–4), which draws in a range of pollinators with spikes of showy, white flowers that appear in June and July. It typically reaches eight to 12 feet in height, with a similar spread.

One of the most popular shrubs with pollinators in our garden is a cultivar of

TOP (2): COURTESY OF JAMES GAGLIARDI. BOTTOM: JANET DAVIS

LEFT: NANCY J. ONDRA. RIGHT: JANET DAVIS



Above: A bumblebee searches for nectar on summersweet, which blooms in late summer. Top right: With flowers unfurling as early as January, 'Purpurea' Ozark witch-hazel helps to feed pollinators and add color to the landscape when little else is blooming. Bottom right: Common witch-hazel also produces pollinator-attracting flowers during the colder months, after its foliage turns yellow and drops in fall.

Chenault coralberry (*Symphoricarpos xchenaultii*, Zones 4–7, 7–1) called 'Hancock'. It produces small, pinkish flowers in June and July that are usually covered with insects. We have a large grouping of it at the National Museum of Natural History to help retain a steep slope. These suckering shrubs only reach about two feet in height but can spread up to 12 feet, so we often need to trim them back. However, they constantly attract so many pollinators that our gardeners refrain from working with these plants during bloom time. Ornamental, rosy

pink berries follow, often persisting well into winter. Chenault coralberry is a hybrid of two North American native plants: pink snowberry (*Symphoricarpos microphyllus*, Zones 8–10, 10–8) and coralberry (*S. orbiculatus*, Zones 2–7, 7–1). Each of these parents has plenty of landscape and pollinator value in its own right.

EXTENDING THE SEASONS

Summersweet (*Clethra alnifolia*, Zones 3–9, 9–1) is one of the few blooming shrubs you can find in late summer shade in our Polli-

nator Garden. Its wands of fragrant, white blooms attract a variety of pollinators—including butterflies, bees, and hummingbirds—that have evolved to take advantage of its narrow, tubular inflorescences. It ranges in size from two to eight feet tall.

Witch-hazel species bookend the pollination season in our gardens. Common witch-hazel (*Hamamelis virginiana*, Zones 3–8, 8–1) is one of the last plants to bloom each year, between October and December. The straplike yellow petals and strong fragrance of the witch-hazel

flowers draw pollinators like owlet moths and late-season bees scavenging for food. It can grow up to 20 feet tall. At the start of the year, Ozark witch-hazel (*H. vernalis*, Zones 4–8, 8–4) is one of the first to greet pollinators with its yellowish-red blooms as early as January, on into March. It tops out around 10 feet tall. Both of these shrubs also have yellow fall foliage.

OTHER CONSIDERATIONS FOR POLLINATORS

Flowers are not the only consideration when creating a garden for pollinators. Gardeners also should think about the needs of polli-

nators throughout their entire life cycle. For example, some pollinators migrate at the end of the season while others hunker down to wait out the winter. At the Pollinator Garden, we only cut back plants and remove dead foliage in spring (if at all) in consideration of overwintering wildlife.

Many of our native bee species, such as mason bees and sweat bees, overwinter as adults. Due to their size, they are able to seek shelter in hollow stems and canes from existing shrubs. These structures provide protection from the harsh winter weather and from potential predators. Other pollinators, such as some beetle species, can also overwinter as adults hiding out in leaf litter and decaying plant material. So leaving some cut stems and fallen leaves on the ground until spring can provide vital winter habitat for these pollinators.

And don't forget about caterpillars. Most of us learned very early on from reading *The Very Hungry Caterpillar* by Eric Carle that we will not have a beautiful butterfly without a hungry caterpillar. Caterpillars can be picky eaters, so in the Pollinator Garden we include a variety of host plants. This means accepting some leaf damage. We also recommend that when shopping for shrubs, make sure they have not been treated with systemic insecticides.

The plants in the Pollinator Garden are in generally good health, in part because of the diversity of species we include. In all the Smithsonian Gardens, we practice integrated pest management and prefer to use me-



After putting on a colorful autumn show, fallen leaves in this mixed bed near the Smithsonian's National Museum of Natural History will be left on the ground for overwintering pollinators.

Sources

- Mail-Order Natives**, Lee, FL. www.mailordernatives.com.
- Naturally Native Nursery**, South Bend, IN. www.naturallynative.net.
- Prairie Moon Nursery**, Winona, MN. www.prairiemoon.com.
- Sooner Plant Farm**, Park Hill, OK. www.soonerplantfarm.com.

Resources

- National Wildlife Federation Native Plant Finder**, www.nwf.org/NativePlantFinder.
- Xerces Society Pollinator Conservation Resource Center**, www.xerces.org/pollinator-resource-center.

chanical, cultural, and biological controls first. In the rare case that we may need to apply an insecticide, we only use ones that do not affect beneficial insects and pollinators.

In the end, pollination is all about survival and sex. The animal and the plant both need something from the other. The pollinator is often drawn to a plant with an offer of food. In turn, the plant relies on the pollinator to move its pollen to the stigma of another flower. Plants have evolved with particular traits, and pollinators select blooms for their preference for color, odor, nectar, nectar guides, pollen, and flower shape. These traits, combined with bloom period and location, make for a variable matrix of pollinator and plant interactions. This is why it is important to grow a large selection of plants—including shrubs—for various pollinators to support their needs.

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