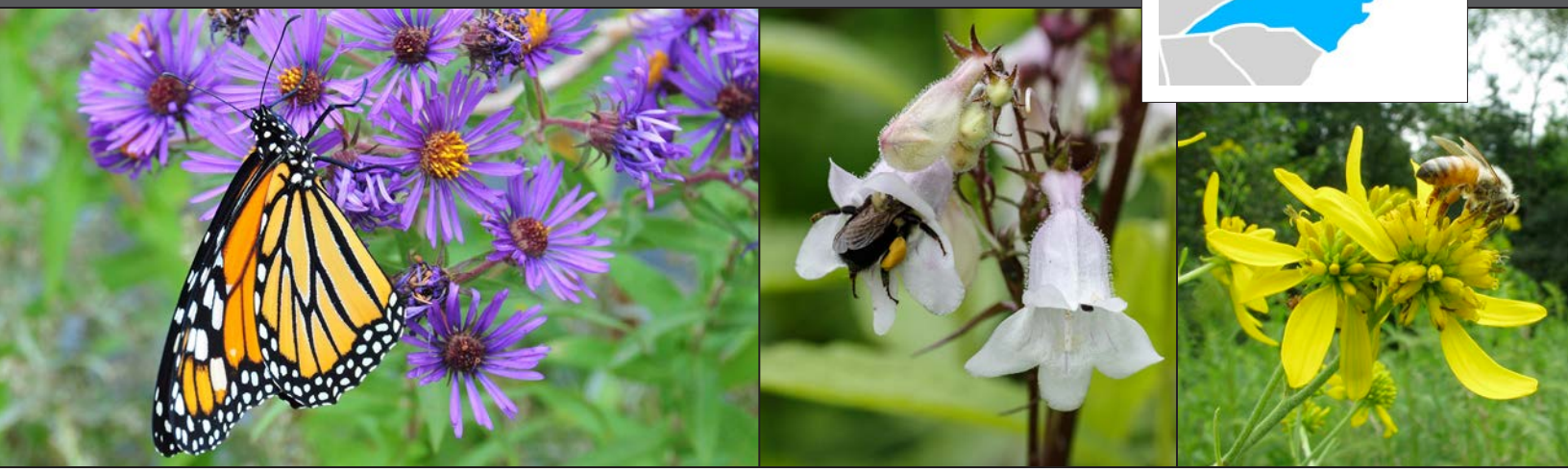
POLLINATOR PLANTS

Mid-Atlantic Region



New England aster, smooth penstemon, and wingstem.

The Mid-Atlantic Region encompasses North Carolina, Virginia, West Virginia, Maryland, Delaware, New Jersey, Pennsylvania, and Washington, D.C. High regional variation in topography, soils, and climate has resulted in tremendous ecological diversity, ranging from the salt marshes and wetlands of the eastern Coastal Plain, to the spectacularly species-rich deciduous forests and riparian communities of the Piedmont foothills and Appalachian Mountains.

Corresponding to this striking diversity of plant communities is an equally remarkable range of pollinators, including nineteen bumble bee species and thousands of other species of native bees, butterflies, hover flies, flower-visiting beetles, wasps, and moths. As a group, these and other pollinators maintain healthy, productive plant communities, provide food that sustains wildlife, and play an essential role in crop production. In the Mid-Atlantic, several important pollinators, including the rusty-patched bumble bee (*Bombus affinis*), the yellowbanded bumble bee (*B. terricola*), and the bronze copper butterfly (*Lycaena hyllus*), are threatened by habitat loss, including dramatic declines in native plant communities needed to support these animals.

Providing wildflower-rich habitat is the most significant action you can take to support pollinators. Adult bees, butterflies, and other pollinators require nectar as their primary food source. Female bees also collect pollen as food for their offspring. Native plants, which are adapted to local soils and climates, are usually the best sources of nectar and pollen for native pollinators. Incorporating native wildflowers, shrubs, and trees into any landscape promotes local biological diversity by providing shelter and food for wildlife. Native plants are better adapted to regional climate cycles, do not need fertilizers, and are less likely to become weedy.

This guide features regional native plants that are highly attractive to pollinators and are well-suited for small-scale plantings in gardens, on business and school campuses, in urban greenspaces, and in farm field borders. In addition to supporting native bees and honey bees, many of these plants attract nectar-seeking butterflies, moths, and hummingbirds, and some are host plants for butterfly and moth caterpillars. With few exceptions, these species occur broadly across the region and can be purchased as seed or transplants. Please consult regional Floras, the Biota of North America's North American Plant Atlas (http://bonap.net/napa), or the USDA's PLANTS database (http://plants.usda.gov) for details on species's distributions in your area.

BRING BACK THE POLLINATORS
A Xerces Society Conservation Campaign

Our Bring Back the Pollinators campaign is based on four principles: grow pollinator-friendly flowers, protect bee nests and butterfly host plants, avoid pesticides, and spread the word. You can participate by taking the Pollinator Protection Pledge and registering your habitat on our nationwide map of pollinator corridors.

www.bringbackthepollinators.org

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FOR INVERTEBRATE CONSERVATION

Protecting the life that sustains us

		Common Name	Scientific Name	Flower Color	Max. Height	Water Needs	Notes
		Forbs			(Feet)	L: low; M: medium; H: high	All species are perennials, unless otherwise noted. Max. Height is an average, individual plants may vary.
Early	1	Lanceleaf coreopsis	*Coreopsis lanceolata*	yellow	2	M	This early bloomer can hold its own among grasses and taller species; bees and syrphid flies are common visitors
	2	Smooth penstemon	*Penstemon digitalis*	white	2	M	Semi-evergreen; prolific nectar producer; visited by many butterflies, moths, and bees, including honey bees
Early–Mid	3	Wild indigo	*Baptisia tinctoria*	yellow	3	L	Fixes nitrogen that can be used by other plants; attracts a wide diversity of pollinators, including the beautiful Io moth (*Automeris io*)
	4	Butterfly milkweed	*Asclepias tuberosa*	orange	3	L	Host plant for monarchs and a nectar source for many bees; swamp and common milkweed are also recommended
	5	Great blue lobelia	*Lobelia siphilitica*	blue	3	H	An exceptional bumble bee plant; excellent for rain gardens; tolerates heavy shade
Mid	6	Joe Pye weed	*Eutrochium fistulosum*	pink	7	H	Both *E. maculatum* and *E. fistulosum* (pictured above) attract butterflies and bees, prefer moist soils, and tolerate partial shade
	7	Mountain mint	*Pycnanthemum* spp.	white	3	M	Mountain mints have fragrant foliage, and are visited by blue and copper butterflies, bees, and more
	8	Purple coneflower	*Echinacea purpurea*	purple	4	M	Visitors include bees in the genera *Bombus*, *Melissodes*, and *Svastra*, and the leafcutter bee (*Megachile pugnata*)
	9	Wild bergamot	*Monarda fistulosa*	purple	4	M	Hawk moths, hummingbirds, and long-tongued bumble bees (such as *Bombus pensylvanicus*) are common visitors
Mid–Late	10	Field thistle	*Cirsium discolor*	purple	6	M	Not to be confused with non-native thistles; a now uncommon but important plant for butterflies and bumble bees
	11	Marsh blazing star	*Liatris spicata*	purple	4	M	Blazing stars support a broad community of butterflies; including monarchs, swallowtails, skippers, and sulfurs
	12	Wingstem	*Verbesina alternifolia*	yellow	6	H	A major honey producer and great as a shade-tolerant rain garden or wetland edge plant; may be hard to find in nurseries
Late	13	Bottle gentian	*Gentiana andrewsii*	blue	2	M	Pollinated almost exclusively by bumble bees, which pry open the closed flowers and climb inside to collect pollen
	14	New England aster	*Symphyotrichum novae-angliae*	purple	6	M	One of the latest fall-blooming plants; frequented by honey bees and pre-hibernation bumble bee queens
	15	New York ironweed	*Vernonia noveboracensis*	purple	7	H	Tall, upright plant, great for back borders; attracts many butterflies and bees, including some specialist long-horned bees
	16	Seaside goldenrod	*Solidago sempervirens*	yellow	6	L	Highly attractive to bumble bees, monarchs, and other butterflies, especially when planted in large clumps; tolerates high salinity
	17	Sneezeweed	*Helenium autumnale*	yellow	2	H	Striking flowers with domed centers and distinctive tri-lobed rays; attracts leafcutter bees, bumble bees, and honey bees
	18	Wrinkleleaf goldenrod	*Solidago rugosa*	yellow	4	M	Goldenrods are frequented by beneficial solitary wasps, pollen-eating soldier beetles, hover flies, and much more
		Shrubs and Trees					
Early	19	Cockspur hawthorn	*Crataegus crus-galli*	white	20	L	Tough native tree that attracts bumble bees, honey bees, and mining bees (*Andrena* spp.), as well as songbirds
	20	Eastern redbud	*Cercis canadensis*	pink	30	M	Showy flowers create a dramatic display in spring; pollinated primarily by long-tongued bees
	21	Highbush blueberry	*Vaccinium corymbosum*	white/ pink	12	M–H	Well-loved by humans, and also provides food for mining bees, mason bees, and long-tongued bumble bees
	22	Pussy willow	*Salix discolor*	yellow/ green	15	M–H	Silky gray catkins open into flowers that provide spring forage for bees; also a host plant for mourning cloak butterflies
Early–Mid	23	Basswood	*Tilia americana*	cream	60	M	Also called "bee tree" for its abundance of very fragrant, nectar-rich flowers that are extremely attractive to bees
Mid	24	New Jersey tea	*Ceanothus americanus*	white	4	M	Pollinator magnet that attracts many species of flies, wasps, bees, and butterflies; slow growing and prone to deer browsing

Planting for Success

Sun Exposure

Most pollinator-friendly plants prefer sites that receive full sun throughout most of the day and are mostly open, with few large trees. A southern exposure can provide the warmest habitat, but is not required.

Plant Diversity

Choosing a variety of plants with overlapping and sequential bloom periods will provide food for pollinators throughout the seasons.

Habitat Size and Shape

Habitat patches that are bigger and closer to other patches are generally better than those that are smaller and more isolated from one another. However, even a small container garden can attract and support pollinators!

Planting Layout

Flowers clustered into clumps of one species will attract more pollinators than individual plants scattered through a habitat patch. Where space allows, plant clumps of the same species within a few feet of one another.

Seeds or Transplants

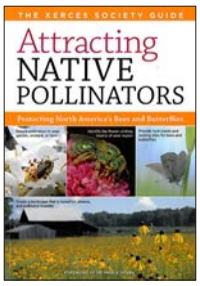
It is usually cheaper to establish large habitat areas from seed; however, seeding native wildflowers on a large-scale is an art unto itself. For step-by-step instructions, see *Establishing Pollinator Meadows from Seed* and the Pollinator Habitat Installation Guides listed in the Additional Resources section. For smaller areas like gardens, transplants are usually easier to use and will bloom faster than plants started from seed.

Protect Pollinators from Insecticides

Although dependent on timing, rate, and method of application, all insecticides have the potential to poison or kill pollinators. Systemic insecticides in particular have received significant attention for their potential role in pollinator declines (imidacloprid, dinotefuran, clothianidin, and thiamethoxam are examples of systemic insecticides now found in various farm and garden products). Because plants absorb systemic insecticides as they grow, the chemicals become distributed throughout plant tissues and are sometimes present in pollen and nectar. You can help protect pollinators by avoiding the use of these and other insecticides. Before purchasing plants from nurseries and garden centers, be sure to ask whether they have been treated with insecticides. To read more about threats to pollinators from pesticides, please visit: www.xerces.org/pesticides.

Additional Resources

Attracting Native Pollinators



Our best-selling book highlights the role of native pollinators in natural ecosystems, gardens, and farms. This comprehensive guide includes information about pollinator ecology, detailed profiles of over 30 common bee genera, and habitat designs for multiple landscapes with over 50 pages of fully illustrated regional plant lists. Available in bookstores everywhere, and through www.xerces.org/books.

The Xerces Pollinator Conservation Resource Center

Our Pollinator Conservation Resource Center includes regional information on pollinator plants, habitat conservation guides, nest management instructions, bee identification and monitoring resources, and directories of native pollinator plant nurseries.
www.xerces.org/pollinator-resource-center

Lady Bird Johnson Wildflower Center

The Xerces Society has collaborated with the Lady Bird Johnson Wildflower Center to create lists of plants that are attractive to native bees, bumble bees, honey bees, and other beneficial insects, as well as plant lists with value as nesting materials for native bees. These lists can be narrowed down with additional criteria such as state, soil moisture, bloom time, and sunlight requirements. The Center's website also features image galleries, how-to articles on native plant gardening, and more.
www.wildflower.org/conservation_pollinators/

Establishing Pollinator Meadows from Seed

These guidelines provide step-by-step instructions for establishing pollinator meadows from seed in areas that range in size from a small backyard garden up to an acre. Topics include: site selection, site preparation, plant selection, planting techniques, and ongoing management.
www.xerces.org/establishing-pollinator-meadows-from-seed

Pollinator Habitat Installation Guides

These regional guidelines, developed in collaboration with the USDA's Natural Resources Conservation Service, provide in-depth practical guidance on how to install nectar and pollen habitat for bees in the form of wildflower meadow plantings or linear rows of native flowering shrubs. Region-specific seed mixes and plant recommendations are included in the appendices of each guide.
www.xerces.org/pollinator-conservation/agriculture/pollinator-habitat-installation-guides

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