



United States Department of Agriculture



Important Plants of the Monarch Butterfly Greater Appalachian Mountains Region Staff Guide



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Preface

The *Monarch Butterfly Wildlife Habitat Evaluation Guide (WHEG) and Decision Support Tool: Greater Appalachian Mountains Region* is used by NRCS staffs as a planning tool to evaluate current habitat conditions at the assessment area scale, not at the farm or ranch scale. Following the assessment, a rating (poor, medium, good or excellent) is assigned to each assessment area within the farm or ranch.

These ratings (*benchmark monarch habitat conditions rating*) are used to recommend monarch habitat improvement alternatives for each assessment area, and to predict improvement of habitat following implementation of alternatives (*planned monarch habitat conditions rating*). The WHEG can also be applied to areas after conservation practice installation to determine improvement in habitat condition (*applied monarch habitat condition rating*).

An essential function of the Monarch WHEG is inventorying the current plant community. The proper identification of key monarch plant species is required when inventorying vegetation within the assessment area (belt transect). Another use of the WHEG transect protocol could be to determine planting success. To support the WHEG and assist in the development of planning, NRCS has developed this appendix to the WHEG. This appendix contains three different technical support documents to assist NRCS staff and partners working in the Greater Appalachian Mountains Region (Figure 1) in making informed decisions. These documents are:

Monarch Planting List: Provides key plant species for establishing a quality monarch habitat planting mix.

Monarch WHEG Inventory List: Provides the plant species that will be identified and measured (percent cover) during the habitat evaluation (vegetative sampling effort within the belt transect).

Plant Identification Guide: Provides a plant identification sheet for each species from the planting and WHEG lists.

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Introduction

A proper understanding of the breeding and feeding behaviors of larval and adult monarch butterflies (*Danaus plexippus*) is essential to conducting an evaluation of the quality of monarch butterfly habitat. The data obtained from the application of the assessment portion (WHEG) of the *Monarch Butterfly Wildlife Habitat Evaluation Guide and Decision Support Tool*: Greater Appalachian Mountains Region (Fig. 1) is used to identify habitat deficiencies. Those identified habitat deficiencies provide targets for habitat improvements (Fig. 2). The information offered in this appendix to the monarch WHEG will assist the conservation planner in plant identification and the selection of species to consider in a monarch butterfly habitat planting mix. This information is critical to implementation of steps 3-6 of the NRCS Conservation Planning process (USDA, NRCS 2014).

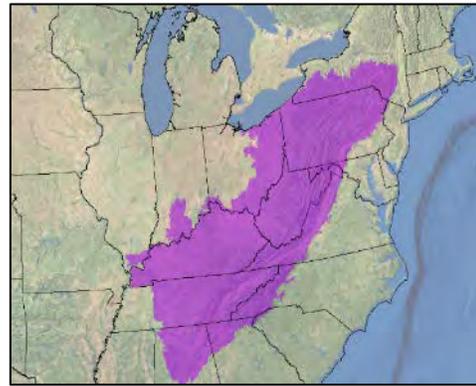


Fig. 1. Great Appalachian Mountains Monarch Region.

- Step 3: Inventory Resources
- Step 4: Analyze Resource Data
- Step 5: Formulate Alternatives
- Step 6: Evaluate Alternatives

Host Plant Selection and Monarch Survival: Gravid monarch females are selective, preferring younger and more nutrient rich plants to lay their 300 - 400+ eggs over a 2-5 week period (Fischer et al. 2015). Seldom does a single female lay more than 1-2 eggs on a single plant. Additionally, gravid females appear to prefer plants without existing eggs or larva, and plants with few aphids (Agrawal 2017 and Borkin 1982). There appears to be preferences towards some species over others. For example, gravid females do not utilize butterfly milkweed (*Asclepias tuberosa*) as often as common milkweed (*Asclepias syriaca*). Conversely, the non-native species, tropical milkweed (*Asclepias curassavica*) is highly preferred by gravid females for egg laying¹. Most monarch butterfly scientists and monarch conservation groups have raised disease concerns associated with tropical milkweed. These concerns primarily target lands adjacent to the Gulf of Mexico where tropical milkweed does not dieback in the winter. Regardless, NRCS does not support the use of non-native milkweeds for monarch habitat plantings.

Gravid female behavior of selecting plants without other monarch eggs or larva and limiting oviposition (egg laying) to 1-2 eggs per plant, assures enough plant biomass for each offspring to complete the larval stage². Some suggest that observation of multiple eggs and larva on a single plant is an ecological indicator that the site (and adjacent habitats) is

¹ Some suggest that this preference is related to the high levels of cardenolides (toxins) found in tropical milkweed.

² The behavior of typically limiting egg laying to 1-2 eggs per plant may also serve to minimize predation, disease, and inadvertent cannibalism (monarch larva will consume their eggshell and other eggs if nearby).

deficient in adequate milkweeds³. Predation of eggs and larva, primarily by predatory insects, is significant. Survival rate to the 5th instar has been documented to be as high as 10% (Borkin 1982; Prysby and Oberhauser 2004), but is more commonly less than 5%. Survival is also compromised by parasites, and tachinid flies (*Lespesia archippivora*) in particular (Mueller and Baum 2014; Oberhauser et al. 2006). Although widely variable, percent of milkweed plants utilized by gravid females in monarch habitat is typically from 5 - 25% of available plants (Kasten et al. 2016). It is estimated that approximately 30 milkweed plants are needed to produce an adult participating in the fall migration to Mexico (Nail et al. 2015).

Most studies agree that the loss of breeding habitat (milkweed) in the corn-belt region of the U.S. has affected the eastern monarch population (Pleasants and Oberhauser 2013). Questions remain regarding the significance of other population stressors. There is growing evidence suggesting that in addition to loss of breeding habitat in the Midwest, losses of nectaring habitat throughout the eastern U.S. needed to support the fall migration, and the loss of wintering habitat in Mexico may be significant limiting factors (Agrawal 2017; Inamine et al. 2016).

Monarch Larval Feeding Behavior: Immature, free-living instars (larvae or caterpillars) of the monarch butterfly are obligate specialists on the leaves of milkweeds, primarily within the genus *Asclepias*, but also on milkweed vines in the genera of *Cynanchum*, *Funastrum*, and *Matelea*. The larval stage includes 5 instars (molts) and requires from 8-15 days to complete. It is through the consumption of milkweed foliage as larvae that monarch butterflies gain the toxic cardenolides, which deter predation (Roeske et al. 1976) by birds and mammals⁴. However, too much cardenolide consumption affects growth and survival of larvae. For this reason, gravid females tend to select individual plants with a moderate level of cardenolides (Zalucki et al. 1990)⁵. First instars consume their egg casing, then begin to feed on the surface of the leaf or flower. This feeding activity by the 1st instars is evidenced by shallow feeding grooves, often in small circular patterns. As the larva grows (facilitated by molting) the grooves become deeper, until the larva creates a hole in the leaf that is often arc-shaped but may be circular or oval. Older larvae (3rd- 5th instars) feed by consuming the entire leaf, often the newer (upper most) leaves, presumed of higher forage quality. Additionally, floral parts are commonly consumed. The latex (white sap) in the milkweed plants can be deadly to



Fig. 2. Promoting and maintaining native monarch butterfly habitat in the Greater Appalachian Mountains Region requires disturbance activities to promote a rich forb component, and to control woody plants. Photo of gayfeather (*Liatris* spp.) in Lewis County, KY.

³ On occasion, “egg dumping” from females under extreme stress does occur, resulting in plants/leaves with several (10+) eggs. Thus, egg dumping is not always an indication of inadequate milkweed availability.

⁴ These cardenolides do not affect most predatory invertebrates. Monarch larvae experience very large losses to predation from other arthropods (e.g. insects, spiders, centipedes).

⁵ Cardenolide levels can vary significantly, among individual plants within the same species.

monarch larvae. Larvae often sever leaf veins, slowing or inhibiting the supply of latex. It is proposed that this feeding behavior reduces the supply of latex to the leaf; thereby improving foraging efficiencies and increasing survival (Zalucki et al. 2001). In addition to leaf damage, the accumulation of frass (excrement) on lower leaves and the ground provides evidence of a feeding monarch larva.

Adult Monarch Feeding Behavior: Adult monarchs rely on high-quality floral nectar to meet their energy requirements. Monarchs feed by rolling out their proboscis (long flexible straw) to extract nectar from the flower (Krenn 2010)⁶. Thus, a feeding monarch perches on a flower and then moves their proboscis around, finding nectar from different locations. For this reason, monarchs prefer sturdy plants that have relatively flat surfaces (sunflowers, asters) or long multi-flowering inflorescences (gayfeather), where the nectar is easily accessed. In reviewing the two plant lists provided in this document, the user will find many species in the Asteraceae family (sunflower family). Common characteristics of this family include clusters of flowers with shallow, easily accessed nectar. Milkweeds, which also have easily accessed nectar, are excellent nectar sources. Despite their somewhat long proboscises, monarchs rarely visit deep tubular flowers such as honeysuckles (*Lonicera* spp.).

Migration: Tagging data and observations documented in Journey North provide information about fall migration, but little about spring and summer movements. Isotope technology provides additional understanding of monarch natal origins and migration patterns. Stable isotopes in the bodies of adults identify (predict) the milkweed species (and even local ecotypes) that an adult monarch fed upon as a larva. As new isotopes data is collected, monarch scientists are gaining an improved understanding of movement patterns in North America. It was once suspected most all monarch adults in the northeastern U.S. moved along the Gulf, then northward to Maine. Recent isotope data suggests that most of the 2nd generation adults in the Northeast came from the Midwest by crossing the Appalachian Mountains (Miller et al. 2017). Using isotope and tagging data, Flockhart et al. (2013) suggested most of the 2nd generation adults that originated from the Midwest moved horizontally to populate the northern and eastern regions of the eastern U.S. This isotope work, coupled with other data (Miller et al. 2012), suggests a two-generational distribution pattern for the northern migration, rather than multi-generational (where each successive generation moves further north). The 1st generation adults migrate from the southern U.S. primarily, but far from exclusively, to the Midwest and Great Lakes region. The 2nd generation then spreads out across the U.S. and southern Canada, with many of the 3rd and 4th generation adults remaining in proximity to their natal origin. This approach results in rapid access to the cooler summer milkweed regions of the U.S., then provides for 2 generations to increase the overall population (migration is a very high mortality event), maximizing numbers in preparation for the long and often fatal migration to the wintering grounds (Agrawal 2017).

Regardless of the northern migration patterns, monarchs emerging as adults in late summer migrate south to Mexico to repeat the cycle. Non-migrating adults live from 2-5 weeks, whereas migrating adults live through the fall and winter for 6-9 months. Most theorize they accomplish long distance travel by catching air currents and riding thermals using the soaring/gliding approach common to many other long distance migrants (Gibo and Pallet 1979). Brower et al. (2006) suggest that monarchs do not prepare for this long migration by storing energy (lipids) immediately, as these lipids would increase body mass and reduce flight efficiency. Rather, they consume nectar periodically during migration. As they near the overwintering locations in Mexico, they increase lipid consumption to build the energy

⁶ Monarch butterflies are ineffective pollinators of milkweed (Agrawal 2017), and only incidental pollinators of other species.

reserves essential for the winter dormant period (November-March)⁷. Agrawal (2017) and Inamine et al. (2016) suggest that the availability of fall nectar resources, particularly in Texas and northern Mexico, may be an important variable in the success of the monarch wintering population in Mexico.

Milkweeds of the Greater Appalachian Mountains Region: There are many milkweed species native to this region of the U.S., but the distribution and abundance of common milkweed (*A. syriaca*) overshadows other species. In herbaceous wetlands, swamp milkweed (*A. incarnata*) is locally important. Species adapted to non-hydric soils are butterfly milkweed (*A. tuberosa*), green comet milkweed (*A. viridiflora*), purple milkweed (*A. purpurascens*) and whorled milkweed (*A. verticillata*).

Some species of milkweed are rhizomatous (e.g. *A. syriaca* and *A. verticillata*), while others are tap-rooted (e.g. *A. tuberosa* and *A. viridiflora*). There are obvious advantages to the establishment of rhizomatous species in conservation plantings, and for those reasons, these species should be considered in all monarch butterfly planting mixes.

Trees and Shrubs: Narrow bands of woody vegetation and edges of forested areas, can provide important fall resting sites (microclimates) for migrating monarchs. Some flowering trees, shrubs, and vines also provide nectaring habitat. Some shrubs occurring in open wetlands (e.g. shrub wetlands) can provide valuable habitat. For example, button bush (*Cephalanthus occidentalis*) is commonly used by monarchs. However, the planting lists provided in this document are limited to herbaceous species.

Plant Lists and Plant Identification Guide

To assist with the application of the NRCS *Monarch Butterfly WHEG Wildlife Habitat Evaluation Guide and Planning Tool: Greater Appalachian Mountains Edition*, this document provides two plant species lists, and a plant identification guide for use by conservation planners.

Monarch Planting List: The *Monarch Planting List* provides planting recommendations for improvement of monarch habitat with the use of an array of national conservation practices (e.g. Conservation Cover (327) and Field Borders (386)). Lists of larval host plants and nectar plants suitable for monarch butterfly habitat plantings are provided in the NRCS Field Office Technical Guide (FOTG). The following national minimum planting criteria shall be followed for all monarch butterfly habitat plantings. Nationally approved variances to these requirements may be provided by the FOTG.

- To provide food for monarch butterfly larvae, plantings shall include at least one species of milkweed (*Asclepias* spp.) from the FOTG monarch butterfly planting list. All milkweed species used in the mix must be from this list and shall represent at least 1.5% of the total seeds in the mix. The total seeds include pure live seed from both grass and forbs.
- A grass component in a monarch habitat planting is commonly needed for ecological stability, weed control, and fuel for prescribed burning. The FOTG provides information on the grass/forb ratio for monarch habitat plantings.
- To provide food for adults, at least 60% of the forb seeds (pure live seed) in the mix shall be from the monarch butterfly planting list (FOTG). Milkweed seeds are included in meeting the 60% minimum because milkweeds are excellent nectar plants. The

⁷ Monarchs do not feed at the wintering grounds, but do move to access water during warmer days. Thus, the stored lipids are critical to winter survival.

FOTG provides information on the required number of forb species per bloom period (early, mid, or late season) for monarch habitat plantings. Bloom period consideration shall coincide with monarch presence in the area.

Monarch WHEG Inventory List: The *Monarch WHEG Inventory List* is for use by conservation planners in the application of the herbaceous vegetation sampling portion of the *Monarch Butterfly Wildlife Habitat Evaluation Guide: Greater Appalachian Mountains Edition*. This process requires identifying and inventorying vegetation in assessment areas that support an herbaceous plant community with a forb component. Some species on this list are grouped to facilitate a more rapid assessment. For example, there are many species of blazing star, also commonly referred to as gayfeather. These are all in the genus *Liatris*. Identification of *Liatris* to species adds little value to the habitat assessment process. As such, they are combined into the *Liatris* spp. group.

Plant Identification Guide: The *Monarch Habitat Plant Identification Guide* contains plant identification sheets of species provided in the WHEG and planting lists for the Greater Appalachian Mountains Region. The guides are organized alphabetically by common name used by the USDA-NRCS PLANTS Database (USDA, NRCS 2007). Plant species which were reported to be of superlative use to the monarch were rated as “Very High” value, as were plants mentioned in multiple sources as providing nectar to monarchs. Other plant species, which were also cited as attractive to monarchs, but with less frequency, were given the rating of “High” value.

Acknowledgements

The species in these plant lists were developed from a review of the literature, in combination with monarch adult nectaring observations data compiled by the Xerces Society for Invertebrate Conservation (Xerces). Biologists from Xerces, USDA-NRCS, U.S. Fish and Wildlife Service, state resource management agencies, universities and conservations organizations contributed their observations.

Monarch Planting List

This list includes plants for all of Kentucky and West Virginia, western Pennsylvania and Maryland and southwestern New York.

Species name	Plant symbol	Common name	Growth habit	Monarch Value	Bloom Period			States					
					Early	Mid	Late	KY	MD	NY	PA	WV	
<i>Apocynum cannabinum</i>	APCA	Indian hemp	forb/her b	high		x	x						
<i>Asclepias incarnata</i>	ASIN	swamp milkweed	forb/her b	very high		x	x						
<i>Asclepias syriaca</i>	ASSY	common milkweed	forb/her b	very high		x							
<i>Asclepias tuberosa</i>	ASTU	butterfly milkweed	forb/her b	very high		x	x						
<i>Asclepias verticillata</i>	ASVE	whorled milkweed	forb/her b	very high		x							
<i>Bidens aristosa</i>	BIAR	showy tickseed	forb/her b	high		x							
<i>Cirsium altissimum</i>	CIAL2	tall thistle	forb/her b	very high		x	x						
<i>Cirsium discolor</i>	CIDI	field thistle	forb/her b	very high			x						
<i>Conoclinium coelestinum</i>	COCO13	blue mistflower	forb/her b	very high		x	x						
<i>Coreopsis lanceolata</i>	COLA5	lanceleaf coreopsis	forb/her b	high		x							
<i>Doellingeria umbellata</i>	DOUM2	parasol whitetop	forb/her b	high			x						
<i>Echinacea purpurea</i>	ECPU	purple coneflower	forb/her b	high	x	x	x						
<i>Eryngium yuccifolium</i>	ERYU	rattlesnake master	forb/her b	high		x	x						
<i>Eupatorium perfoliatum</i>	EUPE3	common boneset	forb/her b	high		x	x						
<i>Euthamia graminifolia</i>	EUGR5	flat-top goldentop	forb/her b	high	x	x	x						
<i>Eutrochium fistulosum</i>	EUF114	Joe pye weed	forb/her b	high		x	x						
<i>Eutrochium maculatum</i>	EUMA9	spotted Joe pyeweed	forb/her b	high			x						
<i>Helenium autumnale</i>	HEAU	common sneezeweed	forb/her b	high		x	x						
<i>Helenium flexuosum</i>	HEFL	purple sneeze weed	forb/her b	high		x							
<i>Helianthus divaricatus</i>	HEDI2	woodland sunflower	forb/her b	high		x	x						
<i>Helianthus giganteus</i>	HEGI	giant sunflower	forb/her b	high		x	x						
<i>Helioopsis helianthoides</i>	HEHE5	smooth oxeye	forb/her b	high	x	x							
<i>Liatris aspera</i>	LIAS	tall blazing star	forb/her b	high			x						
<i>Liatris spicata</i>	LISP	dense blazing star	forb/her b	high		x	x						
<i>Monarda fistulosa</i>	MOFI	wild bergamot	forb/her b	high	x	x	x						
<i>Oligoneuron rigidum</i>	OLRI	stiff goldenrod	forb/her b	very high		x	x						
<i>Polygonum pennsylvanicum</i>	POPE24	Pennsylvania smartweed	forb/her b	high	x	x	x						
<i>Pycnanthemum incanum</i>	PYIN	hoary mountainmint	forb/her b	high		x	x						
<i>Pycnanthemum muticum</i>	PYMU	clustered mountainmint	forb/her b	very high		x	x						
<i>Pycnanthemum tenuifolium</i>	PYTE	narrow-leaf mountain-mint	forb/her b	high		x	x						

Species name	Plant symbol	Common name	Growth habit	Monarch Value	Bloom Period			States				
					Early	Mid	Late	KY	MD	NY	PA	WV
<i>Rudbeckia fulgida</i>	RUFU2	orange coneflower	forb/herb	high		x	x					
<i>Rudbeckia hirta</i>	RUHI2	black-eyed Susan	forb/herb	high		x	x					
<i>Silphium trifoliatum</i>	SITR7	whorled rosinweed	forb/herb	high		x	x					
<i>Solidago altissima</i>	SOAL6	tall goldenrod	forb/herb	high		x	x					
<i>Solidago caesia</i>	SOCA4	wreath goldenrod	forb/herb	high			x					
<i>Solidago canadensis</i>	SOCA6	Canada goldenrod	forb/herb	high			x					
<i>Solidago juncea</i>	SOJU	early goldenrod	forb/herb	high		x	x					
<i>Solidago nemoralis</i>	SONE	gray goldenrod	forb/herb	high			x					
<i>Solidago rugosa</i>	SORU2	wrinkleleaf goldenrod	forb/herb	high			x					
<i>Solidago speciosa</i>	SOSP2	showy goldenrod	forb/herb	high			x					
<i>Symphotrichum cordifolium</i>	SYCO4	common blue wood aster	forb/herb	high			x					
<i>Symphotrichum laeve</i>	SYLAL3	smooth blue aster	forb/herb	high			x					
<i>Symphotrichum lateriflorum</i>	SYLA4	calico aster	forb/herb	high		x	x					
<i>Symphotrichum novae-angliae</i>	SYNO2	New England aster	forb/herb	very high		x	x					
<i>Symphotrichum oblongifolium</i>	SYOB	aromatic aster	forb/herb	high			x					
<i>Symphotrichum pilosum</i>	SYPI2	hairy white oldfield aster	forb/herb	high		x	x					
<i>Symphotrichum praealtum</i>	SYPR5	willowleaf aster	forb/herb	high			x					
<i>Symphotrichum prenanthoides</i>	SYPR6	crooked stem aster	forb/herb	high		x	x					
<i>Symphotrichum puniceum</i>	SYPU	purplestem aster	forb/herb	high		x	x					
<i>Verbena hastata</i>	VEHAH	swamp verbena	forb/herb	high		x	x					
<i>Verbena stricta</i>	VEST	hoary verbena	forb/herb	high		x						
<i>Verbesina alternifolia</i>	VEAL	yellow wingstem	forb/herb	high		x	x					
<i>Verbesina virginica</i>	VEVI3	white wingstem	forb/herb	high		x	x					
<i>Vernonia gigantea</i>	VEGI	giant ironweed	forb/herb	high		x	x					
<i>Vernonia noveboracensis</i>	VENO	New York ironweed	forb/herb	high		x	x					
<i>Veronicastrum virginicum</i>	VEVI4	Culver's root	forb/herb	high	x							

USDA, NRCS. 2017. PLANTS Database (<http://plants.usda.gov>). National Plant Data Team, Greensboro, NC 27401-4901 USA.

Monarch WHEG Inventory List

					Bloom Period			States				
Species name	Plant symbol	Common name	Growth habit	Monarch Value	Early	Mid	Late	KY	MD	NY	PA	WV
<i>Apocynum cannabinum</i>	APCA	Indian hemp	forb/herb	high		x	x					
<i>Asclepias</i> spp.	ASCLE	swamp milkweed	forb/herb	very high		x	x					
<i>Bidens aristosa</i>	BIAR	showy tickseed	forb/herb	high		x						
<i>Cirsium</i> spp.	CIRSI	thistle	forb/herb	very high		x	x					
<i>Conoclinium coelestinum</i>	COCO13	blue mistflower	forb/herb	very high		x	x					
<i>Coreopsis lanceolata</i>	COLA5	lanceleaf coreopsis	forb/herb	high		x						
<i>Doellingeria umbellata</i>	DOUM2	parasol whitetop	forb/herb	high			x					
<i>Echinacea purpurea</i>	ECPU	purple coneflower	forb/herb	high	x	x	x					
<i>Eryngium yuccifolium</i>	ERYU	rattlesnake master	forb/herb	high		x	x					
<i>Eupatorium perfoliatum</i>	EUPE3	common boneset	forb/herb	high		x	x					
<i>Euthamia graminifolia</i>	EUGR5	flat-top goldentop	forb/herb	high	x	x	x					
<i>Eutrochium</i> spp.	EUTRO	Joe pye weed	forb/herb	high		x	x					
<i>Helenium</i> spp.	HELEN	sneezeweed	forb/herb	high		x	x					
<i>Helianthus</i> spp.	HELIA3	sunflower	forb/herb	high		x	x					
<i>Heliopsis helianthoides</i>	HEHE5	smooth oxeye	forb/herb	high	x	x						
<i>Liatris</i> spp.	LIATR	blazing star	forb/herb	high		x	x					
<i>Monarda</i> spp.	MONAR	bergamot	forb/herb	high	x	x	x					
<i>Oligoneuron rigidum</i>	OLRI	stiff goldenrod	forb/herb	very high		x	x					
<i>Polygonum pensylvanicum</i>	POPE24	Pennsylvania smartweed	forb/herb	high	x	x	x					
<i>Pycnanthemum</i> spp.	PYCNA	mountainmint	forb/herb	high		x	x					
<i>Rudbeckia</i> spp.	RUDBE	coneflower	forb/herb	high		x	x					
<i>Silphium trifoliatum</i>	SITR7	whorled rosinweed	forb/herb	high		x	x					

					Bloom Period			States				
Species name	Plant symbol	Common name	Growth habit	Monarch Value	Early	Mid	Late	KY	MD	NY	PA	WV
<i>Solidago</i> spp.	SOLID	goldenrod	forb/herb	high		x	x					
<i>Symphotrichum</i> spp.	SYMPH4	aster	forb/herb	high			x					
<i>Verbena</i> spp.	VERBE	swamp verbena	forb/herb	high		x	x					
<i>Verbesina</i> spp.	VERBE2	wingstem	forb/herb	high		x	x					
<i>Vernonia</i> spp.	VERNO	ironweed	forb/herb	high		x	x					
<i>Veronicastrum virginicum</i>	VEVI4	Culver's root	forb/herb	high	x							

USDA, NRCS. 2017. PLANTS Database (<http://plants.usda.gov>). National Plant Data Team, Greensboro, NC 27401-4901 USA.

Flower Color Chart

Common Name	Flower Color	Scientific Name	Flower Color
aromatic aster		<i>Apocynum cannabinum</i>	
black-eyed Susan		<i>Asclepias incarnata</i>	
blue mistflower		<i>Asclepias syriaca</i>	
butterfly milkweed		<i>Asclepias tuberosa</i>	
calico aster		<i>Asclepias verticillata</i>	
Canada goldenrod		<i>Bidens aristosa</i>	
clustered mountainmint		<i>Cirsium altissimum</i>	
common blue wood aster		<i>Cirsium discolor</i>	
common boneset		<i>Conoclinium coelestinum</i>	
common milkweed		<i>Coreopsis lanceolata</i>	
common sneezeweed		<i>Doellingeria umbellata</i>	
crooked stem aster		<i>Echinacea purpurea</i>	
Culver's root		<i>Eryngium yuccifolium</i>	
dense blazing star		<i>Eupatorium perfoliatum</i>	
early goldenrod		<i>Euthamia graminifolia</i>	
field thistle		<i>Eutrochium fistulosum</i>	
flat-top goldentop		<i>Eutrochium maculatum</i>	
giant ironweed		<i>Helenium autumnale</i>	
giant sunflower		<i>Helenium flexuosum</i>	
gray goldenrod		<i>Helianthus divaricatus</i>	
hairy white oldfield aster		<i>Helianthus giganteus</i>	
hoary mountainmint		<i>Heliopsis helianthoides</i>	
hoary verbena		<i>Liatris aspera</i>	
Indian hemp		<i>Liatris spicata</i>	
Joe pye weed		<i>Monarda fistulosa</i>	
lanceleaf coreopsis		<i>Oligoneuron rigidum</i>	
narrow-leaf mountain-mint		<i>Polygonum pensylvanicum</i>	
New England aster		<i>Pycnanthemum incanum</i>	
New York ironweed		<i>Pycnanthemum muticum</i>	
orange coneflower		<i>Pycnanthemum tenuifolium</i>	
parasol whitetop		<i>Rudbeckia fulgida</i>	
Pennsylvania smartweed		<i>Rudbeckia hirta</i>	
purple coneflower		<i>Silphium trifoliatum</i>	
purple sneeze weed		<i>Solidago altimissa</i>	
purplestem aster		<i>Solidago caesia</i>	
rattlesnake master		<i>Solidago canadensis</i>	
showy goldenrod		<i>Solidago juncea</i>	
showy tickseed		<i>Solidago nemoralis</i>	
smooth blue aster		<i>Solidago rugosa</i>	
smooth oxeye		<i>Solidago speciosa</i>	

Common Name	Flower Color	Scientific Name	Flower Color
spotted Joe pye weed		<i>Symphyotrichum cordifolium</i>	
stiff goldenrod		<i>Symphyotrichum laeve</i>	
swamp milkweed		<i>Symphyotrichum lateriflorum</i>	
swamp verbena		<i>Symphyotrichum novae-angliae</i>	
tall blazing star		<i>Symphyotrichum oblongifolium</i>	
tall goldenrod		<i>Symphyotrichum pilosum</i>	
tall thistle		<i>Symphyotrichum praealtum</i>	
white wingstem		<i>Symphyotrichum prenanthoides</i>	
whorled milkweed		<i>Symphyotrichum puniceum</i>	
whorled rosinweed		<i>Verbena hastata</i>	
wild bergamot		<i>Verbena stricta</i>	
willowleaf aster		<i>Verbesina alternifolia</i>	
woodland sunflower		<i>Verbesina virginica</i>	
wreath goldenrod		<i>Vernonia gigantea</i>	
wrinkleleaf goldenrod		<i>Vernonia noveboracensis</i>	
yellow wingstem		<i>Veronicastrum virginicum</i>	

Aromatic Aster (*Symphotrichum oblongifolium*)

Aster Family

Other Common Names: aromatic American aster, fall aster, wild blue aster, shale aster, oblong-leaved aster

Scientific Name: *Symphotrichum oblongifolium* (Nutt.) G.L. Nesom

Plant Symbol: SYOB

Distinguishing characteristics: Stems much branched above the midpoint, several stems developing from a woody horizontal rhizome; leaves basal as well as along the stem, the basal leaves usually absent when flowering, stem leaf shape is oblong to widest across the top, without a leaf stem, and they become progressively smaller moving up the stem; flowering heads numerous at the ends of branches, blue rays and yellow centers, about 1 inch across.

Plant Height: 1-2 ft.

Blooms/Fruits: September–November

Duration: Perennial, herbaceous

Pollinator Value: Visited by a wide diversity of native bees, flies and butterflies. Serves as a host plant for the silvery checkerspot butterfly. Particularly important in that it is one of the latest plants to bloom in fall, providing nectar and pollen at a time when few other native plants do.

Habitat: Calcareous soils, upland prairies, openings in upland forests, and roadsides.





Photo: Mike Haddock



Photo: Mike Haddock

Full flowering/close-up of flowers



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Close-up of leaf/foliage

Bearded Beggarticks (*Biden aristosa*)

Aster Family

Other Common Names: tickseed sunflower, awnless beggarticks

Scientific Name: *Biden aristosa* (Michx.) Britton

Plant Symbol: BIAR

Distinguishing characteristics: Leaves opposite on the stem, 1-2 times dissected with multiple segments on each leaf; flower heads with bright to golden yellow rays and with a black and yellow center; seeds lack the characteristic awns on top of most beggartick species, but may have two pointed “bumps” or may just be rounded on the top of the seed.

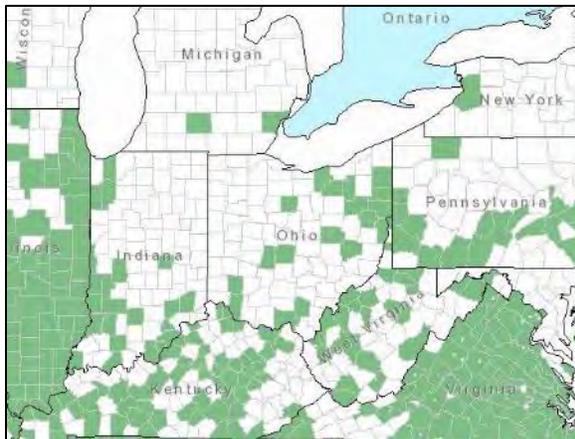
Plant Height: variable, 1-5 ft.

Blooms/Fruits: April-October

Duration: Annual or Biennial

Pollinator Value: Highly attractive to monarch butterflies and many other insects including diverse species of native bees.

Habitat: Low moist ground, wetlands, ditches, and low ground





Full flowering/close-up of flower



Stem and leaf



Seedling



Seed

Blackeyed Susan (*Rudbeckia hirta*)

Aster Family

Other Common Names: common black-eyed Susan, brown-eyed Susan, brown Betty, poor-land daisy, English bulls-eye

Scientific Name: *Rudbeckia hirta* L.

Plant Symbol: RUHI2

Distinguishing characteristics: Flower heads daisy-like in overall appearance, but with yellow to orange-yellow rays and a dark purple to brown conical center, the rays may have a deep maroon to purple base; leaves are variable - larger and with a leaf stem towards the base, smaller and without a leaf stem towards the middle and top of the plant, all leaves with short, stiff hairs and have a raspy feel.

Plant Height: 2-3 ft., erect

Blooms/Fruits: June–October

Duration: Annual, Biennial, to short lived Perennial, herbaceous (developing taproots)

Pollinator Value: The gorgone checkerspot and bordered patch butterflies use this plant as a larval food source. It may attract butterflies.

Habitat: Open dry woods, prairies, pastures, old fields, and roadsides.

Note: There are 4 botanical varieties within the US, all going by the common name blackeyed Susan. Only 2 of the varieties occur natively in the Midwest Region: *R. hirta* var. *hirta* and *R. hirta* var. *pulcherrima*. Blackeyed Susan is a commonly cultivated plant and cultivars available.

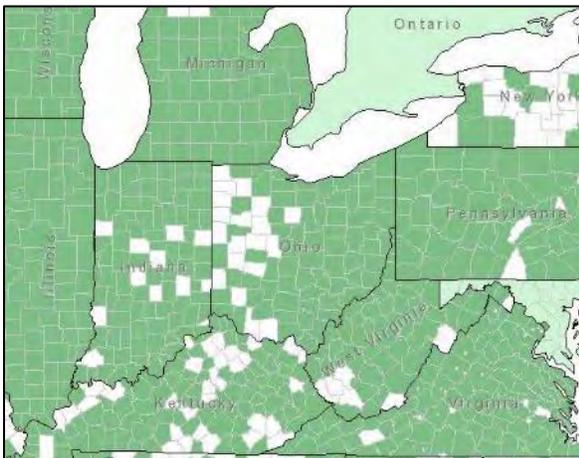


Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Seedlings

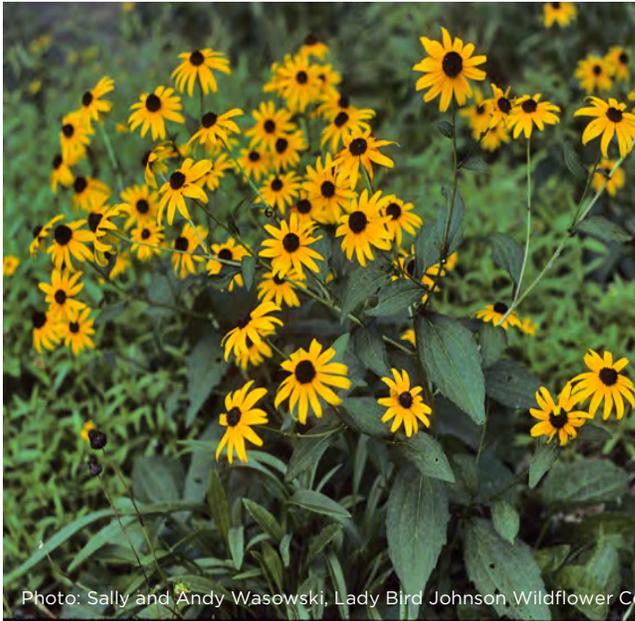


Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Photo: Thomas Muller, Lady Bird Johnson Wildflower Center



Photo: Joseph Marcus, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Stanley Harmon, Lady Bird Johnson Wildflower Center

Mature plant



Photo: Joseph Marcus, Lady Bird Johnson Wildflower Center

Stem and leaf

Blue Mistflower (*Conoclinium coelestinum*)

Aster Family

Other Common Names: wild ageratum, blue boneset

Scientific Name: *Conoclinium coelestinum* (L.) DC.

Plant Symbol: COCO13

Distinguishing Characteristics: Clusters of fluffy blue, blue-violet, or rosy-violet flower heads, rarely white; stems usually with short curly hairs; leaves fairly wide in shape, triangular or rounded; leaves opposite with margins toothed or scalloped.

Plant Height: Erect to 3 feet, sometimes sprawling over other vegetation

Blooms/Fruits: July–November

Duration: Perennial, herbaceous

Pollinator Value: Blue mistflower is a wonderful nectar source for monarchs, and favored by many other butterflies as well as bees. Male queen butterflies, another species of milkweed butterflies similar to the Monarch, collect alkaloids from the nectar of these flowers to use in their courtship of females. Males can be seen nectaring in huge aggregations on these plants.

Habitat: Streambanks, wet meadows, low woods, floodplains, ditches, and disturbed sites. May become weedy

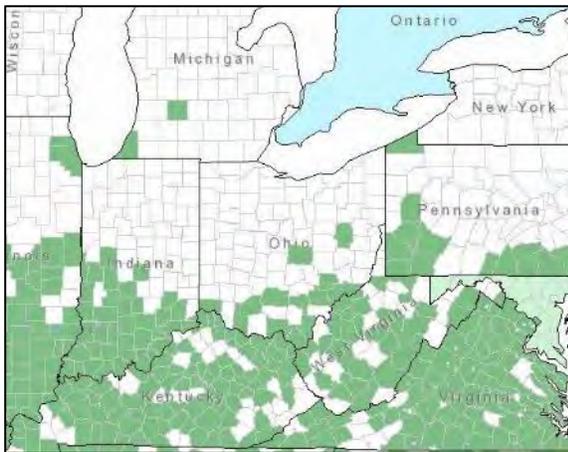


Photo: Mike Haddock



Early flower development



Flowering



Stem and leaf characteristics



Butterfly Milkweed (*Asclepias tuberosa*)

Milkweed Family

Other Common Names: orange milkweed, butterfly weed

Scientific Name: *Asclepias tuberosa* L.

Plant Symbol: ASTU

Distinguishing characteristics: brick red or orange flowers; hairy stem; long and narrow leaves with smooth leaf margins; sap not milky like other milkweed species.

Plant Height: up to 2.5 ft.

Blooms/Fruits: May–October

Duration: Perennial, herbaceous (from rootstock tuberous)

Pollinator Value: Larval host plant for monarch butterfly. The plant is very attractive to butterflies because it is a high quality nectar source.

Habitat: Upland; sandy, loamy, or rocky limestone soils

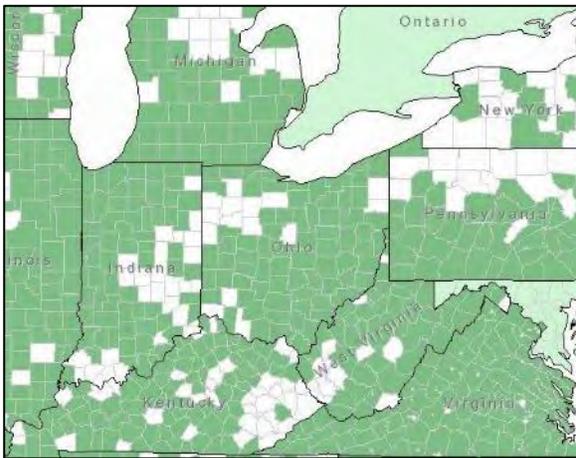


Photo: Edith Bettinger, Lady Bird Johnson Wildflower Center



Photo: Lady Bird Wildflower Center Staff

Seedling



Photo: Bruce Leander, Lady Bird Johnson Wildflower Center



Photo: Lillian G. Flaigg, Lady Bird Johnson Wildflower Center

Early flowering/close-up view of flower

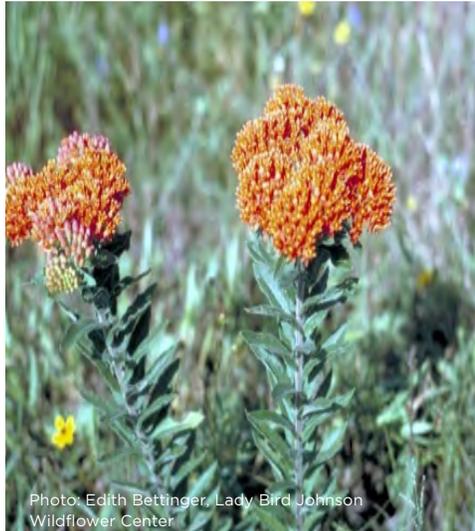


Photo: Edith Bettinger, Lady Bird Johnson Wildflower Center

Full flowering



Photo: Julie Makin, Lady Bird Johnson Wildflower Center

Fruit



Photo: Barbara Nuffer, Lady Bird Johnson Wildflower Center

Mature fruit with seed

Button Eryngo/ Rattlesnake Master (*Eryngium yuccifolium*)

Carrot Family

Other Common Names: button snakeroot, bristle-leaf eryngo

Scientific Name: *Eryngium yuccifolium* Michx.

Plant Symbol: ERYU

Distinguishing characteristics: Tall, erect, flowering stem with a basal rosette of linear, 2-3 ft. long leaves, leaves reduced up the flowering stem; leaves slightly toothed along the margin and are monocot in appearance with parallel veined (resembling *Yucca*); flowers grayish-white in compact, round, spiny heads.

Plant Height: Up to 3.5 ft.

Blooms/Fruits: May–August

Duration: Perennial

Pollinator Value: Rattlesnake master is of special value to beneficial insects, such as wasps and syrphid flies. It is the only larval host plant for the rare Rattlesnake master borer moth. Rattlesnake master nectar is also attractive to many bees and butterflies.

Habitat: Prairies and open rocky woodlands

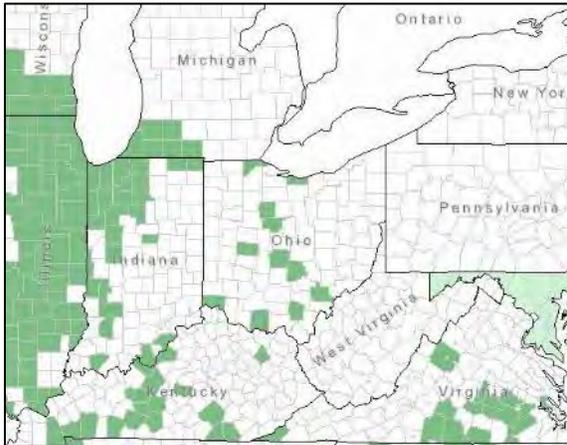


Photo: Carolyn Fannon Lady Bird Johnson Wildflower Center



Photo: USDA-NRCS



Photo: USDA-NRCS

Seedling (note the toothed leaf margin)



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Mature



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Flowering/close-up of flower



Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center

Early vegetative growth



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Toothed leaf margin



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Calico Aster (*Symphyotrichum lateriflorum*)

Aster Family

Other Common Names: starved aster, rosemary, white woodland aster

Scientific Name: *Symphyotrichum lateriflorum* (L.) Á. Löve & D. Löve
SYLA4

Plant Symbol:

Distinguishing characteristics: Stems 1 or more arising from a short, woody rootstock and succulent rhizomes; basal leaves usually absent when flowering, when present widest near the top with a tapering base and a short pointed tip, and without a leaf stem; stem leaves progressively smaller up the stem, widest across the top and without a leaf stem; flowering heads numerous, small—about 1/2 inch across, white with a yellow to purplish center, and arising from inflorescences from the upper leaf axils.

Plant Height: 2-4 ft.

Blooms/Fruits: August–October

Duration: Perennial, herbaceous

Pollinator Value: Popular with a very wide variety of insects, including honey bees, native bees, beetles, flies, moths, butterflies, and plant bugs.

Habitat: Banks of streams and ponds, moist depressions in prairies, moist pastures, roadsides and waste places.

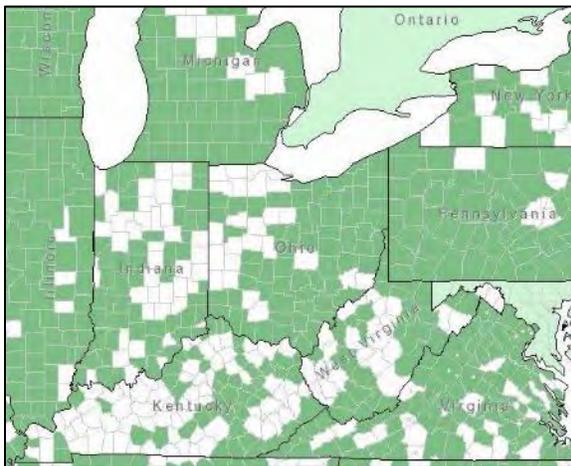


Photo: Stephanie Brundage, Lady Bird Johnson Wildflower Center



Full flowering/close-up of blooms



Stem and leaf arrangement

Canada Goldenrod (*Solidago canadensis*)

Aster Family

Other Common Names: Canadian goldenrod, tall goldenrod, giant goldenrod, verge d'or du Canada

Scientific Name: *Solidago canadensis* L.

Plant Symbol: SOCA6

Distinguishing characteristics: Flowering heads small with yellow rays and yellow center; inflorescence terminal and shaped into a broad pyramid with branches bent backwards and the individual flowers oriented upward; leaves alternate on the stem, with 3 main veins, lance-shaped, the upper surface raspy to the touch from short, stiff hairs with bulbous bases; the basal and lower leaves withered at flowering; stems hairy except towards the base of the plant.

Plant Height: 3-6+ ft., erect (often with numerous stems)

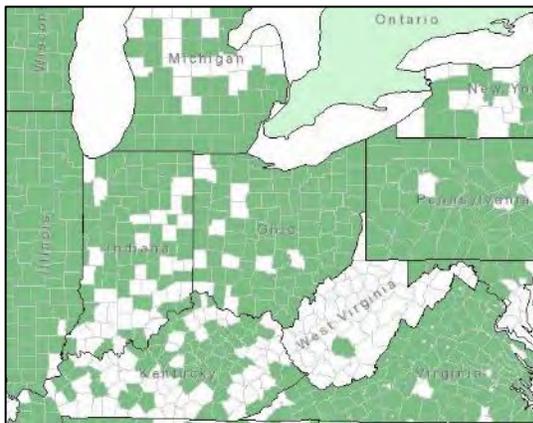
Blooms/Fruits: August-October

Duration: Perennial, herbaceous (from creeping rhizomes)

Pollinator Value: Goldenrods are very attractive to pollinators and other beneficial insects. They host a number of oligolege bees.

Habitat: Bottomland forests, mesic pastures and prairies, stream and river banks, and roadsides.

Note: There are many plants commonly called goldenrods that belong to different plant genera, *Solidago*, *Euthamia*, and *Oligoneuron*, and they are all fairly similar. They generally have yellow, clustered flowers, but some species are white. The flowering stems can be elongate and recurved or flat-topped.





Full flowering/close-up of flowers



Stem and leaf arrangement; close up of underside of leaf

Clustered Mountainmint (*Pycnanthemum muticum*)

Mint Family

Other Common Names: short-toothed mountain mint

Scientific Name: *Pycnanthemum muticum* (Michx.) Pers.

Plant Symbol: PYMU

Distinguishing characteristics: Stems erect, branched above the middle, and minutely hairy; leaves opposite on the stem and with a short leaf-stem, overall shape is widely lance-shaped with a tapered tip and a rounded base, the margins with a few short teeth; the leaves associated with the inflorescence greyish in color and a little shorter and wider than the stem leaves; inflorescence is a tight ball of many small flowers clustered at the top of each branch and a few of the nodes below; flowers two-lipped, purple with darker spots.

Plant Height: 2-3 ft.

Blooms/Fruits: July–September

Duration: Perennial, herbaceous

Pollinator Value: Visited by a variety of bees, butterflies and flies, it is particularly appealing to small and medium-sized butterflies.

Habitat: Dry to moist uplands, open woods, pastures, meadows, and roadsides.

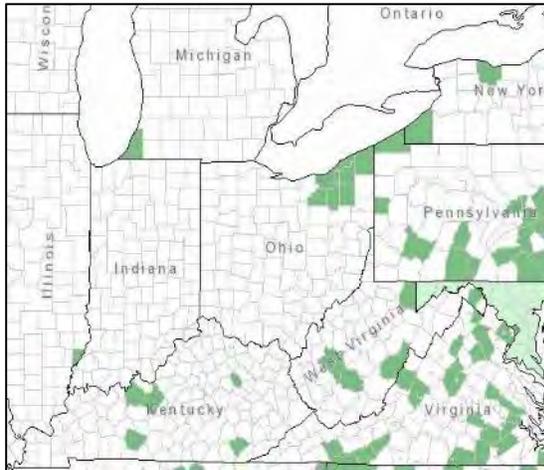


Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



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Stem and leaf



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

Common Blue Wood Aster (*Symphyotrichum cordifolium*)

Aster Family

Other Common Names: heartleaf aster, broad-leaved aster

Scientific Name: *Symphyotrichum cordifolium* (L.) G.L. Nesom **Plant Symbol:** SYCO4

Distinguishing characteristics: Stems unbranched or with a few branches above the midpoint, arising from a short, stout, woody rootstock; leaves basal and along the stem; basal leaves persistent in flower, heart-shaped in overall appearance with a pointed tip, toothed margin, and a lobed base giving rise to a long leaf stem; stem leaves also heart shaped but smaller than the basal leaves; flowering heads purplish blue to lavender, daisy-like developing along inflorescences arising from the upper portions of the stem and at the top, and about 1 inch across.

Plant Height: 2-4 ft.

Blooms/Fruits: August-October

Duration: Perennial, herbaceous

Pollinator Value: Visited by bees, flies and beetles.

Habitat: Moist upland forest openings, bottomland forests, pastures, roadsides, and open areas.

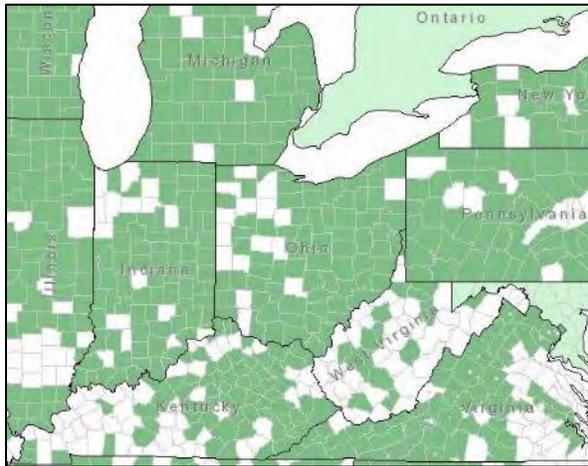


Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Common Boneset (*Eupatorium perfoliatum*)

Aster Family

Other Common Names: thoroughwort

Scientific Name: *Eupatorium perfoliatum* L.

Plant Symbol: EUPE3

Distinguishing characteristics: Flower heads white in small fuzzy clusters on a many branched, flat-topped inflorescence; leaves are opposite one another (rarely whorled), hairy, with a pointed tip, and are very distinctive where the leaf bases wrap around the stem and appears as if the stem is growing through the middle of the leaf; stems are densely hairy.

Plant Height: 3-5 ft., erect

Blooms/Fruits: August-October

Duration: Perennial, herbaceous

Pollinator Value: Fall blooming flowers are highly attractive to butterflies and native bees.

Habitat: Damp low ground, banks of ponds and streams, fens, sloughs, marshes, crop fields, and fallow fields.

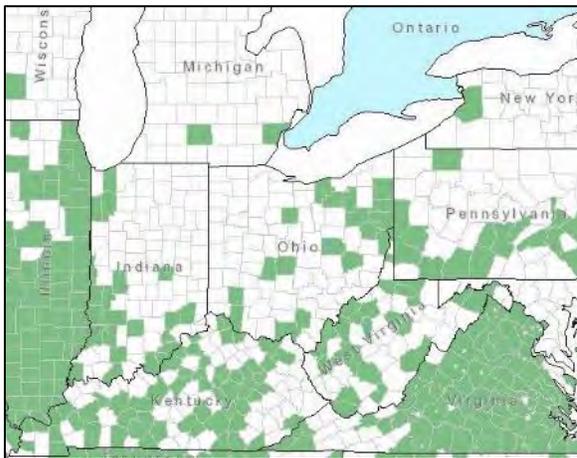


Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower



Photo: Sarah Linn, Lady Bird Johnson Wildflower Center



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Photo: Julie Makin, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Julie Makin, Lady Bird Johnson Wildflower Center

Close-up of leaf arrangement



Photo: Sarah Linn, Lady Bird Johnson Wildflower Center

Common Milkweed (*Asclepias syriaca*)

Milkweed Family

Other Common Names: none

Scientific Name: *Asclepias syriaca* L.

Plant Symbol: ASSY

Distinguishing characteristics: Flowers in circular clusters from the leaf axils on the upper portion of the plant, each flower on a long stalk; petals reflexed, lavender or pink but may be greenish or white with pink highlights; leaves are in pairs (opposite) along the stem, lance-shaped to elliptical.

Plant Height: 2–5 ft., usually unbranched

Blooms/Fruits: May–August

Duration: Perennial, herbaceous and colonial (from deep-set rhizomes)

Pollinator Value: Larval host plant for the monarch butterfly. The plant is very attractive to butterflies and bees because it is a high quality nectar source.

Habitat: Roadsides, disturbed areas, field borders, bottomland & upland prairies, pastures, and old fields.

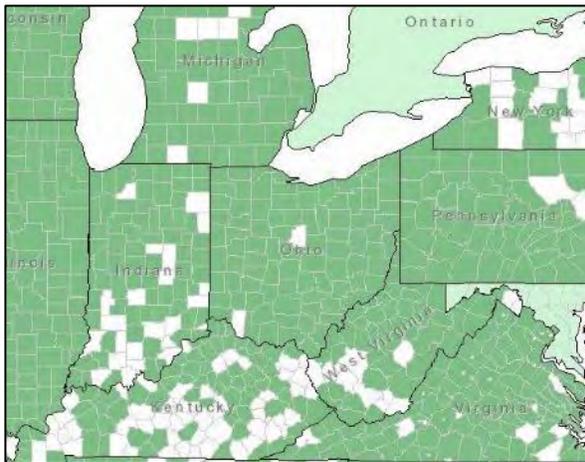




Photo: Kelly Gill, Xerces Society

Flowering/close-up of flowers



Photo: Kelly Gill, Xerces Society



Photo: Mike Haddock



Photo: Kelly Gill, Xerces Society

Stem and leaf arrangement

Common Sneezweed (*Helenium autumnale*)

Aster Family

Other Common Names: yellow sneezweed, fall sneezweed, autumn sneezweed

Scientific Name: *Helenium autumnale* L.

Plant Symbol: HEAU

Distinguishing characteristics: Plants clump forming with 1 to several erect stems arising from a root crown; stems are winged with narrow bands of tissue extending down the stem from the leaf bases; leaves elliptic to widest near the top, 3-5 in. long by about 1 inch wide, and with a pointed tip; flowering heads daisy-like; rays yellow, broadest at the top and with 3 teeth at the end of each ray; centers ball-shaped and yellow.

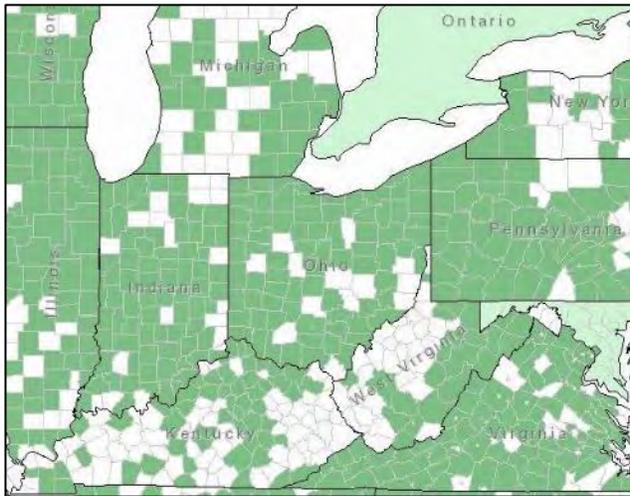
Plant Height: 2-5 ft.

Blooms/Fruits: August–November

Duration: Perennial, herbaceous

Pollinator Value: Visited by honey bees, native bees (including bumble bees), wasps, flies, butterflies, moths and beetles.

Habitat: Wet pastures and meadows, stream and pond banks, swamps, sloughs, moist depressions, ditches roadsides, and moist disturbed areas.





Flowering/close-up of flowers/bud



Winged stem



Mature plant

Crookedstemmed Aster (*Symphyotrichum prenanthoides*)

Aster Family

Other Common Names: zigzag aster, crooked stem aster

Scientific Name: *Symphyotrichum prenanthoides* (Muhl. ex Willd.) G.L. Nesom

Plant Symbol: SYPR6

Distinguishing characteristics: Stems zigzag or crooked, slender, developing from creeping rhizomes; leaves lance-shaped, coarsely serrated on the margins, the lower 1/2 of the leaf has an abrupt narrowing which expands out at the base into a heart-shaped, clasping base, no leaf stem present; flowering heads daisy-like; rays blue to pail purple; center yellow to becoming darker with age.

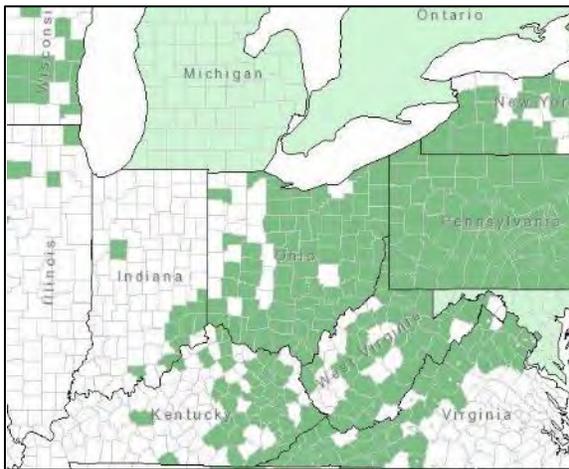
Plant Height: 1-3 ft.

Blooms/Fruits: August-October

Duration: Perennial, herbaceous

Pollinator Value: These flowers provide abundant nectar and pollen in the fall. They attract butterflies. There are a number of aster-oligolege bees that feed on the pollen.

Habitat: Moist soils and ditches, streambanks, meadows, and moist woods.





Flowering/close-up of flowers



Base of flower



Leaf and stem

Culver's Root (*Veronicastrum virginicum*)

Figwort Family

Other Common Names: Bowman's Root

Scientific Name: *Veronicastrum virginicum* (L.) Farw.

Plant Symbol: VEVI4

Distinguishing characteristics: Flowering stems 1 – several at the top of the plant, with elongate inflorescences appearing candelabra-like; flowers numerous on short flower stalks, white to cream colored, occasionally light pink with 4 petals per flower; leaves in whorls along the stem, variable in size from 1.5-5 in. long, lance-shaped with a pointed tip and sharply toothed edges.

Plant Height: 3-6 ft., erect

Blooms/Fruits: July-September

Duration: Perennial, herbaceous (from rhizomes)

Pollinator Value: This flower is highly attractive to many types of bee, butterfly, and other beneficial insects.

Habitat: Bottomland and upland prairies, openings in mesic to upland forests, pastures, and roadsides.

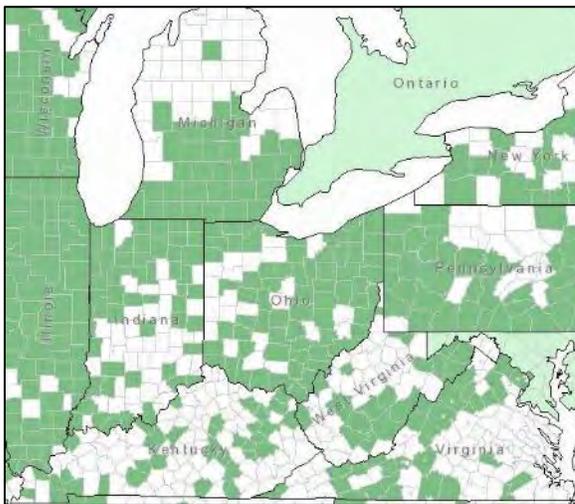




Photo: Mike Haddock



Photo: R.W. Smith, Lady Bird Johnson
Wildflower Center

Full flowering/close-up of blooms



© 2007 K. Chayka



Photo: Mike Haddock

Stem and Leaf arrangement



© K. R. Robertson
Illinois Natural
History Survey

Mature plant

Dense Blazingstar (*Liatris spicata*)

Aster Family

Other Common Names: button snakeroot, dense gayfeather, dense liatris, marsh blazing star, marsh gayfeather, marsh liatris

Scientific Name: *Liatris spicata* (L.) Willd.

Plant Symbol: LISP

Distinguishing characteristics: Flowering heads are in rose-purple tufts tightly clustered along an elongated spike-like inflorescence which flowers from the top down; leaves are linear (about 8 - 10 in. long), clustered near the base of the stem, but also occurring up the stem where they become shorter.

Plant Height: 2-4 ft., erect

Blooms/Fruits: July–October

Duration: Perennial, herbaceous (from a rounded corm)

Pollinator Value: Bees and butterflies are attracted to the flowers of this late summer nectar source.

Habitat: Upland prairies, meadows, and slopes.

Note: There are several *Liatris* species similar in appearance to dense blazing star. This species is distinguished from others by having small, tightly crowded flower heads and the leafy bracts under each flower head (involucre) rounded on the tip with a short blunt tip.

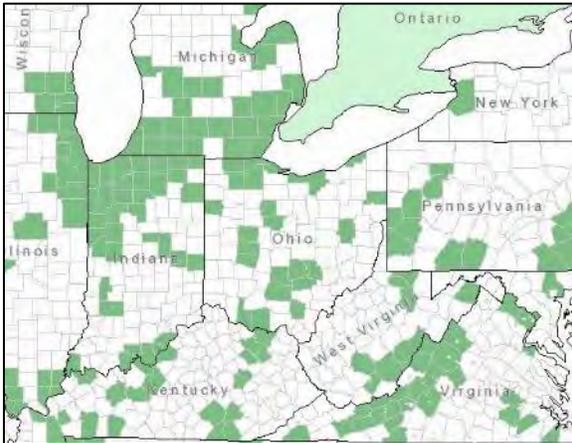


Photo: Julie Makin, Lady Bird Johnson Wildflower Center



Seedling



Fulling flowering/close-up of flowers



Stem and leaf arrangement



Mature plant

Early Goldenrod (*Solidago juncea*)

Aster Family

Other Common Names: plume goldenrod

Scientific Name: *Solidago juncea* Aiton

Plant Symbol: SOJU

Distinguishing characteristics: Stems 1 to a few arising from slender rhizomes; leaves mostly basal, tufted, persistent when in flower, 6-12 inches long with a pointed tip and a long leaf stem, widest in the middle, and with toothed margins; stem leaves smaller than the basal leaves and reduced in size moving up the stem; individual flowering heads small, numerous, yellow, and on inflorescences that bend backwards.

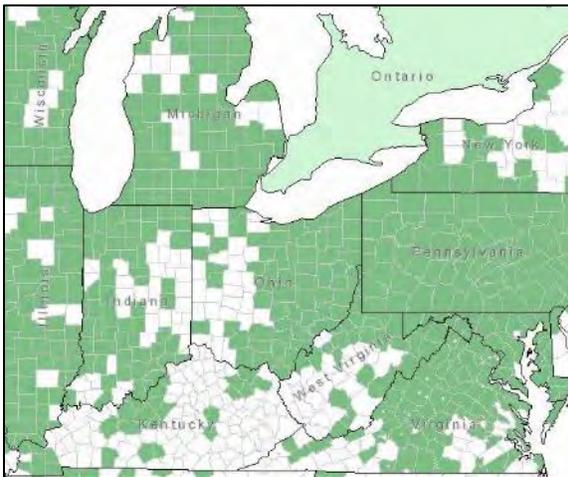
Plant Height: 2-4 ft.

Blooms/Fruits: June–October

Duration: Perennial, herbaceous

Pollinator Value: Known to be visited by the honey bee and a diverse array of native bees, flies, beetles, moths and butterflies.

Habitat: Dry soils, fields, open prairies, forest openings, open disturbed areas, and roadsides.



2005 © Peter M. Dziuk



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Photo: John Hilty, Illinois Wildflowers

Flowering/close-up of flower



2011 © Peter M. Dziuk

Vegetative growth stage



Photo: John Hilty, Illinois Wildflowers

Stem and leaf

Eastern Purple Coneflower (*Echinacea purpurea*)

Aster Family

Other Common Names: echinacea, snakeroot, Kansas snakeroot, narrow-leaved purple coneflower, scurvy root, Indian head, comb flower, black susans, and hedge hog

Scientific Name: *Echinacea purpurea* (L) Moench

Plant Symbol: ECPU

Distinguishing characteristics: Flowering heads with reddish-purple to pink rays (2-3" long) which are generally reflexed slightly at flowering; central disk conical with reddish-orange, blunt tipped spines and a dark center; leaves largest basally and reduced in size up the stem and with coarsely saw-toothed margins. The only *Echinacea* in our range with leaves 3-5 in. wide and with rounded or heart-shaped leaf bases, and fibrous roots.

Plant Height: 2-4 ft., erect

Blooms/Fruits: May-October

Duration: Perennial, herbaceous (with fibrous roots)

Pollinator Value: Attracts butterflies and native bees.

Habitat: rocky prairies, open wooded, thickets, often near waterways

Note: Eastern purple coneflower is a common horticultural plant with several cultivars, which do escape into natural environments. These cultivars will appear somewhat different in size and flower color compared to native individuals.

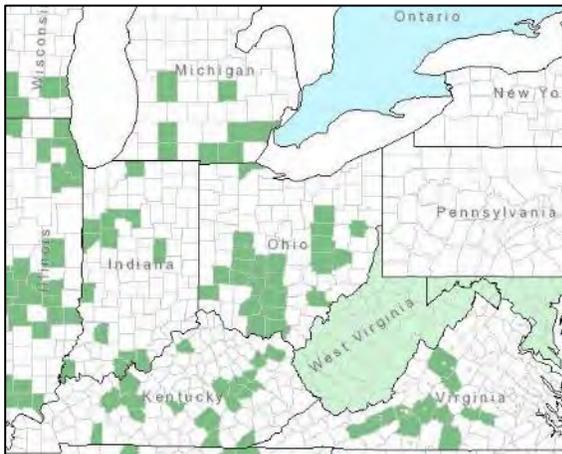


Photo: Alan Cressler, Lady Bird Johnson Wildflower Center



Seedling

Full flowering/close-up of flower and mature seedhead



Stem and leaf



Seed

Field Thistle (*Cirsium discolor*)

Aster Family

Other Common Names: roadside thistle

Scientific Name: *Cirsium discolor* (Muhl. Ex Willd.) Speg.

Plant Symbol: CIDI

Distinguishing characteristics: Flower heads solitary on the ends of branches, pinkish to reddish purple in a “cup” of spine-tipped bracts underneath the inflorescence; leaves are deeply dissected more than ½ way from the margin to the midrib, and spiny, the upper surface green and the undersurface densely hairy and appearing white.

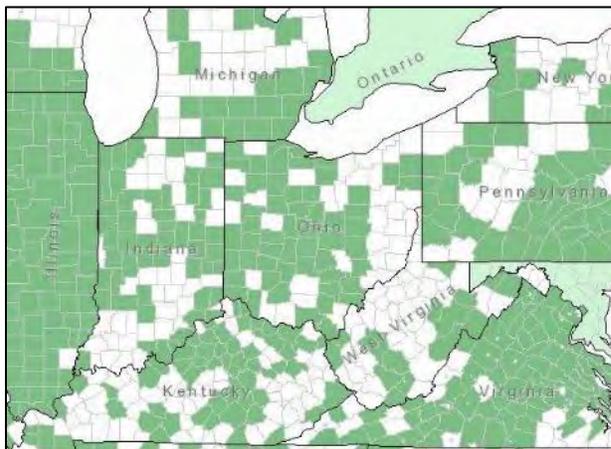
Plant Height: 3–8 ft., erect

Blooms/Fruits: July–November

Duration: Biennial or short-lived Perennial, herbaceous (with thickened taproot)

Pollinator Value: This native thistle is highly attractive to numerous pollinators, from bumble bees to the monarch butterfly.

Habitat: Upland prairie, glades, bluffs, old and fallow fields, and openings in dry upland forests.





© K. R. Robertson Illinois Natural History Survey

Full flowering/close-up of bloom



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



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Stem and leaf



Photo: Albert F.W. Vick, Lady Bird Johnson Wildflower Center

Mature flowers and seed



Photo: Albert F.W. Vick, Lady Bird Johnson Wildflower Center

Flat-top Goldentop (*Euthamia graminifolia*)

Aster Family

Other Common Names: flat-topped goldenrod, grass-leaved goldentop/goldenrod

Scientific Name: *Euthamia graminifolia* (L.) Nutt.

Plant Symbol: EUGR5

Distinguishing characteristics: Stems leafy and heavily branched in the upper half, with small spreading hairs; leaves grass like, sessile on the stem and linear, 4-5 in. long by 1/2 in. wide, and with leaf margins showing stiff ascending hairs; inflorescences flat-topped in appearance and borne on the ends of branches; individual flower heads, numerous heads at the end of branches with approximately 15-25 yellow rays and a yellow center.

Plant Height: 3-5 ft.

Blooms/Fruits: July-September

Duration: Perennial, herbaceous

Pollinator Value: Provides nectar and/or pollen to a wide variety of insect taxa including butterflies and moths, beetles, true bugs, wasps, honey bees, bumble bees and other native bee species.

Habitat: Fields, pastures, thickets, prairie, and roadsides.

Note: Older botanical keys and references refer to this species as *Solidago graminifolia*.

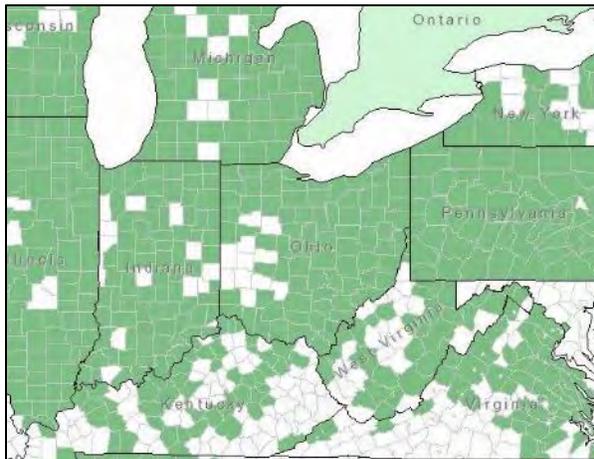


Photo: W.D. and Dolphia Bransford Lady Bird Johnson Wildflower Center



Photo: John Hilty, Illinois wildflowers



© 2008 k. chayka

Photo: John Hilty, Illinois wildflowers

Flowering/close-up view of flower



2003 © Peter M. Dziuk



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Leaf shape and arrangement

Giant Ironweed (*Vernonia gigantea*)

Aster Family

Other Common Names: tall ironweed

Scientific Name: *Vernonia gigantea* (Walter) Trel.

Plant Symbol: VEGI

Distinguishing characteristics: Flower heads in large, open, terminal inflorescences; individual flower heads dark purple, without rays, cylindrical to bell-shaped; leaves alternate on the stem, lance shaped, 6-10 inches long, and tapered at both ends; leaf margins sharply toothed.

Plant Height: 4-6 feet

Blooms/Fruits: August-October

Duration: Perennial, herbaceous

Pollinator Value: flowers attract a diverse array of bees and butterflies.

Habitat: Lowland prairie, pastures, stream banks, bottomland forest openings, and roadsides.

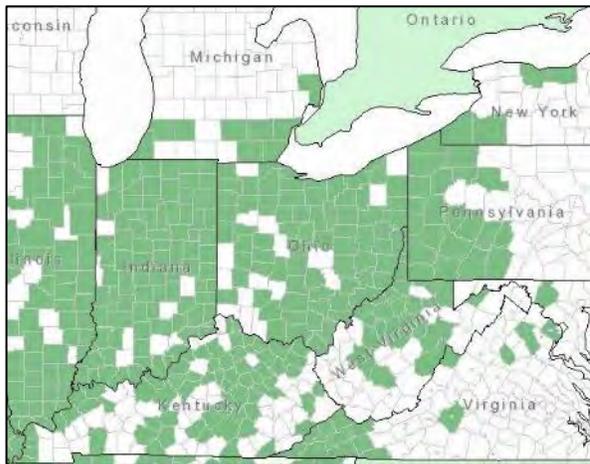


Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

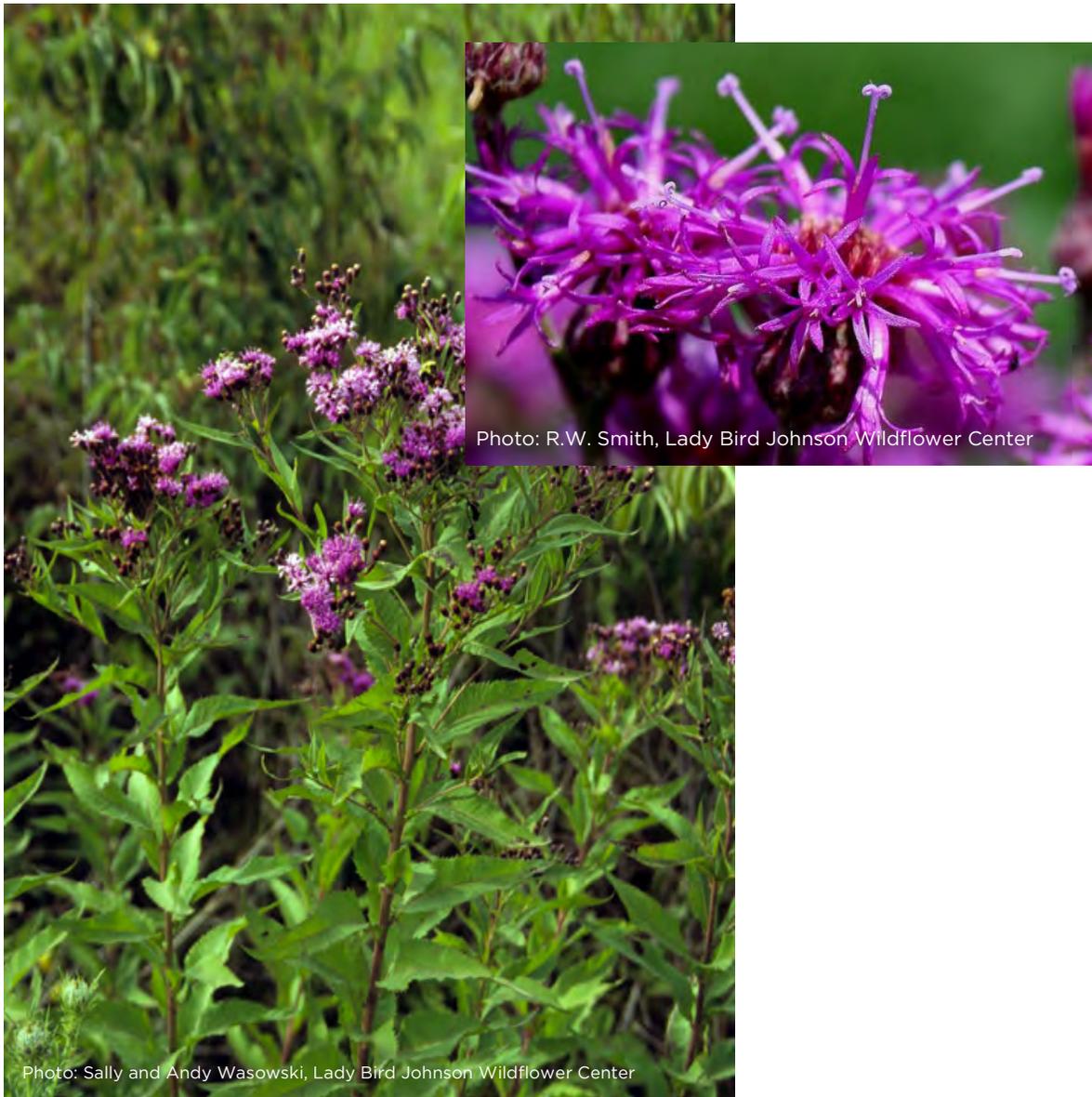


Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center

Leaf and Stem, and close-up of flowers

Giant Sunflower (*Helianthus giganteus*)

Aster Family

Other Common Names: swamp sunflower, tall sunflower, hélíanthe géant

Scientific Name: *Helianthus giganteus* L.

Plant Symbol: HEGI

Distinguishing characteristics: Very tall with numerous sunflower type flowering heads (2–3 in. across) and with reddish to purplish stems; flower heads with yellow rays and dark red to black centers; leaves alternate on the stem, widely lance-shaped, very raspy to the touch on the upper surface, and with long stiff hairs on the undersurfaces.

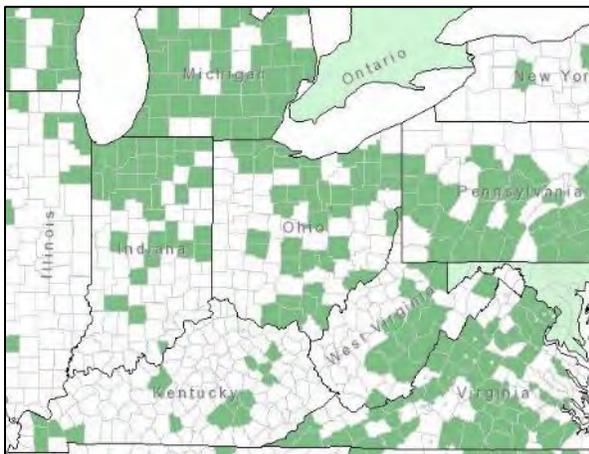
Plant Height: Up to 10 ft., erect, branched above

Blooms/Fruits: July–October

Duration: Perennial, herbaceous (from short rhizomes)

Pollinator Value: Sunflowers are workhorse plants, supporting bees, butterflies, and other beneficial insects. Many species of native bee are oligoleges on its pollen. Checkerspot butterflies feed on its leaves as caterpillars.

Habitat: Swamps and other moist places.





© 2007 k. chayka

Full flowering/close-up of flowers



© 2007 k. chayka



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Stem and leaf arrangement



Photo: John Hilty, Illinois

Gray Goldenrod (*Solidago nemoralis*)

Aster Family

Other Common Names: dwarf goldenrod, grayleaf goldenrod, old field goldenrod, prairie goldenrod

Scientific Name: *Solidago nemoralis* Aiton

Plant Symbol: SONE

Duration: Perennial

Growth Habit: Forb/herb

Plant Height: 0.5-2.5 ft.

Blooms/Fruits: July–November

Distinguishing characteristics: Small yellow flower clusters on recurved terminal branches; stems densely hairy with extremely short, curved hairs; leaves forming a basal rosette and are gradually reduced in size up the stem; leaves oblong, widest towards the top end, with only 1 prominent vein.

Pollinator Value: This flower is very popular with bees and wasps. It is also known to attract butterflies.

Habitat: Dry upland prairie, ledges and tops of bluffs, openings in dry woods, old fields and pastures.

Note: There are many plants commonly called goldenrods that belong to different plant genera (e.g. *Chrysoma*, *Euthamia*, *Oligoneuron*, and *Solidago*) and are all fairly similar. They generally have yellow, clustered flowers, but some species are white. The flowering stems can be elongate and recurved or flat-topped.

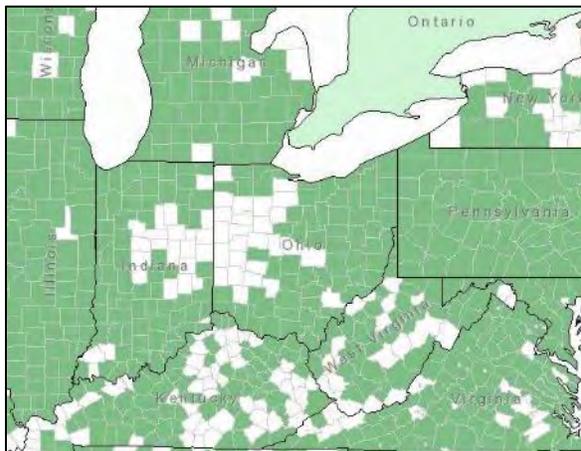


Photo: F.W. Smith, Lady Bird Johnson Wildflower Center



Photo: Bruce Leander, Lady Bird Johnson Wildflower Center

Photos: Ray Mathews/Bruce Leander, Lady Bird Johnson Wildflower Center

Unopened flowers



Photo: Ray Mathews, Lady Bird Johnson Wildflower Center

Close-up of Flowers

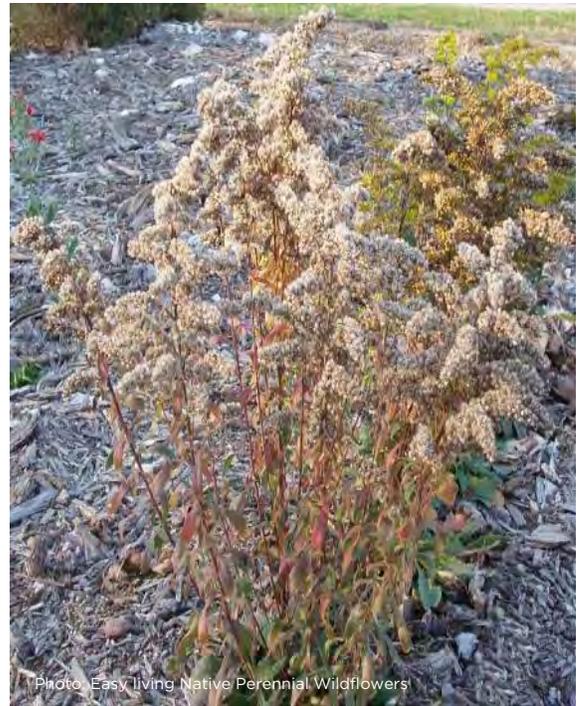


Photo: Easy Living Native Perennial Wildflowers

Mature plant



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

Full bloom



Photo: USDA-ARS

Seed

Hairy White Oldfield Aster (*Symphyotrichum pilosum*)

Aster Family

Other Common Names: white heath aster

Scientific Name: *Symphyotrichum pilosum* (Willd.) G.L. Nesom

Plant Symbol: SYPI2

Distinguishing characteristics: Stems several from a woody rootstock and branched above the middle; leaves variable; lower leaves usually absent at flowering, widest towards the top, and with a leaf stem; middle and upper leaves without a leaf stem, 2–3 in. long by about ½ in. wide, tapered at the base and bluntly pointed at the tip; flowering heads daisy-like and many on raceme-like branches; ray flowers white; centers yellow and darkening with age.

Plant Height: 1-5 ft.

Blooms/Fruits: August–October

Duration: Perennial, herbaceous

Pollinator Value: These flowers provide abundant nectar and pollen in the fall. They attract butterflies. There are a number of aster-oligolege bees that feed on the pollen.

Habitat: Dry fields, pastures, upland prairies, streambanks, fencerows, and roadsides.

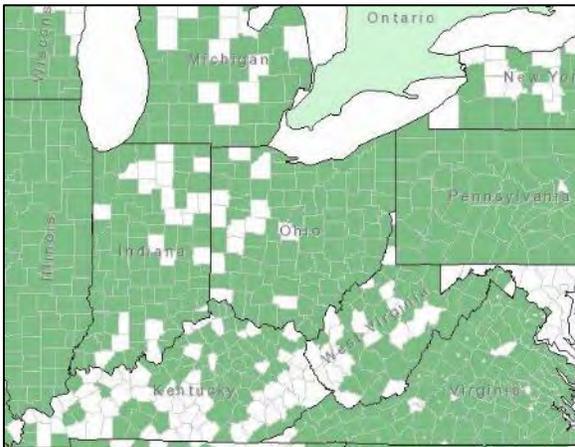


Photo: Julie Makin, Lady Bird Johnson Wildflower Center



Full flowering/close-up of flowers



Seedling; stem and leaf arrangement; close-up of leaf

Hoary Mountainmint (*Pycnanthemum incanum*)

Mint Family

Other Common Names: silverleaf mountain mint

Scientific Name: *Pycnanthemum incanum* (L.) Michx. **Plant Symbol:** PYIN

Distinguishing characteristics: Stems erect, square, densely hairy with fine recurved hairs, and branched especially in the upper half; leaves opposite on the stem, lance-shaped to wider towards the base, tip pointed, base rounded, and with a leaf stem, the undersurfaces are densely long-hairy; inflorescences compact clusters that terminate the branches and around the upper axils, the associated bracts are whitened; flowers small, two-lipped and are white with purple spots or pale lavender. Leaves and flowers are strongly aromatic/minty.

Plant Height: 2-3 ft.

Blooms/Fruits: July–September

Duration: Perennial, herbaceous

Pollinator Value: Is widely considered a “magnet” to a variety of long-tongued bees (honey bees, bumble bees, and others), short-tongued bees, flies, beetles and butterflies.

Habitat: Dry upland woods, forest openings, pastures, and roadsides.

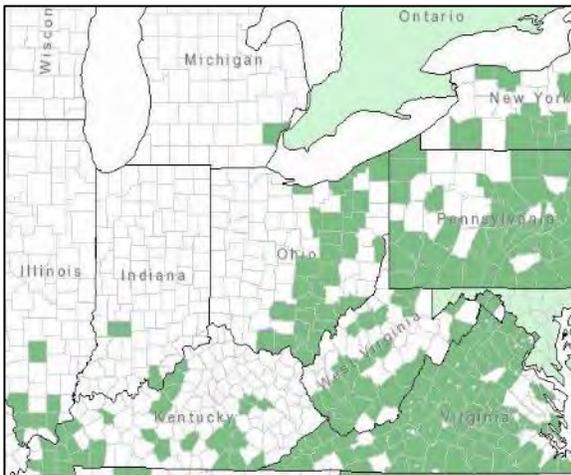


Photo: Stephanie Brundage, Lady Bird Johnson Wildflower



Photo: Stephanie Brundage, Lady Bird Johnson Wildflower Center



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Photo: Stefan Bloodworth, Lady Bird Johnson Wildflower Center

Flowering/close-up of flower and mature seedhead



Photo: R.W. Smith, Lady Bird Johnson wildflower



Photo: Stephanie Brundage, Lady Bird Johnson Wildflower Center

Stem and leaf arrangement

Hoary Verbena (*Verbena stricta*)

Verbena Family

Other Common Names: hoary vervain, tall vervain, woolly verbena, wooly verbena

Scientific Name: *Verbena stricta* Vent.

Plant Symbol: VEST

Distinguishing characteristics: Flowers blue to purple on long (up to 1 ft.) terminal spikes, flowering occurs at the bottom of the spike first and progressively flowers upward; leaves are opposite each other on the stem, attached directly to the stem without a leaf stalk, or with a short leaf stalk <1/4 in. long, shape is widely lance-shaped to almost circular; stems and leaves densely covered with short hairs giving the plant an overall “grayish” appearance.

Plant Height: 1-4 ft., erect to ascending

Blooms/Fruits: June–September

Duration: Perennial, herbaceous

Pollinator Value: This flower attracts butterflies. It is also a larval food source for the common buckeye.

Habitat: Upland prairies, loess and sand prairies, open upland forests, overgrazed pastures, old fields, and disturbed areas.

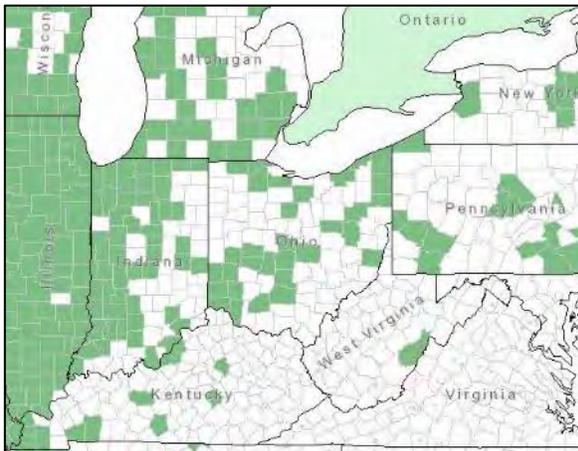




Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Mike Haddock

Close-up of stem and leaf



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Mature plant

Indianhemp (*Apocyanum cannabinum*)

Dogbane Family

Other Common Names: Indianhemp bane, hemp dogbane, indianhemp dogbane, prairie dogbane, honeybloom, bitter root, black hemp, lechuguilla, westernwall

Scientific Name: *Apocyanum cannabinum* L.

Plant Symbol: APCA

Distinguishing characteristics: Inflorescences located on the upper portions of the plant and composed of clusters of small, white to greenish-white bell-shaped flowers that are often drooping; leaves are opposite on the stem, broadly lance shaped or oblong; fruit in long, drooping, cylindrical pods which are always in pairs. Indianhemp superficially resembles milkweed with flowers in clusters and milky sap.

Plant Height: 2-6 ft., erect

Blooms/Fruits: May-September

Duration: Perennial, herbaceous

Pollinator Value: High-value nectar source in the summer for monarch butterfly.

Habitat: Prairies, open woodlands, roadsides, disturbed sites; quite common.

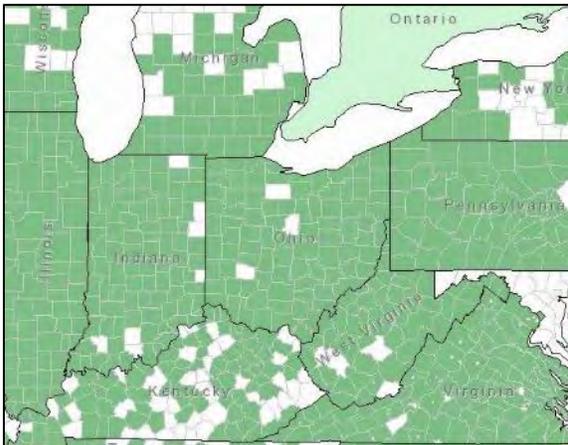


Photo: Albert F.W. Vick, Lady Bird Johnson Wildflower



Photo: Steve Eggers ©



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Norm Flaigg, Lady Bird Johnson Wildflower Center



Photo: Steve Eggers ©

Photo: Edwin Martin, Lady Bird Johnson Wildflower Center

Stem and leaf arrangement

Lanceleaf Coreopsis (*Coreopsis lanceolata*)

Aster Family

Other Common Names: lance-leaf tickseed, sand coreopsis

Scientific Name: *Coreopsis lanceolata* L.

Plant Symbol: COLA5

Distinguishing characteristics: Stems clumped, erect, growing from short rhizomes, and with only 3-5 pairs of leaves up the stem, mostly occur on the lower half of the plant; leaves are opposite each other on the stem, narrowly elliptical or wider towards the top, tapered at both ends, typically with a single unlobed leaf or the leaf may have 1-2 deeply lobed divisions at the base of the blade; flower heads daisy-like on the ends of long stalks up to 15 in. long; rays yellow, 8 in number, each with 3-5 jagged teeth at the end; centers yellow that darken with age. Some cultivars had a deep red spot at the base of each ray flower.

Plant Height: 1-3 ft.

Blooms/Fruits: May-August

Duration: Perennial, herbaceous

Pollinator Value: Visited by honey bees, native bees (including bumble bees, small carpenter bees and leafcutter bees), beetles and butterflies.

Habitat: Dry sandy soils, prairies, glades, old fields, and roadsides.

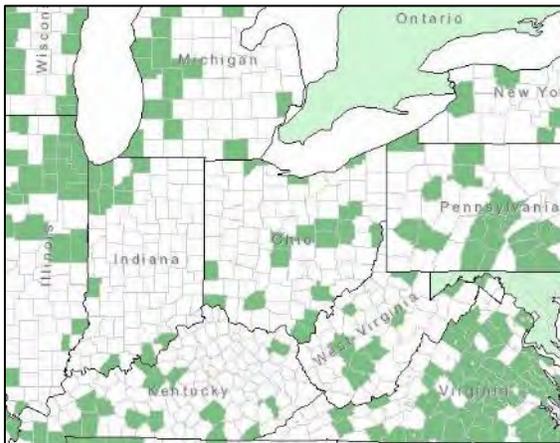


Photo: John Hixson, Lady Bird Johnson Wildflower Center



Seedlings



Flowering/close-up of flowers/bud



Leaf



Seed

Narrowleaf Mountainmint (*Pycnanthemum tenuifolium*)

Mint Family

Other Common Names: slender mountainmint, common horsemint

Scientific Name: *Pycnanthemum tenuifolium* Schrad.

Plant Symbol: PYTE

Distinguishing characteristics: Flowers in compact clusters, two-lipped, generally white to white with lavender spots; flower clusters appear somewhat flat-topped; leaves with a mild mint odor when crushed, very narrow, 1.5 inches long by ¼ inch wide, mostly without hairs and without leaf stalks

Plant Height: 2-3 feet. **Blooms/Fruits:** June–September

Duration: Perennial, herbaceous

Pollinator Value: This plant attracts bees and butterflies.

Habitat: Dry uplands, banks of streams, pastures, roadsides, and disturbed sites.

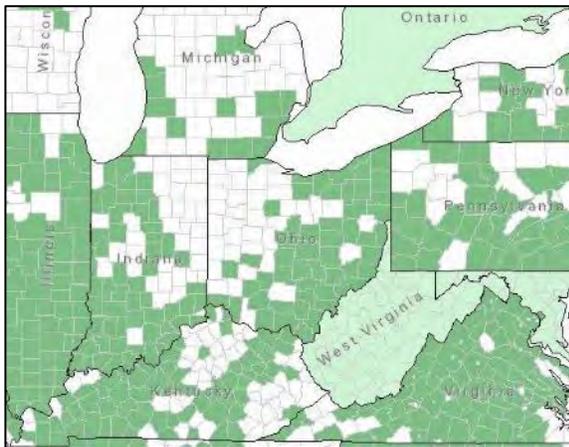


Photo: Mike Haddock



Photo: Mike Haddock



Photo: Alan Cressler, Lady Bird Johnson Wildflower Center



Photo: Julie Makin, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Julie Makin, Lady Bird Johnson Wildflower Center

Foliage (note the narrow leaf)



Photo: Mike Haddock

New England Aster (*Symphyotrichum novae-angliae*)

Aster Family

Other Common Names: none

Scientific Name: *Symphyotrichum novae-angliae* (L.) G.L. Nesom

Plant Symbol: SYNO2

Distinguishing characteristics: Flower heads in many branched inflorescences; rays numerous (40 – 100) in each flower head, reddish-purple to purple and the disc reddish-purple; the leaves are widest at the ends, with a blunt tip and tapering base that clasps the stem, with 3-main veins per leaf, the middle and lower leaves absent at flowering; stems are hairy with interspersed gland-tipped hairs, 1 to several from the base and branched towards the top.

Plant Height: 2-5 ft., erect

Blooms/Fruits: July–October

Duration: Perennial, herbaceous (with woody rootstock and rhizomes)

Pollinator Value: These flowers provide abundant nectar and pollen in the fall. They attract butterflies. There are a number of aster-oligolege bees that feed on the pollen.

Habitat: Bottomland prairies, moist depressions, fens, stream banks, pastures, fencerows, and roadsides.

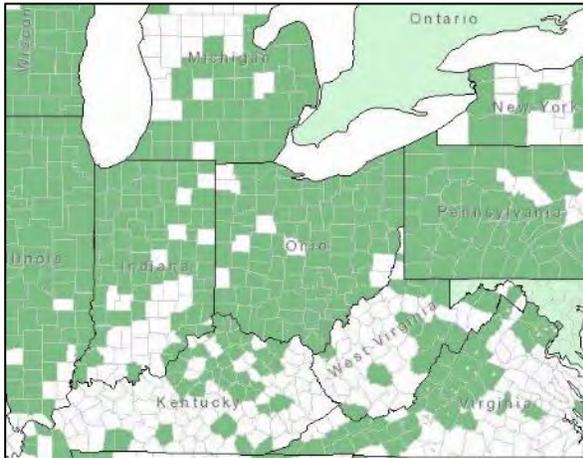




Photo: Steve Eggers ©

Full flowering/close-up of blooms



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Photo: USDA-NRCS



Photo: USDA-NRCS

Stem and leaf arrangement



Photo: USDA-NRCS

Seedlings

New York Ironweed (*Vernonia noveboracensis*)

Aster Family

Other Common Names: none

Scientific Name: *Vernonia noveboracensis* (L.) Michx.

Plant Symbol: VENO

Distinguishing characteristics: Stems tall, stout, with alternate leaves, and rarely branching except in the inflorescence; leaves variable in width—lance-shaped to widest near the top with a long taper-tipped at the top and tapering to a leaf stem at the base, 4-10 inches long, with sharply toothed margins; flowering heads terminal and numerous, deep purple in color.

Plant Height: 3-7 ft.

Blooms/Fruits: August-October

Duration: Perennial, herbaceous

Pollinator Value: Attracts bees and butterflies.

Habitat: Moist soils, pastures, wet meadows, streambanks, and moist woodlands.



Photo: Stephanie Brundage, Lady Bird Johnson Wildflower Center



Full flowering/close-up of blooms



Leaf shape and arrangement

Orange Coneflower (*Rudbeckia fulgida*)

Aster Family

Other Common Names: orange rudbeckia, perennial black-eyed Susan

Scientific Name: *Rudbeckia fulgida* Aiton

Plant Symbol: RUFU2

Distinguishing characteristics: Stems erect, new plants developing basal rosettes at the tip of runners and rhizomes; leaves all unlobed; lower leaves with long leaf stems, widely lance-shaped to widest in the middle; middle and upper stem leaves without a leaf stem or a very short leaf stem that is winged with leaf tissue; flowering heads borne singly on long stems, daisy-like, and similar in appearance to black-eyed Susans; rays yellow to orange with dark red to black, conical centers.

Plant Height: 2-4 ft.

Blooms/Fruits: August–October

Duration: Perennial, herbaceous

Pollinator Value: Not enormously popular with pollinators. Visited most by native bees such as leafcutter bees, mining bees, and sweat bees. Also visited by small butterflies, flies and beetles.

Habitat: Woodlands often in shade, pastures, edges of streams and ponds, and roadsides.

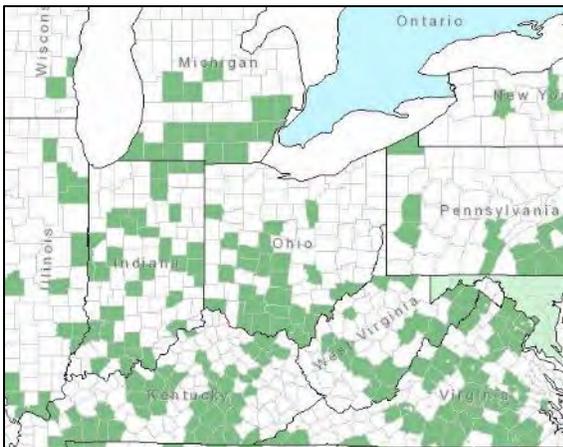


Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Parasol Whitetop (*Doellingeria umbellata*)

Aster Family

Other Common Names: flat-top aster, flat-topped white aster, tall white aster

Scientific Name: *Doellingeria umbellata* (Mill.) Nees

Plant Symbol: DOUM2

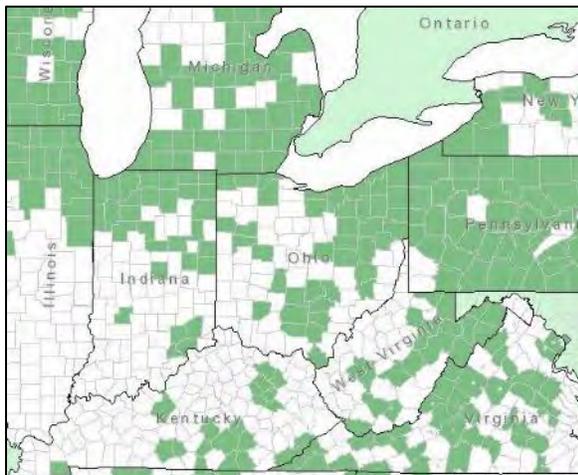
Distinguishing characteristics: Flower heads daisy-like with white rays and a yellow center and ½ to 1 in. across; inflorescence is flat-topped, branched with densely clustered flower heads; the stem has fine longitudinal lines of many small curved hairs; leaves are lance-shaped to widest in the middle, sharp pointed at the tip, have smooth margins, and do not have leaf stalks.

Plant Height: 2-4 ft., erect (only branched in the inflorescence) **Blooms/Fruits:** August-October

Duration: Perennial, herbaceous (from thick, sometimes woody rhizome)

Pollinator Value: This late summer blooming plant is highly attractive to a variety of bees and other invertebrates.

Habitat: Wetland margins, seeps, forest edges, meadows, fields, and disturbed areas.





Flowering/close-up of flowers



Stem and leaf arrangement



Pennsylvania Smartweed (*Polygonum pensylvanicum*)

Smartweed Family

Other Common Names: common smartweed, pink smartweed

Scientific Name: *Polygonum pensylvanicum* L. **Plant Symbol:** POPE2

Family: Polygonaceae

Duration: Annual

Growth Habit: Forb/herb

Plant Height: 0.5-6 ft., variable

Blooms/Fruits: May-November

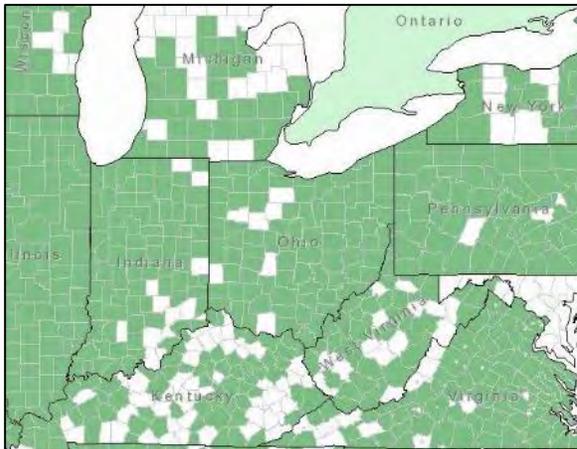
Distinguishing characteristics: Flowers greenish white, white, or pink borne on terminal stalks and in the axils of the upper leaves; inflorescence erect, often slightly drooping; stems have a papery sheath (ocrea) growing above the leaf joints, top of the sheath is smooth and lacks hairs or bristles; leaves arrow-shaped, with or without a reddish chevron.

Pollinator Value: The nectar of this plant is attractive to bees, butterflies, and beneficial insects. It is also a larval host plant to a variety of moths and butterflies.

Habitat: Wetland shallows, mudflats, ditches, disturbed wet areas.

Notes:

1. Many different types of smartweeds occur in the Greater Appalachian Mountains; native, non-native, and some are invasive.
2. Some authors use the scientific name *Persicaria pensylvanica* (L.) Small for this species.



© Robin R. Buckallew



© Robin R. Buckallew

Leaf, stem, and close-up of flower



Photo: R. W. Smith, Lady Bird Johnson Wildflower Center



Photo: © Steve Eggers, USACE

Seed

Purplehead Sneezeweed (*Helenium flexuosum*)

Aster Family

Other Common Names: Southern sneeze-weed, purple-head sneezeweed

Scientific Name: *Helenium flexuosum* Raf.

Plant Symbol: HEFL

Distinguishing characteristics: Stems erect, usually solitary from rhizomes and branched in the upper half of the stem, stems strongly winged with “wings” of tissue running down the stem starting from the attached leaves; leaves alternate on the stem, narrow and widest towards the base or the middle, with small yellow glands on the surface, and the lower leaves dead or absent when flowering; heads daisy like, rays yellow and each with 3 small lobes at the tip; flower centers ball-shaped and sitting above the rest of the flowering head, dark purple to purple-brown in color.

Plant Height: 2-4 ft.

Blooms/Fruits: June–August

Duration: Perennial, herbaceous

Pollinator Value: This plant is known to attract a variety of native bees and butterflies.

Habitat: various, stream and river margins, swamps and sloughs, moist bottomlands and upland depressions, old fields and pastures, roadsides, moist open and disturbed areas.

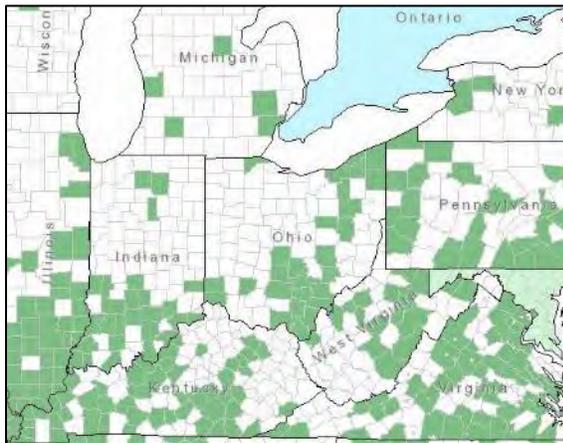


Photo: Mike Haddock



Photo: Mike Haddock



Photo: R.W. Smith, Lady Bird Johnson



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Full flowering/close-up of flowers



Photo: Mike Haddock

Close up of winged stem



Photo: Mike Haddock

Stem and leaf arrangement

Purplestemmed Aster (*Symphyotrichum puniceum*)

Aster Family

Other Common Names: glossy-leaved aster, purple-stemmed aster

Scientific Name: *Symphyotrichum puniceum* (L.) Á. Löve & D. Löve
 SYPU

Plant Symbol:

Distinguishing characteristics: Stems erect, branching from mid-height, developing colonies from long rhizomes; basal and lower stem leaves absent when flowering, when present leaves are sessile or with a very short leaf stem, overall about 4 inches long x 1 inch wide, widest at the top with a short pointed tip, upper surfaces shiny or roughened to the touch; upper stem leaves similar in shape but smaller than basal leaves and the leaves clasp the stem; flowering heads numerous in open inflorescences, about 1.5 inches across, blue rays and yellow centers.

Plant Height: 2-5 ft.

Blooms/Fruits: August–November

Duration: Perennial, herbaceous

Pollinator Value: Moist to wet areas, seeps, swamps, stream banks, bottomland, wet prairies and pastures, road ditches, and moist disturbed areas.

Habitat: Moist to wet areas, seeps, swamps, stream banks, bottomland, wet prairies and pastures, road ditches, and moist disturbed areas.

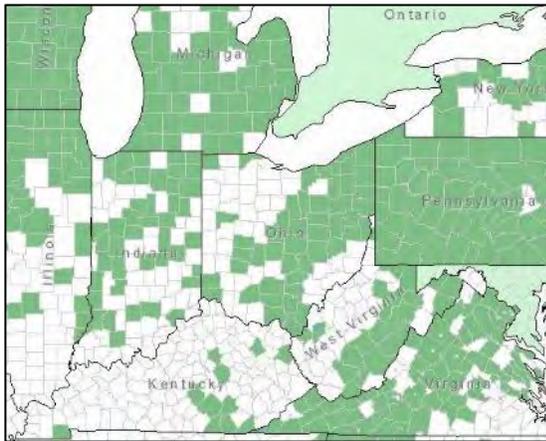


Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Full flowering/close-up of blooms



Close up of stem and leaf



Showy Goldenrod (*Solidago speciosa*)

Aster Family

Other Common Names: prairie goldenrod, showy-wand goldenrod

Scientific Name: *Solidago speciosa* Nutt.

Plant Symbol: SOSP2

Distinguishing characteristics: Flower heads yellow in branched inflorescences arising both terminal and from the axils of the upper leaves, ascending to spreading; leaves are variable – those on the lower portions of the plant widest in the middle or the end of the leaf, and leaves above the middle of the plant are widest towards the base of the leaf, all leaves have 1 main vein, stems with longitudinal ridges or grooves.

Plant Height: 2-5 ft., erect

Blooms/Fruits: August–November

Duration: Perennial, herbaceous

Pollinator Value: This flower is very attractive to bumble bees and butterflies. Goldenrods are quality nectar and pollen sources for pollinators and other beneficial insects. It hosts a number of oligolege bees.

Habitat: Upland prairies, dry to mesic upland forests, dry open site, and roadsides.

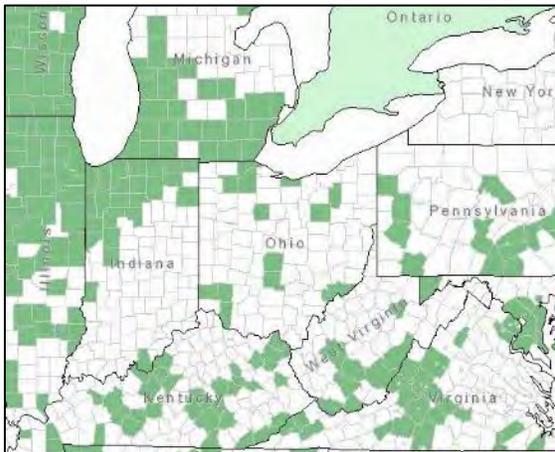


Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Photo: R.W. Smit, Lady Bird Johnson Wildflower Center

Close-up of Flowers



Photo: R.W. Smit, Lady Bird Johnson Wildflower Center



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Illinois Natural History Survey

Mature plant



Photo: John Hilty, Illinois Wildflowers

Leaf

Smooth Blue Aster (*Symphyotrichum laeve*)

Aster Family

Other Common Names: smooth aster

Scientific Name: *Symphyotrichum laeve* var. *laeve* (L.) G.L. Nesom **Plant Symbol:** SYLAL3

Distinguishing characteristics: Flowering heads few to many on the ends of ascending branches, rays are blue to lavender and the center is yellow; leaves are widest near the middle and sometimes heart-shaped, generally without hairs; leaf stems absent or very short; basal leaves and those on the lower half of the stem generally absent/withered at flowering.

Plant Height: 2-4 ft., erect, branched above the stem's midpoint **Blooms/Fruits:** August-October

Duration: Perennial, herbaceous (from creeping, woody rhizomes)

Pollinator Value: Provides nectar and/or pollen to a wide variety of insect taxa including butterflies, beetles, wasps, bumble bees and other native bee species.

Habitat: Open or drying sites, upland prairies, open forests, and roadsides.

Note: Four varieties have been described to smooth blue aster. Varieties *laeve* and variety *concinnum* occur in the Appalachian region. This variety, *S. l.* var. *laeve* is distinguished from the other 3 varieties by having the phyllary bracts under the inflorescence noticeably unequal and on the tip of each there is a diamond shaped green patch at the tip.

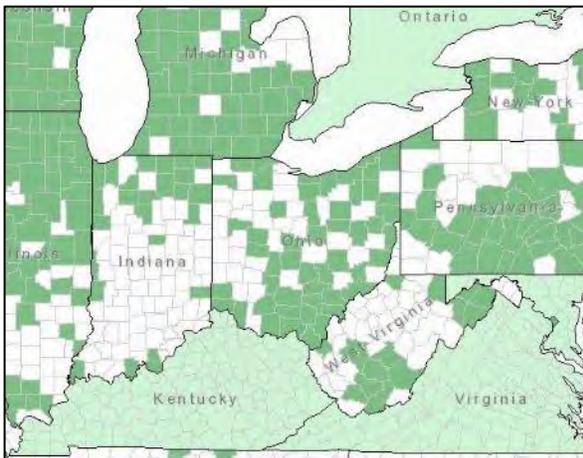




Photo: R.W. Smith, Lady Bird Johnson Wildflower Center © 2009 k. chayka

© 2009 k. chayka

Full flowering/close-up of flowers



Photo: John Hilty, Illinois Wildflower

Photo: © 2007 K. Chayka

Stem and leaf arrangement



© 2009 k. chayka

Mature plant

Smooth Oxeye (*Heliopsis helianthoides*)

Aster Family

Other Common Names: oxeye sunflower, false sunflower

Scientific Name: *Heliopsis helianthoides* (L.) Sweet

Plant Symbol: HEHE5

Distinguishing characteristics: Flower heads with persistent yellow rays and a cone-shaped yellow-orange center and superficially appearing like a small version of common sunflower; leaves are opposite on the stem, have a rough texture to the touch, with coarsely saw-toothed margins, 3 main veins, and a pointed tip.

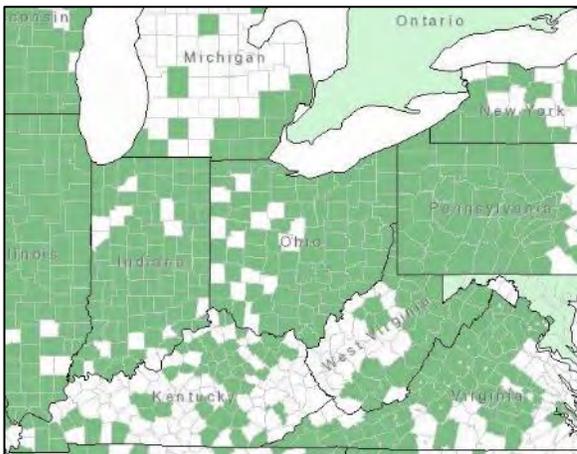
Plant Height: 3-5 ft., erect

Blooms/Fruits: June-September

Duration: Perennial, herbaceous (from creeping rhizomes)

Pollinator Value: This summer blooming flower is of high value to many pollinators and beneficial insects. It has its own oligolege bee, and it attracts butterflies.

Habitat: Dry areas, prairies, edges of woods, roadsides, open woods, edges of fields and thickets.



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Full flowering/close-up of blooms



Photo: R.W. Smith, Lady Bird Johnson
Wildflower Center



Julie Makin, Lady Bird Johnson
Wildflower Center



Photo: Robert S. Lane, Lady Bird Johnson
Wildflower Center



Photo: Robert S. Lane, Lady Bird Johnson
Wildflower Center

Mature plant



Photo: John Hilty, Illinois Wildflowers

Stem arrangement



Photo: John Hilty, Illinois Wildflowers

Leaf

Spotted Joe Pye Weed (*Eutrochium maculatum*)

Aster Family

Other Common Names: spotted trumpetweed, eupatoire maculée

Scientific Name: *Eutrochium* (= *Eupatorium*) *maculatum* (L.) E.E. Lamont **Plant Symbol:** EUMA9

Distinguishing characteristics: Flower heads are terminal in large, purple, dome-shaped inflorescences; leaves are in whorls of 4 to 5 (except towards the top where they can be alternate), tapering to a point at the tip, have margins sharply toothed, undersurfaces with both short hairs and glandular hairs, and only 1 main vein per leaf; the stems are solid (except at the very base) and are colored with dark purple mottling or uniformly dark purple tinged.

Plant Height: 3-6 ft., erect

Blooms/Fruits: August-September

Duration: Perennial, herbaceous

Pollinator Value: This late summer flower provides nectar for long-tongued bees and butterflies.

Habitat: Pastures & disturbed sites, moist areas, and open sun or partial shade.

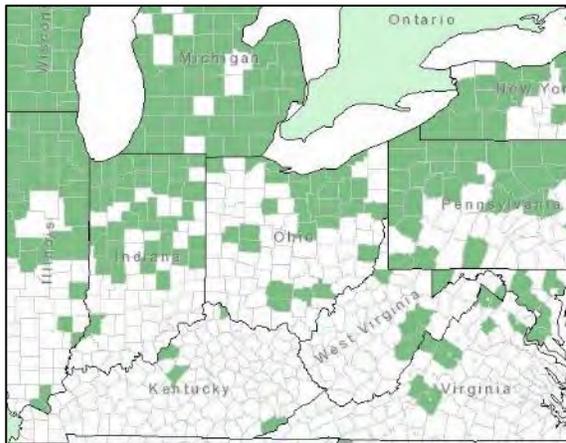


Photo: Steve Eggers ©



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Full flowering



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Stem and leaf arrangement

Stiff Goldenrod (*Oligoneuron rigidum*)

Aster Family

Other Common Names: ridged goldenrod

Scientific Name: *Oligoneuron rigidum* (L.) Small

Plant Symbol: OLRI

Distinguishing characteristics: Flower heads in branched, flat-topped to mildly rounded inflorescences, individual flower heads small with yellow rays and yellow centers; leaves with basal rosettes that are persistent at flowering as well as smaller stem leaves; leaf surfaces with short, usually dense, curved hairs making the surface feel rough; stems with several fine grooves/ridges and with pubescence of curved hairs.

Plant Height: 2-4 ft., erect

Blooms/Fruits: July–November

Duration: Perennial, herbaceous (with short, creeping rhizomes)

Pollinator Value: This flower supports pollinators and beneficial insects. It attracts butterflies, including the monarch.

Habitat: Bottomland and upland prairies, dry upland forests, old fields, and pastures.

Note: There are many plants commonly called goldenrods that belong to different plant genera, *Solidago*, *Euthamia*, and *Oligoneuron*, and they are all fairly similar. They generally have yellow, clustered flowers, but some species are white. The flowering stems can be elongate and recurved or flat-topped.

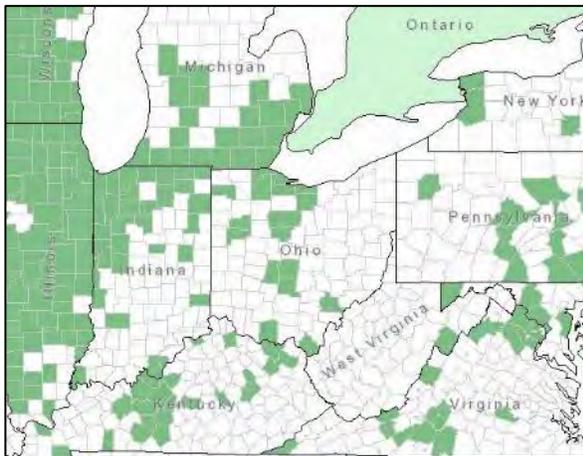


Photo: W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



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History Survey

Full flowering/close-up of blooms



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Illinois Natural History Survey



Photo: Janice Lynn, Lady Bird Johnson Wildflower
Center

Stem and leaf arrangement



Photo: Julie Makin, Lady Bird Johnson Wildflower Center

Swamp Milkweed (*Asclepias incarnata*)

Milkweed Family

Other Common Names: rose milkweed, pleurisy root, white Indian hemp

Scientific Name: *Asclepias incarnata* L. **Plant Symbol:** ASIN

Distinguishing characteristics: Inflorescences long stalked and with 2–12 per plant, both terminal and in the leaf axis toward the upper end of the stem; flowers pink to pinkish-white; petals reflexed; leaves opposite on the stem, lance-shaped, and with an abrupt or rounded base; leaf stalk short.

Plant Height: 2–6 ft., erect

Blooms/Fruits: June–October

Duration: Perennial, herbaceous (from fibrous rootstock)

Pollinator Value: Larval host plant for the monarch butterfly. Flowers attract butterflies.

Habitat: Wetland habitats: swamps, sloughs, marshes, and edges of ponds.

Note: Swamp milkweed is poisonous if consumed in larger quantities by people and livestock. Sheep are especially susceptible.

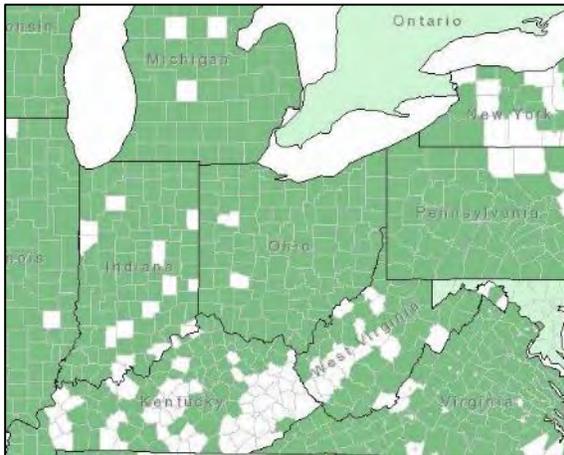


Photo: Jennifer Anderson ©



Photo: Jennifer Anderson ©

Full flowering/close-up of blooms



Photo: Joseph Marcus, Lady Bird Johnson Wildflower Center



Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center

Leaf arrangement



Photo: Steve Eggers, USACE

Fruit

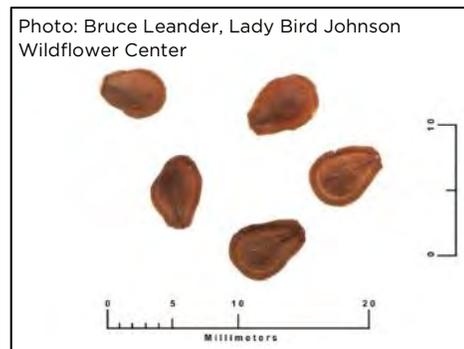


Photo: Bruce Leander, Lady Bird Johnson Wildflower Center

Seed

Swamp Verbena (*Verbena hastata*)

Vervain Family

Other Common Names: blue vervain, blue verbena, Simpler's joy

Scientific Name: *Verbena hastata* L.

Plant Symbol: VEHA2

Distinguishing characteristics: Stems erect with opposite leaves, square/angled stems, and most branching occurs on the upper half of the plant; leaves widely lance-shaped, coarsely toothed and sometimes double-toothed, and (except for the uppermost leaves) have a short leaf stem; inflorescences in long spikes appearing candelabra-like, each spike with a ring of blue flowers, the ring flowering first at the base of the spike and the ring moves up towards the top as flowering continues.

Plant Height: 2-5 ft.

Blooms/Fruits: June–October

Duration: Perennial/Biennial, herbaceous

Pollinator Value: Provides nectar to many beneficial insects.

Habitat: Edges of marshes, swamps, streams, and ponds. Also in moist meadows, prairies, fields, and woodlands.

Note: There are two varieties of swamp verbena, only one of which occurs in the Appalachian Region: *Verbena hastata* var. *hastata*.

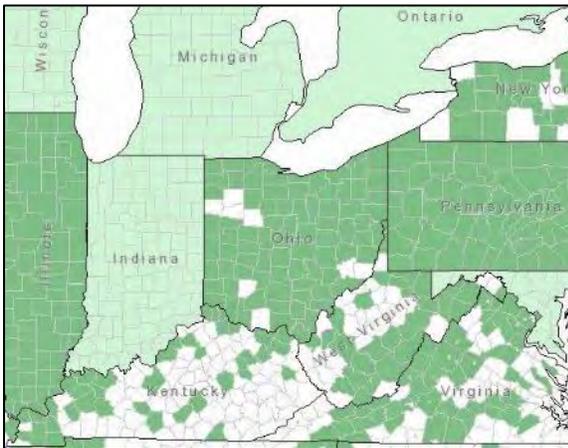




Photo: Mike Haddock

Full flowering/close-up of blooms

Photo: Albert F.W. Vick, Lady Bird Johnson Wildflower Center



Seedling



© 2013 Katy Chayka

Mature plant



Photo: Mike Haddock



Photo: Mike Haddock

Foliage/close-up of leaf

Tall Blazing Star (*Liatris aspera*)

Aster Family

Other Common Names: rough gayfeather

Scientific Name: *Liatris aspera* Michx.

Plant Symbol: LIAS

Distinguishing characteristics: Flower heads are in small powder-puffs interspersed along an elongate spike-like inflorescence; the leaves are widest towards the middle or tip of the leaves, but they are always very narrow, appearing linear.

Plant Height: 2-4 ft., erect

Blooms/Fruits: August–November

Duration: Perennial, herbaceous (with a round corm)

Pollinator Value: Monarchs are known to visit this plant. Bees and butterflies are attracted to the flowers of this late summer/fall nectar source.

Habitat: Upland prairies, glades, openings of mesic to dry upland forests, pastures, and roadsides.

Note: There are several *Liatris* species that are similar in appearance to Tall Blazing Star. This species can be distinguished from others by having the bracts under the flower heads with thin, transparent margins which are purplish-tinged and appearing torn. The individual flowers are hairy within the floral tube, and the terminal head is NOT larger than the rest of the heads.

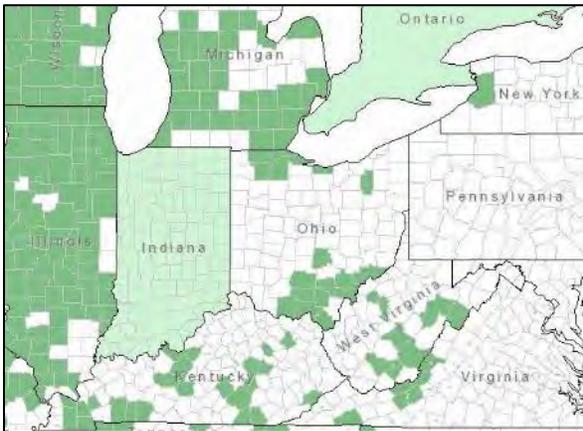


Photo: Sally and Andy Wasowski, Lady Bird Johnson Wildflower Center



Full flowering/close-up of blooms



Mature plant



Seedlings

Tall Goldenrod (*Solidago altissima*)

Aster Family

Other Common Names: tall goldenrod, late goldenrod

Scientific Name: *Solidago Canadensis* L.

Plant Symbol: SOAL6

Distinguishing characteristics: Stems 1 – several from rhizomes, leafy throughout, and with several fine, longitudinal lines or grooves along the stem; leaves narrow, widest near the top or middle (4–5 inches long by 1 inch wide), and with 3 prominent veins; inflorescence terminal and generally overall pyramid shaped; individual flowering heads all upright on the recurving flowering branches, small, with 10–16 yellow rays and 3–7 yellow disc flowers in the centers.

Plant Height: 3–6 feet.

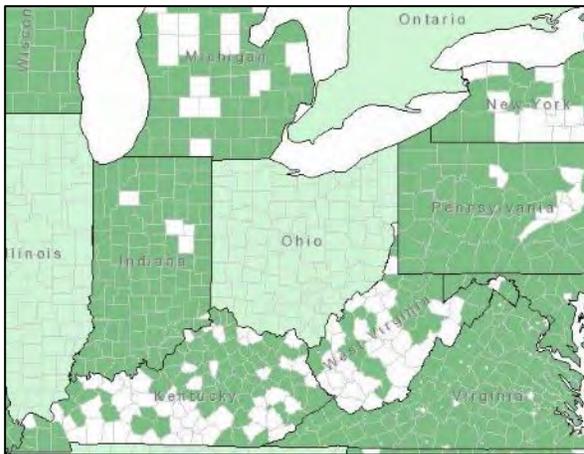
Blooms/Fruits: August–November

Duration: Perennial, herbaceous

Pollinator Value: Goldenrods are very attractive to pollinators and other beneficial insects. They host a number of oligolege bees.

Habitat: Upland prairies, old fields, pastures, roadsides, and disturbed areas. Fairly common throughout its range.

Note: A similar species (*Solidago canadensis*) also goes by the common name Canada goldenrod. That species has smaller individual flower heads, and fewer ray (6–12) and disc (2–5) flowers.





Full flowering/close-up of blooms



Mature plant

Leaf arrangement

Tall Thistle (*Cirsium altissimum*)

Aster Family

Other Common Names: Iowa thistle, roadside thistle

Scientific Name: *Cirsium altissimum* (L.) Hill

Plant Symbol: CIAL2

Distinguishing characteristics: Stems solitary with heavy branching in the upper portions of the stem; Leaves with a basal rosette of 1st year leaves and stems leafy with the 2nd year growth; basal & stem leaves large, up to 10 in. long and 5 in. wide, generally not lobed or with shallow lobes; leaf margins wavy and spine tipped; flowering heads numerous and solitary at the ends of the branch tips, pinkish-purple to reddish-purple in color.

Plant Height: (variable) 3-10 ft.

Blooms/Fruits: July-September

Duration: Biennial, herbaceous

Pollinator Value: This native thistle is highly attractive to numerous pollinators, from bumble bees to the monarch butterfly.

Habitat: Bottomland forests, open stream bottom thickets, pastures, savannahs, old fields, and roadsides.

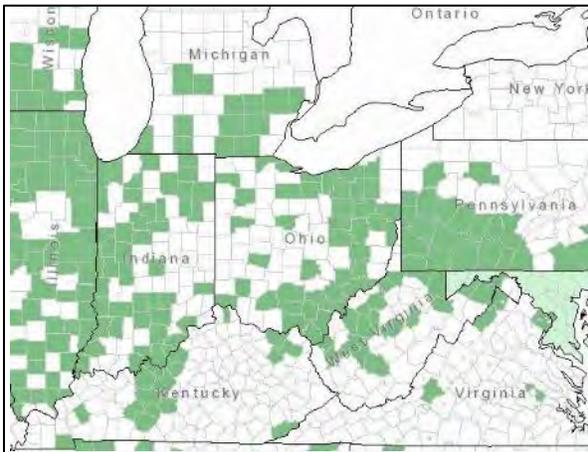


Photo: Mike Haddock



Photo: Mike Haddock



Photo: Mike Haddock

Close-up view of flower



Photo: Mike Haddock



Photo: Mike Haddock

Stem and leaf characteristics

Trumpetweed (*Eutrochium fistulosum*)

Aster Family

Other Common Names: hollow joepyeweed, hollow-stemmed joepyeweed

Scientific Name: *Eutrochium (=Eupatorium) fistulosum* (Barratt) E.E. Lamont

Plant Symbol: EUFI14

Distinguishing characteristics: Individual flowering heads small, pinkish-purple, in large dome-shaped inflorescences, rays absent; leaves in whorls of 4 - 7, lance-shaped and finely toothed on the margins; stems purplish or purple blotched throughout, covered with a thin, white-waxy coating (glaucous), and hollow except where the leaves attach (nodes) and the top of the plant.

Plant Height: 3-9+ ft., erect
September

Blooms/Fruits: July-

Duration: Perennial, herbaceous

Pollinator Value: This flower blooms in the summer and is visited by numerous species of pollinator and beneficial insects. It is known to attract butterflies.

Habitat: Wet lowlands, bottomland forests, alluvial woods, along stream and riverbanks, moist meadows, bogs, marshes, moist pastures, and roadsides.

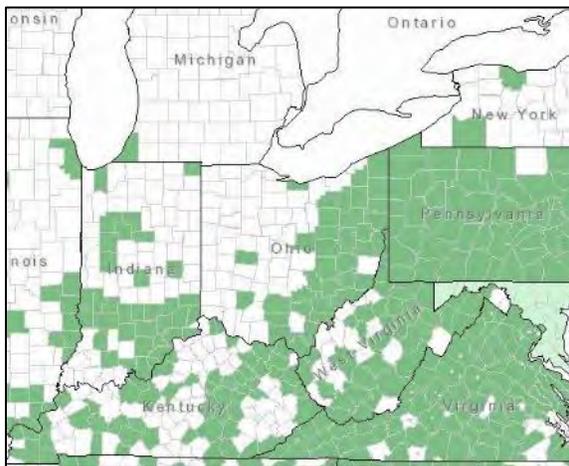


Photo: W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Photo: John Hilty, Illinois

Photo: Alan Cressler, Lady Bird Johnson Wildflower Center

Full flowering/close-up of flowers



Photo: John Hilty, Illinois



Photo: W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center

Stem and leaf arrangement

White Crownbeard (*Verbesina virginica*)

Aster Family

Other Common Names: frostweed, iceweed, squaw-weed, Virginia crown-beard

Scientific Name: *Verbesina virginica* L.

Plant Symbol: VEVI3

Family: Asteraceae

Duration: Biennial, Perennial

Growth Habit: Forb/herb

Plant Height: 4-8 ft.

Blooms/Fruits: August–November

Distinguishing characteristics: Stems are winged and densely covered with short woolly hairs appearing felt-like; white flower heads; seeds winged and with two barbed awns at the tip.

Pollinator Value: This late season nectar source has been noted as important to fall butterflies and migrating monarchs.

Habitat: Bottomlands, floodplains, woodland borders, tree driplines and savannahs (40% shade), pastures, & disturbed sites.



Photo: Marcus Joseph, Lady Bird Johnson Wildflower Center



Photo: Joseph Marcus, Lady Bird Johnson Wildflower

Seedling (note the winged-stem)



Photo: Marcus Joseph, Lady Bird Johnson Wildflower

Flowering



Photo: Marcus Joseph, Lady Bird Johnson Wildflower

Close-up of winged stem



Ice ribbon formed around the stem

Whorled Milkweed (*Asclepias verticillata*)

Milkweed Family

Other Common Names: horsetail milkweed

Scientific Name: *Asclepias verticillata* L. **Plant Symbol:** ASVE

Distinguishing characteristics: Leaves very linear/narrow and whorled along the stem. Flower clusters in loose roundish clusters, white to greenish-white sometimes with a purple tinge; petals reflexed but with upturned tips; stems solitary or few from the root mass.

Plant Height: 1-3 ft., erect

Blooms/Fruits: May–September

Duration: Perennial, herbaceous

Pollinator Value: Larval host plant for the monarch butterfly. Provides nectar in the summer and early fall. Flowers attract butterflies.

Habitat: Upland prairies, savannahs, pastures, roadsides, and open upland forests.

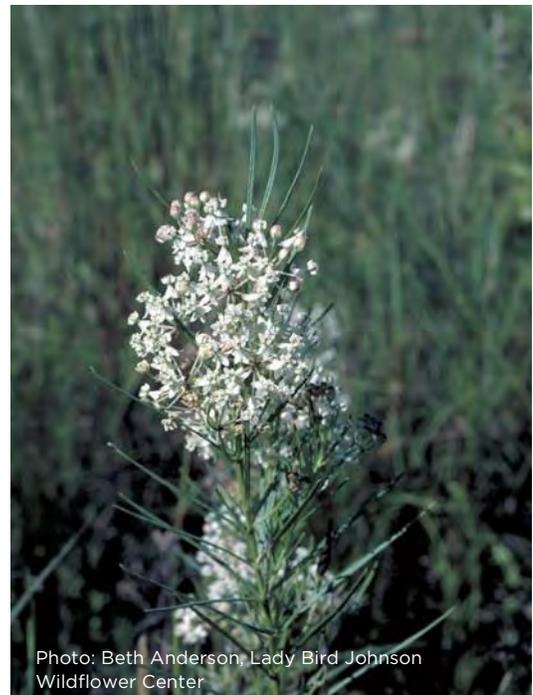
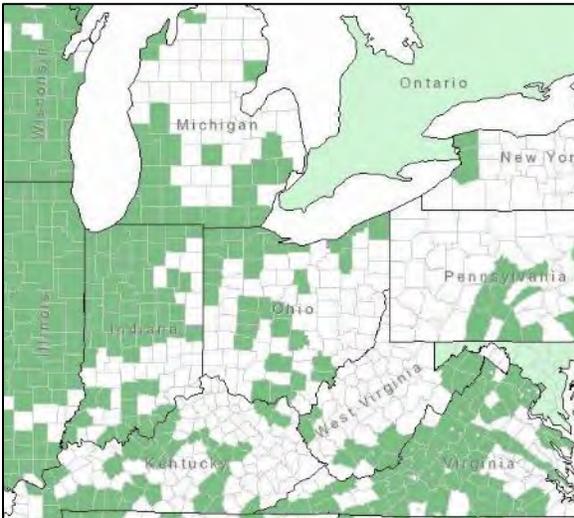




Photo: Beth Anderson, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Janice Lynn, Lady Bird Johnson Wildflower Center



Photo: Edith Bettinger, Lady Bird Johnson Wildflower Center

Stem and leaf arrangement



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Multiple inflorescences



Photo: Carolyn Fannon, Lady Bird Johnson Wildflower Center

Fruit (left) and mature fruit with seed (right)



Photo: Janice Lynn, Lady Bird Johnson Wildflower Center

Whorled Rosinweed (*Silphium trifoliatum*)

Aster Family

Other Common Names: none

Scientific Name: *Silphium trifoliatum* L.

Plant Symbol: SITR7

Distinguishing characteristics: Stems from short rhizomes, solitary with branches in the inflorescence, and generally lack hairs but may have a waxy bloom (glaucous); leaves in whorls of 3, 5, or sometimes opposite, lance-shaped to broadly lance-shaped, with margins either smoothed or toothed, and a short leaf stem.; inflorescence large, daisy-like, with yellow rays and a yellow center.

Plant Height: 4-6 ft.

Blooms/Fruits: July-September

Duration: Perennial, herbaceous

Pollinator Value: Attracts bumblebees, flies, wasps, and butterflies to feed.

Habitat: Open woods, prairies, and open disturbed areas.

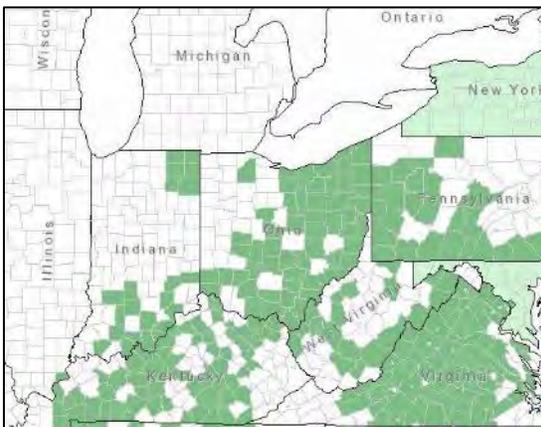




Photo: Nancy Adamson, Xerces Society



Photo: Nancy Adamson, Xerces Society



Photo: Nancy Adamson, Xerces Society

Close-up of blooms/flower buds

Wild Bergamot (*Monarda fistulosa*)

Mint Family

Other Common Names: beebalm

Scientific Name: *Monarda fistulosa* L.

Plant Symbol: MOFI

Distinguishing characteristics: Flowers in tight ball-like clusters terminating the branches, strongly 2-lipped with the upper lip erect and the lower lip downturned, pale to dark lavender, but rarely white; leaves opposite, variable from lance-shaped to widely lance-shaped, the undersurface has small, clear spots (punctae) that are visible when holding the leaf up to the light; stems are square and with backwards-pointed hairs on the upper half of the stem.

Plant Height: 1.5–4 ft., erect

Blooms/Fruits: May–September

Duration: Perennial, herbaceous (with slender, creeping rhizomes)

Pollinator Value: This flower is highly attractive to long-tongued bees and butterflies.

Habitat: Dry open woods, fields, wet meadows and ditches, and at the edges of woods and marshes; calcareous or acidic soils.

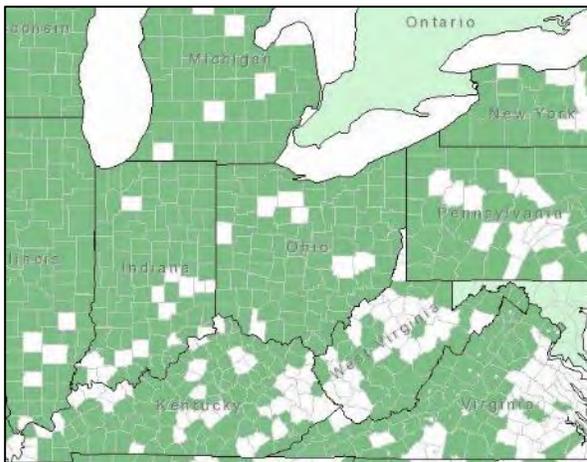




Photo: Alan Cressler, Lady Bird Johnson Wildflower Center



Photo: Eric Beckers, Lady Bird Johnson Wildflower Center



Photo: Thomas Muller, Lady Bird Johnson Wildflower Center

Full flowering/close-up of blooms



Photo: Sandy Smith, Lady Bird Johnson Wildflower Center

Flower bud



Photo: W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center

Foliage/leaf arrangement

Willowleaf Aster (*Symphotrichum praealtum*)

Aster Family

Other Common Names: willow aster, tall aster

Scientific Name: *Symphotrichum praealtum* (Poir.) G. L. Nesom

Plant Symbol: SYPR5

Distinguishing characteristics: Stems erect, branched above the midpoint, often colonial from long, branched rhizomes; leaves sessile on the stem, 3 in. long by 1 in. wide, widest near the top of the leaf, lower leaves absent at flowering, leaf size gradually diminishes from the middle of the stem towards the top; inflorescence with numerous daisy-like heads; flowering heads with numerous purple to bluish-purple rays and a yellow disk.

Plant Height: 3-5 ft.

Blooms/Fruits: August-November

Duration: Perennial, herbaceous

Pollinator Value: These flowers are known to be useful to native bees and a source of nectar for monarch butterflies.

Habitat: Bottomland prairies, moist depressions, river and stream banks, wet roadside ditches, and open disturbed areas.

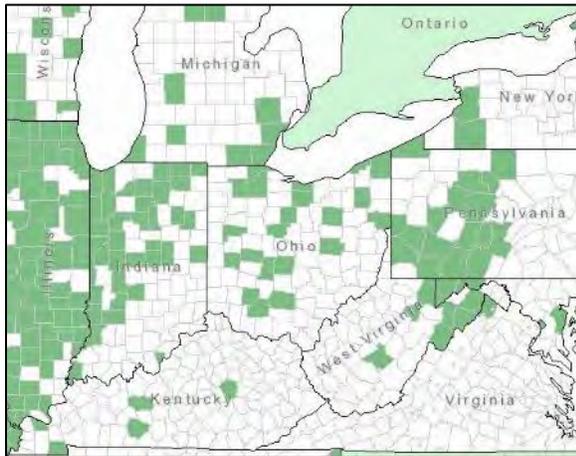


Photo: Janice Lynn, Lady Bird Johnson Wildflower Center



Flowering/close-up of flowers/flower buds



Stem and Leaf

Wingstem (*Verbesina alternifolia*)

Aster Family

Other Common Names: yellow ironweed

Scientific Name: *Verbesina alternifolia* (L.) Britton ex Kearney **Plant Symbol:** VEAL

Distinguishing characteristics: Flower heads numerous in loose, open terminal inflorescences; individual flower heads large, up to 3 inches across with a spherical yellow center and yellow, elongate, drooping rays; stems upright with extra green tissue running down the stem from the point of attachment of the leaves giving it a winged appearance; leaves large, 7 - 10 inches long, generally alternate along the stem and typically without a leaf stem, widely lance-shaped, and rough to the touch on the upper surface.

Plant Height: 5-6 feet **Blooms/Fruits:** August-October

Duration: Perennial, herbaceous

Pollinator Value: Very heavily visited by honeybees, but also visited by bumble bees, other native bees, wasps, flies and butterflies.

Habitat: Banks or streams, pastures and open woodland, and roadsides

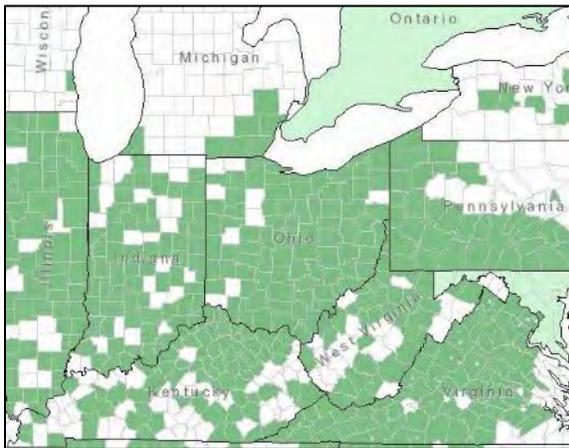


Photo: Mike Haddock



Flowering/close-up of flowers



Close up of winged stem



Leaf and leaf arrangement

Woodland Sunflower (*Helianthus divaricatus*)

Aster Family

Other Common Names: rough sunflower

Scientific Name: *Helianthus divaricatus* L.

Plant Symbol: HED12

Distinguishing characteristics: Stems often colonial arising from woody rootstocks and long branched rhizomes, stem branching above mid-stem; leaves opposite, attached to the stem without a leaf stem or with a very short one (< 1/8 inch), triangular in shape with a pointed tip, rounded to heart-shaped base, and smooth margins; the leaf has 1 main mid-vein and two lateral veins with the two laterals joining the mid-vein at the very base of the leaf; flowering heads terminating the ends of branches, daisy-like with yellow rays and a yellow center.

Plant Height: 4-6 ft.

Blooms/Fruits: July-September

Duration: Perennial, herbaceous

Pollinator Value: Honey bees visit this plant, as do a wide variety of native bees, including *Bombus* spp., *Ceratina* spp., and *Agapostemon*. Wasps, flies, beetles, butterflies and moths also visit.

Habitat: Dry open woodlands, pastures, bluffs, and roadsides.

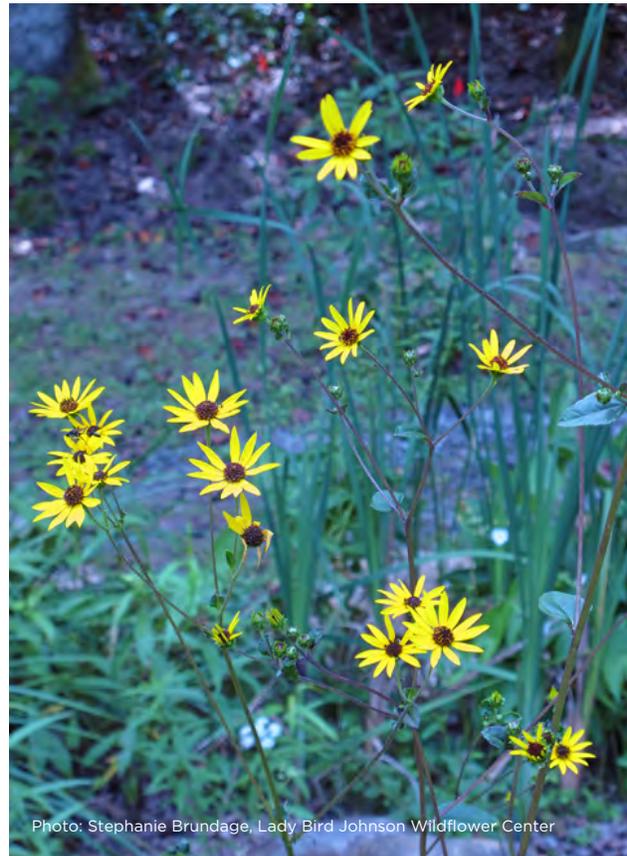
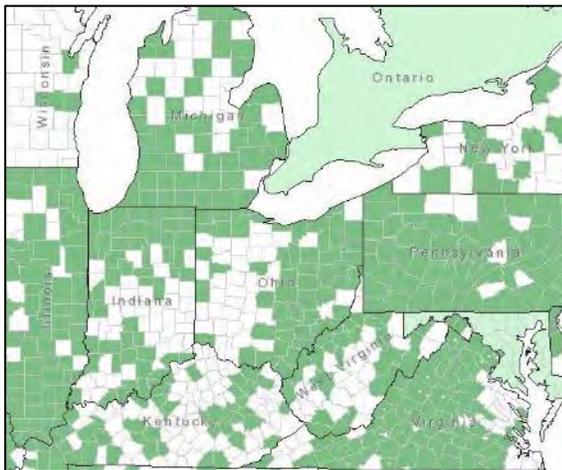


Photo: Stephanie Brundage, Lady Bird Johnson Wildflower Center



Close-up of flowers



Leaf shape and arrangement

Wreath Goldenrod (*Solidago caesia*)

Aster Family

Other Common Names: blue-stemmed goldenrod, bluestem goldenrod

Scientific Name: *Solidago caesia* L.

Plant Symbol: SOCA4

Distinguishing characteristics: Stems arising from a stout, branched rhizome, covered with a white waxy bloom (glaucous) and appearing bluish, purple to green when bloom is rubbed off; leaves narrow, widest in the middle, about 10x longer than wide, pointed at the tip, tapered at the base and usually without a leaf stem, margins coarsely serrated; basal leaves smaller than the stem leaves and usually withered at flowering; inflorescences of numerous small clusters located in the leaf axils and at the top of the stem, yellow.

Plant Height: 1-3 ft.

Blooms/Fruits: August-October

Duration: Perennial, herbaceous

Pollinator Value: Visited by honey bees, bumble bees, other native bees (*Augochlora*, *Augochlorella* spp.) and butterflies.

Habitat: Rich deciduous woodlands, bottomland forests, mesic uplands, and roadsides. This species is somewhat shade tolerant compared to other goldenrods.

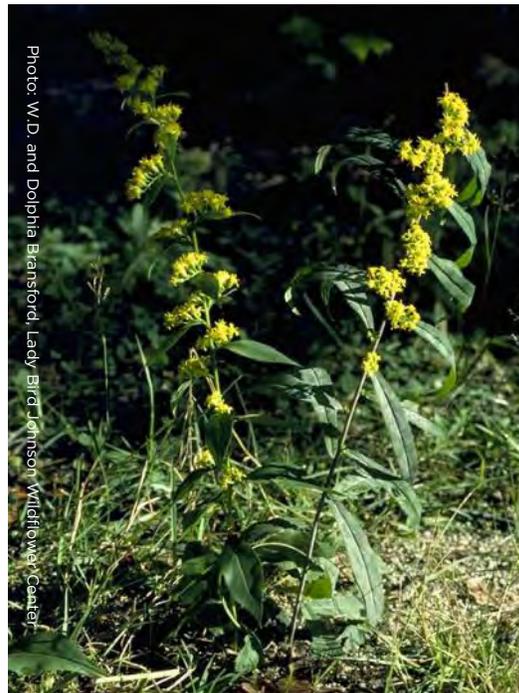
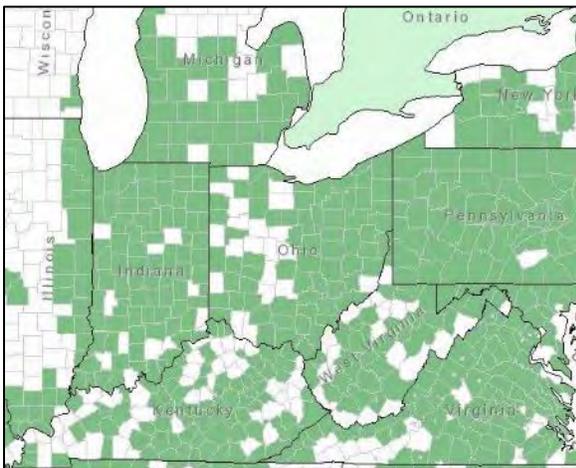


Photo: W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



Flowering/close-up of flower



Wrinkleleaf Goldenrod (*Solidago rugosa*)

Aster Family

Other Common Names: rough-leaved goldenrod, rough-stemmed goldenrod, verge d'or rugueuse

Scientific Name: *Solidago rugosa* Mill. **Plant Symbol:** SORU2

Family: Asteraceae

Duration: Perennial

Growth Habit: Forb/herb

Plant Height: 2–6 ft.

Blooms/Fruits: August–October

Distinguishing characteristics: Leaves with only 1 obvious vein; upper surface of leaves and stems rough/raspy to the touch. Flower heads many on recurved floral branches in an overall pyramid-shaped inflorescence, flowers all yellow; leaves are lance-shaped or elliptical and become smaller towards the top of the stem; basal leaves withered at flowering.

Pollinator Value: Wrinkleleaf goldenrod provides floral resources to many insects, including pollinators and butterflies.

Habitat: Bottomland forests, stream banks, pastures, and roadsides.

Note: There are many plants commonly called goldenrods that belong to different plant genera (e.g., *Chrysoma*, *Euthamia*, *Oligoneuron*, and *Solidago*) and are all fairly similar. They generally have yellow, clustered flowers, but some species are white. The flowering stems can be elongate and recurved (*Solidago*) or flat-topped (*Euthamia* & *Oligoneuron*).

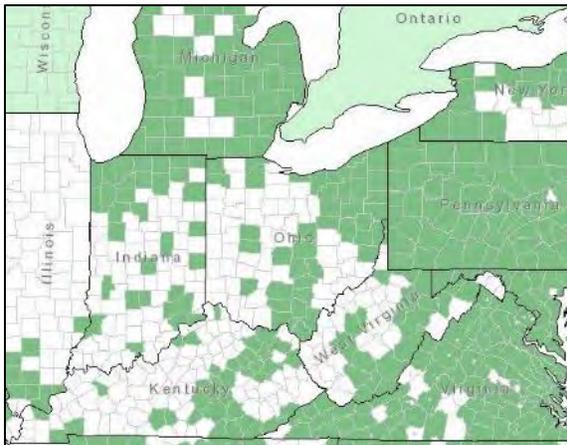


Photo: W.D. and Dolphia Bransford, Lady Bird Johnson Wildflower Center



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center

Close-up of flowers



Photo: R.W. Smith, Lady Bird Johnson Wildflower Center



Photo: Tom Kent

Leaf arrangement



Photo: Tom Kent

Close-up of stem

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Distribution Maps

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