Monarch Butterfly Nectar Plant Lists for Conservation Plantings



Introduction

Monarch butterflies are an iconic part of our natural heritage, heralding the changing seasons as they journey north in spring and south in fall. Monarchs' reliance on milkweeds (*Asclepias* spp.) as host plants for their caterpillars is well known, but they need more than just milkweed. The adults depend on diverse flowers for nectar to fuel them during breeding and on their long migration. By planting milkweed and other nectar-rich wildflowers, and protecting habitat from disturbance, we can help restore monarch populations and ensure that their migration continues.

The Xerces Society works with the Natural Resources Conservation Service (NRCS), farmers, and communities to protect, restore, and plant monarch habitat throughout the United States.

Plant List Notes

Each nectar plant list includes the top species recommended for that region. Although other monarch and pollinator plant lists are available, here we include only plants for which we have documented observations of adult monarchs nectaring. Wherever possible, plants included were reported by multiple sources or noted to be exceptional monarch magnets. Biologists from the Xerces Society, NRCS, U.S. Fish and Wildlife Service, state resource management agencies, universities, and conservation organizations contributed their observations. The lists are constantly evolving as more monarch observations are gathered. You can contribute to this growing body of knowledge. Please add your observations of adult monarchs nectaring at www.monarchmilkweedmapper.org.



Plants included are commercially available and relatively easy to grow. Each list is tailored to only include species that bloom during the times of year that monarchs are expected to be in each region. In time, the data on monarch nectaring preferences could lead to new seed and plant propagation efforts, and to more effective conservation plantings.

When using these lists, also consider plants listed for adjacent regions if they are also native and have bloom times coinciding with monarch presence in your region. Visit <u>http://plants.usda.gov</u> for distributions. Though we are listing individual species (vs. genera), other species in those genera may be equally valuable. This is particularly the case for thistles, goldenrods, and other composites (e.g., asters and sunflowers).

Planting Guidelines

For plantings to support monarchs, the Xerces Society and NRCS recommend including at least 1.5% milkweed. Across the U.S., there are about 76 species of milkweed, but only a few are commercially available. Milkweeds also produce abundant nectar that is excellent for adult butterflies, bees and other pollinators, and diverse predators and parasitoids of crop pests.

Choose milkweeds and other plants native to your region, that flower in months when monarchs are present (highlighted in orange on each regional plant list), that fill gaps in blooms available at the planting site, and that are suited to the growing conditions of your site. Use a Pollinator Habitat Assessment Guide or Monarch Wildlife Habitat Evaluation Guide (WHEG) to assess habitat needs in your landscapes (see *Additional Resources* on p. 18).

What is the best plant for monarchs in addition to milkweed? Plants with the most observations include blazing stars (*Liatris* spp.), beggarticks (*Bidens* spp.), thistles (*Cirsium* spp.), crownbeards or wingstems (*Verbesina* spp.), goldenrods (*Solidago* and *Oligoneuron* spp.), and asters (*Symphyotrichum* spp.). Note that native thistles have been decimated inadvertently by efforts to eradicate non-native Canada thistle (*Cirsium arvense*), and are often not commercially available. Our native thistles are not aggressive and are among the best overall pollinator plants in our native floras.

Alternate Host Plants

Though milkweeds are the most important larval host plants, monarchs also lay their eggs and successfully develop on some native honeyvines (e.g., *Cynanchum laeve*) and milkvines (*Matalea* spp.; aka moonvine). However, please avoid using non-native species in these genera, because adult monarchs will lay eggs on them but the caterpillars will not feed. This is particularly the case with black swallow-wort (*C. louisea*) and pale swallow-wort (*C. rossicum*). For more on how you can help monarchs, see *Additional Resources* on p. 18.

Monarch Nectar Plant List Regions



Multiple Benefits

Plantings for monarchs support a huge diversity of wildlife, including bees, butterflies, and other agriculturally beneficial insects such as wasps, flies, beetles, and other natural enemies of crop pests that depend on the same floral resources that monarchs and other pollinators do.

In spring and early summer, most birds feed caterpillars to their young and those caterpillars need native plants to eat. Hummingbirds depend on many of the same flowers that provide nectar for spring and fall migrating monarchs. Fall flowering species like asters, goldenrods, and blazing stars are also vital for pre-hibernation bumble bee queens.

Thank you for planting for pollinators!



Many monarch nectar plants, like common milkweed (*A. syriaca*), also attract bees^A and hummingbirds^B. (Photographs © Dennis Burnette, Carolina Butterfly Society^A and Debbie Koenigs/USFWS^C.)

MARITIME NORTHWEST

MONARCH BUTTERFLY NECTAR PLANTS





SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NUL		AllG	CED			LEL		C	•	E₹		¥		(j)
Abronia latifolia	Coastal sand verbena			8 8	8 8	8 8	*	88 88	8	3 8	3 8	ß	T	Н	Р	Y	1'	L/M	Ø	1	А
Aesculus californica	California buckeye					8 8	*	\$	ł					S	Р	<u> W/Рк</u>	20'	М	¥	2	В
Agastache urticifolia	Nettleleaf giant hyssop						*	\$ 8 8	8	3				S	Р	<u>Pr/R</u>	2'	L	Ø	3	C, D
Asclepias cordifolia 🍆	Heartleaf milkweed					8 8	*	\$						Η	Р	<u>Рк/Р</u>	3'	L	Ø	5	E
Asclepias fascicularis 🍆	Narrow-leaved milkweed						*	\$ 8 8	8	3				Η	Р	<u>Рк/W</u>	3'	Μ	Ø	10	F
Asclepias speciosa ⊾ 🖸	Showy milkweed						*	\$	8	3				Η	Р	<u>Рк/G/Pr</u>	3'	М	Ø	71	G
Baccharis pilularis	Coyotebrush								8	3 8	3 8	₿		S	Р	<u>W/Y</u>	6'	L	¥	4	E
Ceanothus thyrsiflorus	Blueblossom				8 8	8 8	*	\$						S	Р	<u>BL</u>	15'	L	0 1	2	
Chamerion angustifolium	Fireweed							*	8	3				Н	Р	Рк	6'	М	Ø	1	
Cirsium occidentale	Cobwebby thistle					8 80	8	8 8	}					Н	В	<u>Рк/W/Pr</u>	4'	L	Ø	2	
Clematis ligusticifolia	Western white clematis						8	\$	8	3				V	Р	W	20'	М	¥	1	
Delphinium glaucum	Sierra larkspur							88	8	3	3			Н	Р	BL/PR	6'	Н	Ø	1	
Dichelostemma capitatum	Bluedicks				8 8	8 8	*	}						Η	Р	PR	3'	L	Ø	3	
Ericameria nauseosa	Rubber rabbitbrush								8	3 8	3 8	₿		S	Р	Y	8'	L	Ø	80	E
Eriogonum umbellatum	Sulphur-flower buckwheat						8	8 8	8	3 8	3			Н	Р	Y	3'	L	Ø	1	
Helianthus annuus	Common sunflower						8	8	8	3				Н	А	Y	5'	М	Ø	18	
Monardella odoratissima	Mountain monardella						8	8 8	8	3				Н	Р	W/Pr	1'	L	¥	2	Н
Penstemon procerus	Littleflower penstemon						88	8 8	8	3				S	Р	BL/PR	1'	L	¥	1	
Philadelphus lewisii	Lewis' mock orange					8 80	*	8 8	}					S	Р	W	10'	L	¥	1	
Rudbeckia occidentalis	Western coneflower						88	8 8	8	3				Н	Р	Br/G	6'	L/M	Ø	2	
Solidago can. var. salebrosa	Rough Canada goldenrod							*	8	3 8	3			Н	Р	Y	7'	М	01	5	
Symphyotrichum chilense	Pacific aster								8	3	3			Н	Р	PR	5'	L	01	5	
Symphyotrichum hendersonii	Lyall aster							*	8	3 8	3			Н	Р	BL/PR	5'	L/M	0	1	
Verbena lasiostachys	Western vervain				*	8 8	8	88 88	8	3 8	3			Н	Р	PR	3'	L	0	3	
Wyethia angustifolia	California compassplant					*	*	8 8	}					Н	Р	Y	2'	М	Ø	1	E

<u>KEY</u>

- Bloom time: orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **√** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Solutions of the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © The Xerces Society/Mace Vaughan.

- A. Tolerates salt spray.
- B. Toxic to honey bees.
- C. Establishes better from container-grown plants than seed.
- D. Tolerates clay soil and wet conditions.
- E. Drought tolerant.
- F. Tolerates clay soil and wet or dry conditions.
- G. Can be used for streambank stabilization.
- H. Grows best at mid to high elevations in this region.

CALIFORNIA

MONARCH BUTTERFLY NECTAR PLANTS





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SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NN	Ъ	AUG	SEP				ן <u>ר</u>		\mathcal{C}	•	ĒŤ		Ŷ		(i)
Abronia latifolia	Coastal sand verbena	T		8 8	8 8	8 8	8 8	*	8 8	88	8	3		Î	Н	Р	Y	0.5'	L	¥	5	Α
Achillea millefolium	Yarrow				8 8	8 8	88	8 8	88	2					Н	Р	W	3'	L	0	8	В
Agastache urticifolia	Nettleleaf giant hyssop					8 8	8 8								Н	Р	Pr/R	2'	L	Y	3	В
Apocynum cannabinum	Indian hemp						8 8	8 8	88	2					Н	Р	W	6'	M-H	¥.	8	С
<i>Arctostaphylos</i> 'Howard McMinn' [₩]	McMinn manzanita		8 8	8 8	8 8										S	Ρ	<u>Рк/W</u>	6'	L	¥	4	Α
Arctostaphylos glauca 🎽	Bigberry manzanita	8 80	8 8												S	Р	<u>Рк/W</u>	30'	М	¥	4	
Arctostaphylos patula¥	Greenleaf manzanita	**	8 8												S	Р	<u>Рк</u> /W	7'	L	¥.	4	
Asclepias californica 🏾 🍆 🚺	California milkweed				8 8	8 8	88	8 8							Н	Р	Рк	3'	L	0	1	
Asclepias cordifolia 🏾 🍆 🚺	Heartleaf milkweed			8 8	8 8	8 8	8 8	8 8							Н	Ρ	<u>Рк/Pr</u>	3'	L	0 🎽	5	
Asclepias fascicularis 🏾 🍆 🌔	Narrow-leaved milkweed						88	8 8	88	88					Н	Р	<u>Рк/W</u>	3'	М	0	23	В
Asclepias speciosa¥ 🐛 🚺	Showy milkweed						8 8	8 8							Н	Ρ	<u>Рк/G/Pr</u>	5'	Μ	0 🎽	221	
Baccharis pilularis [™]	Coyotebrush	8 80								88	8	3 8	₿ 88	3	S	Р	<u>W/Y</u>	10'	L	0	4	A, D
Baccharis salicifolia 🏾 🖸	Mulefat	**	8 8	8 8	8 8	8 8	8 8	8 8	88	88	8	3 8 8	3 8	3	S	Р	W	7'	M-H	¥.	3	E
Baccharis sarothroides [™]	Desertbroom	**	8 8												S	Р	<u>Рк/W</u>	10'	L	0	3	D
Bidens laevis	Smooth beggartick								8 8	88	}				Н	Ρ	Y	3'	Н	0 🎽	7	F
Cephalanthus occidentalis	Common buttonbush								8 8	88	8	3			S	Р	W	15'	Н	0	12	
Dichelostemma capitatum	Bluedicks		8 8	8 8	8 8										Н	Ρ	PR	2'	L	0 🎽	3	
Ericameria ericoides ^{¥4}	California goldenbush									88	8	3 8	ß		S	Р	Y	4'	L	¥	3	
Ericameria nauseosa 🎽	Rubber rabbitbrush							8 8	8 8	88	8	3			S	Р	<u>Y</u>	8'	L	0	16	Α
Euthamia occidentalis	Western goldentop								8 8	88	8	3			Н	Р	<u>Y</u>	6'	Н	¥	5	E
Erigeron glaucus	Seaside fleabane	8 80	8 8	8 8	8 8	8 8	8 8	8 8	8 8	?					Н	Р	<u>Рк</u> /L	1'	L	¥.	5	
Grindelia camporum	Gumplant				8 8	8 8	88	8 8	88	88	8	3			Н	Р	Y	5'	L–H	0 🎽	3	В
Grindelia stricta	Oregon gumplant					8 8	8 8	8 8	8 8	88	8	3			Н	Ρ	Y	4'	Н	0 1	3	E
Helianthus annuus ^{¥¥}	Common sunflower						88	8 8	88	2					Н	А	Y	5'	М	0	17	
Monardella odoratissima	Mountain monardella						8 8	*	8 8	2					Н	Р	W/Pr	1'	L	¥.	3	G
Monardella villosa	Coyote mint						8 8	8 8	8 8	2					Н	Р	PK/Pr	2'	L	¥.	3	Н
Salix exigua₩	Narrowleaf willow		8 80	8 80										0	5/T	Р	W	20'	Н	Y	3	E
Salix laevigata 🎽	Red willow		8 8	8 80	8 8	8 8									Т	Р	W	50'	Н	ĩ	3	E
KEY 🏶 BLOOM V FORM	C LIFE CYCLE	E	Ť	MA HEI	X GH	т			VAT			Y			LABI	LITY \L)	OBS (TO	ERVA1	IONS	() A	DDITIO	NAL ATION

See expanded Key & Additional Information on next page.

PLEASE NOTE: In general, milkweed should not be planted within 5 miles of the coast north of Santa Barbara, nor within 1 mile of the coast from Santa Barbara south. These areas are generally outside of milkweed's historical range and planting milkweed too close to overwintering sites may interfere with monarch migration and overwintering behavior. See map on next page for more details.

MONARCH BUTTERFLY NECTAR PLANTS

CALIFORNIA (CONTINUED)



SCIENTIFIC NAME	COMMON NAME	JAN	MA	APR	MAN	NN	JUL	AUC	SEP	5	NOV	DEC	V	\mathcal{S}	@	ĒŤ		V	V	(i)
Salix lasiolepis 🏾 🖸	Arroyo willow	8	₿ ₽	₩	8 8								S/T	Р	W	35'	Н	¥.	3	E
Salvia dorrii	Desert sage				8 8	88							S	Р	PR	4'	L	Ť	1	А
Salvia leucophylla	Purple sage			**	8 8	8 8	₩						S	Р	Рк	4'	L	Ĩ	1	А
Salvia mellifera	Black sage		&	8 8	8 8	8 8	₩						S	Р	<u> W/Рк/L</u>	6'	L	Ĩ	1	А
Salvia clevelandii	Cleveland sage					8 8							S	Р	PR	4'	L	Ĩ	2	А
Solidago velutina ssp. californica [™]	California goldenrod					8 8	**	8 8	%	%			Н	Р	Y	3'	L	0	4	
Symphyotrichum chilense [₩]	Pacific aster						8 8	8 8					Н	Р	Y/V	4'	L	0	5	В
Verbena lasiostachys	Western vervain			88 0	8 8	8 8	₩	8 8	%				Н	Р	PR	3'	L	0	3	В
KEY 🏶 BLOOM V FORM	C LIFE CYCLE	ĒŤ	MA HEI	X GH	т			ATE EED		(GION			SERVAT TAL)	IONS		DDITIO NFORM/	

KEY

- **Bloom time:** orange months indicate monarchs are present.
- Le Milkweeds (Asclepias spp.) are monarch caterpillar host plants ().
- **W** Entire genus is likely attractive to monarchs.
- **Form:** herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Px), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E T Max height** (in feet).
- Water needs: low (L), medium (M) and high (H).
- Observations: the total number of observations received of monarch adults nectaring.
- Dependence of the provided and the provi

(i) ADDITIONAL INFORMATION:

- A. Very drought tolerant.
- B. Tolerates clay soil and wet or dry conditions.
- C. Poisonous to humans, pets and livestock
- D. Can be used for streambank stabilization.
- E. Wetland / riparian.
- F. Tolerates clay soil and wet conditions.
- G. Grows best at mid to high elevations in this region.
- H. Requires good drainage.

PLEASE NOTE: In general, milkweed should not be planted within 5 miles of the coast north of Santa Barbara (►), nor within 1 mile of the coast from Santa Barbara south. These areas are generally outside of milkweed's historical range and planting milkweed too close to overwintering sites may interfere with monarch migration and overwintering behavior. Please check on any milkweed species historical range before including it in monarch habitat in the blue area below:



INLAND NORTHWEST

MONARCH BUTTERFLY NECTAR PLANTS





REGION 3: w. ID, N.E. OR, E. WA

And a state of the				_	_	1							1						ALC: NO.		
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NUL	Ę	AUG	SFP			DEC	V	\mathcal{C}	•	ĒŤ		Ŷ		(j)
Agastache urticifolia	Nettleleaf giant hyssop	Γ					88	88	8	\$				Н	Р	Pr/R	2'	L	Ø	3	A, B
Asclepias cordifolia 🍆	Heartleaf milkweed			8 8	88	8 8	*	88	2					Н	Р	<u>Рк/Р</u>	3'	L	¥	5	
Asclepias fascicularis 🍆	Narrow-leaved milkweed						88	88	8	\$				Н	Р	<u>Рк/W</u>	3'	Μ	¥	10	С
Asclepias speciosa 🍆 🖸	Showy milkweed						88	88	8	\$				Н	Р	<u>Рк/G/Pr</u>	3'	М	0 🎽	71	
Chrysothamnus viscidiflorus	Yellow rabbitbrush								*	\$	8	ß		S	Р	Y	3'	L	0	1	
Cirsium occidentale	Cobwebby thistle					8 8	*	88	2					Н	В	<u>Рк/W/Pr</u>	4'	L	_	2	
Cleome lutea	Yellow spiderflower					8 8	*	ł						Н	А	Y	3'	L	0	3	
Dasiphora fruticosa	Shrubby cinquefoil					8 8	*	}						S	Р	Y	4'	М	¥	2	
Ericameria nauseosa	Rubber rabbitbrush								*	8	8	ß		S	Р	Y	6'	L	Ø	80	D
Eriogonum elatum	Tall woolly buckwheat						*	88	2					Н	Р	W	4'	L	¥	1	
Eriogonum umbellatum	Sulphur-flower buckwheat							*	8	8	3			Н	Р	W/Y	2'	L	Ø	1	
Euthamia occidentalis	Western goldentop								8	8	8	ß		Н	Р	Y	6'	M/H	01	8	
Gaillardia aristata	Blanketflower							88	8	8	3			Н	Р	<u>R/Y</u>	2'	L	0	1	
Helianthus annuus	Common sunflower							8 8	8	8	3			Н	А	Y	5'	М	0	18	
Helianthus n. ssp. nuttallii	Nuttall's sunflower							8 8	8	\$				Н	Р	Y	10'	M/H	0	1	
Monardella odoratissima	Mountain monardella						*	88	8	}				Н	Р	W/BL/PR	1'	L	¥	2	
Penstemon speciosus	Royal penstemon						*	88	?					Н	Р	BL	3'	L	01	1	
Prunus virginiana var. melanocarpa	Black chokecherry					8 8	*	}						Т	Р	W	20'	М	01	1	E, F
Rosa woodsii var. ultramontana	Woods' rose					8 8	*	88	?					S	Р	Рк	6'	L/M	01	1	F
Rudbeckia occidentalis	Western coneflower						*	88	8	8	8	₿ 8	ß	Н	Р	Y/G	7'	М	Ø	2	
Salix lasiolepis	Arroyo willow	*	&	8 80	88	*	*	}						Т	Р	Y/Pr	16'	М	Y	2	G, H
Salvia dorrii	Purple sage					%	*	88	?					Н	Р	BL	3'	М	Ø	1	D
Solidago canadensis	Canada goldenrod								*	8	8	ß		Н	Р	Y	5'	М	_	109	D
Solidago missouriensis	Missouri goldenrod								88	8	8	ß		Н	Р	Y	3'	L	Ø	3	
Symphyotrichum chilense	Pacific aster	\square							*	8	3			Н	Р	Y/V	4'	L	0	5	

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✓** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E** Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Solutions of the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © Tom Koerner, USFWS/flickr.

- A. Establishes better from container-grown plants than seed.
- B. Tolerates clay soil and wet conditions.
 - C. Tolerates clay soil and wet or dry conditions.
 - D. Drought tolerant.
 - E. Seeds are toxic (contain cyanide).
 - F. Birds eat fruit.
 - G. Tolerates sand and seasonal flooding.
 - H. Good for erosion control.

GREAT BASIN

MONARCH BUTTERFLY NECTAR PLANTS





REGION 4: NV, s.e. OR, e. UT

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SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	N		AIIG	SEP		NON	DEC	V	\mathcal{C}	•	Ē₹		¥		(j)
Agastache urticifolia	Nettleleaf giant hyssop	Г					8	3 8 8	8	3				Н	Р	Pr/R	2'	М	Ø	3	A, B
Asclepias fascicularis 🐛 🖸	Narrow-leaved milkweed						8	3 8 8	8	3				Н	Р	<u>Рк/W</u>	3'	М	ľ	10	С
Asclepias speciosa 🐛	Showy milkweed					88	8	3 8 8	8	3 8	2			Н	Р	<u>Рк/G/Pr</u>	3'	М	0	71	
Chamerion angustifolium	Fireweed							88	8	3 8 8				Н	Р	<u>Рк</u>	7'	М	0	1	D
Chrysothamnus viscidiflorus	Yellow rabbitbrush								8	3 8 8	8	}		S	Р	<u>0/Y</u>	3'	L	Ø	1	
Clematis ligusticifolia	Western white clematis						8	3 8 8	8	3				V	Р	W	20'	М	Ĩ	1	
Cleome lutea	Yellow spiderflower					88	8	3						Н	А	<u>Y</u>	3'	L	Ø	3	
Cleome serrulata	Rocky Mountain beeplant							88	8	3 8 8				Н	А	<u> W/Рк</u>	4'	М	Ø	1	
Ericameria nauseosa	Rubber rabbitbrush							88	8	3 8 8	8	}		S	Р	<u>Y</u>	5'	L	0	80	E
Eriogonum umbellatum	Sulphur-flower buckwheat						8	3 8 8	8	3 8 8				Н	Р	<u>W/Y</u>	3'	L	¥.	1	
Erysimum capitatum	Sanddune wallflower					88	8	3 8 8	ł					Н	В	<u>R/0/Y</u>	2'	L	0	1	E
Helianthus annuus	Common sunflower							88	8	3 8 8	8	}		Н	А	Y	8'	М	0	18	
Helianthus n. ssp. nuttallii	Nuttall's sunflower								8	3 8 8	2			Н	Р	Y	10'	M/H	0	1	
Heliotropium curassavicum	Salt heliotrope			8 8	**	88	8	3 8 8	8	3 8 8	8	8	}	Н	А	W	1'	М	0	1	F
Mertensia ciliata	Tall fringed bluebells					88	8	3						Н	Р	<u>BL</u>	3'	Н	Ø	1	
Monardella odoratissima	Mountain monardella						8	3 8 8	8	3				Н	Р	W/BL/PR	1'	М	ľ	2	G
Penstemon speciosus	Royal penstemon					88	8	3 8 8	ł					Н	Р	<u>BL</u>	2'	L	0	1	
Prunus virginiana var. melanocarpa	Black chokecherry				*	88								Т	Р	W	40'	L/M	0	1	H, I
Rosa woodsii var. ultramontana	Woods' rose					88	8	3 8 8	}					S	Р	Рк	3'	М	0	1	Н
Salix lasiolepis	Arroyo willow	**	&	8 8	**	88	8	3						Т	Р	Y/Pr	16'	М	ľ	2	J, K
Salvia dorrii	Purple sage					88	8	3						S	Р	BL/PR	3'	М	0	1	
Solidago canadensis	Canada goldenrod									*	8	8	}	Н	Р	Y	5'	М	0	109	E
Solidago spectabilis	Nevada goldenrod							88	8	3 8 8	}			Н	Р	Y	6.5'	М	۲.	1	
Sphaeralcea ambigua	Desert globemallow		8 80	8 8	**	88	8	3 8 8	8	3	8	8	}	Н	Р	<u>0</u>	3'	L	0	1	E, L
Symphyotrichum lanceolatum	White panicle aster							*	8	3				Н	Р	<u>W/Pĸ/P</u> R	5'	М	Ø	11	

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **√** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E** Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- **Observations:** the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © Eric Eldredge, USDA–NRCS.

- A. Establishes better from container-grown plants than seed.
- B. Tolerates clay soil and wet conditions
- C. Tolerates clay soil and wet or dry conditions.
- D. Can be aggressive in moist gardens.
- E. Drought tolerant.
- F. Tolerates saline or alkaline soils.
- G. Needs regular water and full sun for best flowering.
- H. Birds eat fruit.
- I. Edible fruit used dried, for jelly, or pie.
- J. Tolerates sand and seasonal flooding.
- K. Good for erosion control.
- L. May be short-lived, but usually self-seeds.

ROCKY MOUNTAINS

MONARCH BUTTERFLY NECTAR PLANTS





REGION 5: w. CO, E. ID, w. MT, E. UT, w. WY

					1.20			-	-	1966			1	-							
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NNr	IJ	AUG	SEP		NOV	DEC	V	\mathcal{C}	•	EŦ		¥		(i)
Agastache urticifolia	Nettleleaf giant hyssop	Π					8 8	*	88	}				Н	Р	Pr/R	5'	М	Ø	3	A, B
Asclepias incarnata 🍆	Swamp milkweed						8 80	8 80	88	8	8	}		Н	Р	Рк	4'	М	0	76	
Asclepias speciosa 🐛	Showy milkweed					8 8	8 8	**	88	\$	2			Н	Р	<u>Рк/G/Pr</u>	4'	L/M	0 🎽	71	
Asclepias tuberosa 🍆	Butterfly milkweed					8 8	8 8	8 8	88	\$				Н	Р	<u>0/Y</u>	2'	L	0	99	
Cirsium flodmanii	Flodman's thistle						%	8 8	88	88				Н	Р	<u>W/Pr</u>	3'	М	¥	1	
Chrysothamnus viscidiflorus	Yellow rabbitbrush						8 8	8 8	88	×	8	}		S	Р	<u>0/Y</u>	3'	L	Ø	1	С
Cleome serrulata	Rocky Mountain beeplant							**	88	\$	2			Н	A	<u> W/Рк</u>	4'	L/M	Ø	1	D
Ericameria nauseosa	Rubber rabbitbrush							**	88	8	8	}		S	Р	Y	8'	L	0 🎽	80	E
Eriogonum umbellatum	Sulphur-flower buckwheat						8 8	**	88	\$	2			Н	Р	<u>W/Y</u>	2'	L	¥.	1	E
Euthamia occidentalis	Western goldentop								88	8	8	}		Н	Р	Y	6'	M/H	0 🎽	8	F
Eutrochium maculatum	Spotted Joe Pye weed							8 80	88	8				Н	Р	PK/PR	6'	M/H	0 1	12	
Gaillardia aristata	Blanketflower							8 80	88	8				Н	Р	<u>R/Y</u>	3'	L/M	0	1	E
Helianthus annuus	Common sunflower							8 80	88	8	8	}		Н	A	Y	8'	М	Ø	18	
Helianthus maximiliani	Maximiliani sunflower								88	8	8	88	,	Н	Р	Y/Br	10'	М	0	56	
Helianthus tuberosus	Jerusalem artichoke								88	8	8	}		Н	Р	<u> R/Рк/Y</u>	10'	L	¥.	20	
Liatris ligulistylis 🖸	Rocky Mountain blazing star								88	8				Н	Р	PK/PR	6'	М	—	10	D, G
Liatris punctata	Dotted blazing star								88	8	8	}		Н	Р	PK/PR	2'	L	0	32	E
Mertensia ciliata	Tall fringed bluebells						8 8	*	- 88	}				Н	Р	BL	3'	Н	Ø	1	
Penstemon procerus	Littleflower penstemon							8 8	- 88	}				S	Р	BL/PR	2'	L	0 🎽	1	E
Rosa woodsii var. ultramontana	Woods' rose					8 8	8 8	*	·					S	Р	Рк	5'	L/M	0 🎽	1	Н
Rudbeckia occidentalis	Western coneflower						8 80	8 80	88	8	8	88		Н	Р	Y/G	6'	M/H	Ø	2	
Senecio spartioides	Broom-like ragwort					8 80	8 80	8 8	88	8	}			Н	Р	Y	3'	М	0 1	5	E
Solidago canadensis	Canada goldenrod									*	8	88		Н	Р	Y	5'	D	0 🎽	109	E
Solidago missouriensis	Missouri goldenrod							8 89	- 88	8	}			Н	Р	Y	3'	L/M	Ø	3	E
Verbena hastata	Swamp verbena						8 8	*	88	8	}			Н	В	BL/PR	5'	M/H	0 1	5	I

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✓ Form:** herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (PK), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Availability: seeds available (2), plants available (2).
- Solutions of observations received of monarch adults nectaring across their entire range.
- **Photograph** © The Xerces Society/Sarah Foltz Jordan.

- A. Establishes better from container-grown plants than seed.
- B. Tolerates clay soil and wet conditions.
 - C. Host for northern checkerspot (Chlosyne palla) butterfly.
 - D. Birds eat seeds.
 - E. Drought tolerant.
 - F. Wetland/riparian.
 - G. Do not over water.
 - H. Best with adequate moisture, but drought tolerant.
 - I. Host for common buckeye (Junonia coenia) butterfly.

SOUTHWEST

MONARCH BUTTERFLY NECTAR PLANTS





REGION 6: AZ, NM, w. TX

	And in case of the local division of the loc				100	1								_									
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	N			AUG	SEP	OCT	NOV	DEC	V	\mathcal{C}	•	Ē₹			¥	۲	í
Asclepias asperula 🍆	Spider milkweed	\square			88	88	8	₿ 8 8	β <i>ξ</i>	88					Н	Р	W/G	2'	М		0 1	2	
Baccharis salicifolia	Mule-fat			8 8	88	88	8	₿ 8	β <i>ξ</i>	88	*	8 8	8 8	8 8	S	Р	<u> W/Рк</u>	10'	Μ		0	3	
Baccharis sarothroides	Desertbroom	8 8	8 8							Ę	*	&	8 8	8 8	S	Р	Y	12'	L/N	1	H4	3	А
Bebbia juncea	Sweetbush				88	88	8	₿ 8	ß						S	Р	<u>0</u> /Y	4'	L		0	2	
Berlandiera lyrata	Lyreleaf greeneyes				88	88	8	₿ 8	β ξ	88 4	*	%			Н	Α	Y	2'	L		0	1	В
Bidens laevis	Smooth beggartick								ą	88 4	*				Н	Α	Y	3'	Н		ĩ	7	С
Cephalanthus occidentalis	Common buttonbush						셣	₿ 8	β ξ	88 4	*				S	Р	W	12'	Н		0	11	
Chilopsis linearis	Desert willow				88	88	8	₿ 8	β <i>ξ</i>	88					Т	Р	<u> W/Рк/Р</u>	30'	L		0	2	
Cirsium arizonicum	Arizona thistle					88	8	₿ 8	β <i>ξ</i>	88 4	*	8 8			Н	В	<u> R/Рк/Р</u> г	4'	L		4	1	D
Conoclinium coelestinum 🖸	Blue mistflower							셣	β <i>ξ</i>	88	*	8 8	8 8		Н	Р	BL/PR	3'	Μ		0	10	E
Ericameria nauseosa	Rubber rabbitbrush							셣	β <i>ξ</i>	88 4	*	%	8 8		S	Р	Y	6'	L		0	80	F
Eupatorium serotinum	Lateflowering thoroughwort									Ę	*	8 8	8 8		Н	Р	W	6'	Μ		0	171	G
Glandularia gooddingii	Southwestern mock vervain				88	88	8	₿							Н	Р	<u>Рк/Р</u>	1'	L		0	1	Н
Helianthus annuus	Common sunflower							셣	β <i>ξ</i>	88	*	8 8			Н	Α	Y	8'	Μ		0	18	
Liatris punctata var. mucronata	Cusp blazing star								ą	88 4	*	8 8	8 8	8 8	Н	Р	<u>Рк/Р</u>	3'	L		0	7	
Mahonia haematocarpa	Red barberry		8 8	8 8	88	88	3								S	Р	Y	12'	L		4	1	
Prosopis velutina	Velvet mesquite				88	88	8	₿							Т	Р	<u>W/Y</u>	30'	L		0	2	Ι
Rhus ovata	Sugar sumac				88	88	3								S	Р	<u> W/Рк</u>	6'	L		0	1	D
Robinia neomexicana	New Mexican locust				*	8	8	6	β ξ	88					S	Р	Рк	10'	L		0	2	
Senecio f. var. flaccidus	Threadleaf ragwort			8 8	88	88	3								S	Р	Y	4'	L		0	1	J
Sphaeralcea ambigua	Desert globemallow			8 8	*	88	8	6	ß						Н	Р	0	3'	L		0	1	D
Trifolium pinetorum	Woods clover					88	8	6	β ξ	88 4	*	%			Н	Α	PK/PR	1'	М		0	1	
Verbena macdougalii	MacDougal verbena						8	6	β <i>ξ</i>	86 F	*	%			Н	Р	PR	3'	М		1	1	
Verbesina encelioides	Golden crownbeard							8	β ξ	8 8 8	*	%			Н	Α	Y	5'	L		0	577	
Viguiera dentata	Toothleaf goldeneye											%	8 8		Н	Р	Y	6'	М		ĩ	1	D

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✓** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E** Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Solutions: the number of observations received of monarch adults nectaring across their entire range.
- **O** Photograph © The Xerces Society/Anne Stine.

- A. Can be used for streambank stabilization.
- B. Blooms year-round in warm weather.
- C. Can be used in bioswales.
- D. Drought tolerant.
- E. Can spread quickly.
- F. Can be invasive in disturbed soils.
- G. Birds eat seeds.
- H. Not as drought tolerant as habitat suggests.
- I. Deep taproot reaches water table.
- J. Good for soil stabilization.

NORTHERN PLAINS

MONARCH BUTTERFLY NECTAR PLANTS





REGION 7: w. MN, N.E. MT, NE, ND, SD, E. WY

		C. Carrier	-		R.					_						The second s					
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NNr	IJ	AUG	SEP	OCT	NOV	DEC	\mathcal{V}	\mathcal{C}	•	ĒŤ		Ŷ	۷	(j)
Ageratina altissima	White snakeroot								88	\$ \$				Н	Р	W	3'	L	¥	3	Α
Amorpha canescens	Leadplant						8 8	8 8						S	Р	BL/PR	3'	L	0	6	
Asclepias incarnata 🍆	Swamp milkweed						8 8	8 80	*	,				Н	Р	Рк	4'	М	0	76	
Asclepias syriaca 🍆	Common milkweed						8 8	8 8	*	,				Н	Р	W/PR	5'	М	0	189	
Asclepias tuberosa 🍆	Butterfly milkweed						8 8	8 8	88	2				Н	Р	<u>0/Y</u>	2'	L	0 1	99	
Asclepias verticillata 🍆	Whorled milkweed						8 8	8 8	*	8 8				Н	Р	W	3'	L	0	196	
Brickellia e. var. eupatorioides	False boneset								88	8 8				Н	Р	W	4'	L	0 1	38	
Cirsium altissimum 🖸	Tall thistle								88	8 8	8 8			Н	В	Рк	10'	L	Ø	1,197	В
Dalea candida	White prairie clover					8 8	8 8	8 80	*	8 8				Н	Р	W	2'	М	0	3	В
Euthamia g. var. graminifolia	Grass-leaved goldentop							8 8	*	8 8				Н	Р	Y	6'	M/H	0	6	С
Eutrochium maculatum	Spotted Joe Pye weed								*	8 8				Н	Р	PK/PR	6'	M/H	0	12	D
Helianthus annuus	Common sunflower							8 8	*	8 8	8 8			Н	А	Y	8'	М	Ø	18	
Helianthus maximiliani	Maximilian sunflower									%	8 8			Н	Р	Y/Br	10'	L	0	56	E
Helianthus pauciflorus	Stiff sunflower								88	*				Η	Р	Y	6'	L/M	0	13	
Heliopsis helianthoides	Smooth oxeye							8 8	88	8 8	8 8			Η	Р	Y	5'	L/M	0	41	
Liatris ligulistylis	Meadow blazing star								88	8 8				Η	Р	<u>Рк/Р</u>	5'	М	0	10	
Monarda fistulosa	Wild bergamot							8 8	88	2				Η	Р	<u>W/Pk/Pr</u>	5'	Μ	0	57	
Oligoneuron rigidum	Stiff goldenrod								88	8 8				Η	Р	Y	5'	L/M	0	204	
Silphium integrifolium	Wholeleaf rosinweed							8 8	88	8 8				Η	Р	Y	6'	L	0	34	
Solidago canadensis	Canada goldenrod								88	8 8	8 8			Η	Р	Y	5'	М	0	104	С
Symphyotrichum ericoides	White heath aster								*	8 8	8 8			Н	Р	<u> W/Рк/Y</u>	3'	L	0	33	
Symphyotrichum I. var. laeve	Smooth blue aster									8 8	8 8			Н	Р	BL/PR	4'	М	0	6	F
Symphyotrichum novae-angliae	New England aster								88	- 8 8	8 8			Н	Р	<u>Рк/Р</u>	6'	М	0 1	36	С
Verbena stricta	Hoary vervain					8 80	8 8	8 80	88	- 8 8				Н	Р	PR	4'	L/M	0	10	G
Vernonia fasciculata	Prairie ironweed							8 8	*	8 8				Н	Р	PR	5'	M/H	0	2	С

<u>KEY</u>

- Bloom time: orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✓** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E** Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Availability: seeds available (2), plants available (2).
- Solutions of the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © The Xerces Society/Jennifer Hopwood.

- A. Shade tolerant.
- B. Drought tolerant.
- C. Can be aggressive.
- D. Attractive to rusty patched bumble bee (Bombus affinis).
- E. Host for silvery checkerspot (*Chlosyne nycteis*) and bordered patch (*Chlosyne lacinia*) butterflies.
- F. Host for pearl crescent (*Phyciodes tharos*) butterfly.
- G. Host for common buckeye butterfly (Junonia coenia) butterfly.

SOUTHERN PLAINS

MONARCH BUTTERFLY NECTAR PLANTS





REGION 8: AR, E. CO, KS, OK, TX

			1				×	<u> </u>	8	5	2					1.10				122	1
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NN	JUL	AUG	SEP	0CT	NOV	DEC	V	\mathcal{C}	•	Ē₹		¥		(j)
Asclepias syriaca 🍆	Common milkweed					8 80	8 8	*	*	}				Н	Р	Рк	8'	М	0 🖌	189	А
Asclepias tuberosa 🍆	Butterfly milkweed					8 80	8 8	*	*	}				Н	Р	<u>0/Y</u>	2'	L	0	99	
Asclepias verticillata 🍆	Whorled milkweed				8 8	8 8	8 8	*	88	88				Н	Р	W	3'	L	0	196	
Asclepias viridis L	Spider milkweed				8 8	8 8	8 8	*	88	ł				Н	Р	W/G/PR	2'	L	0	105	
Bidens aristosa	Bearded beggarticks								88	88	8 8			Н	А	Y	4'	Н	0	1,893	
Cephalanthus occidentalis	Common buttonbush								88	88	88			S	Р	W	12'	М	0	13	
Conoclinium betonicifolium	Betonyleaf thoroughwort			8 8	8 8	88	8 8	*	88	ł				Н	Р	<u>BL</u>	3'	М	ľ	1	В
Conoclinium coelestinum	Blue mistflower							8 80	88	88	88			Н	Р	BL/PR	3'	М	0	10	
Echinacea angustifolia	Blacksamson echinacea					8 8	8 8	*						Н	Р	PK/PR	2'	L	0	23	С
Eryngium yuccifolium	Button eryngo					88	8 8	*	88	88				Н	Р	W	6'	М	0	2	D
Eupatorium serotinum	Lateflowering thoroughwort								88	88	8 8			Н	Р	W	5'	М	0	171	Е
Glandularia bipinnatifida	Dakota mock vervain					88	8 8	*	88	88	88			Н	Р	PR	1'	L/M	0	3	
Helenium amarum	Sneezeweed						8 8	*	88	88	8 8			Н	А	Y	5'	L	0	40	
Helianthus maximiliani	Maximilian sunflower								88	88	88			Н	Р	Y/Br	10'	L	0	56	D
Lantana urticoides	West Indian shrubverbena		뿂	8 8	8 8	88	8 8							S	Р	<u>R/0/Y</u>	3'	L	ľ	51	В
Liatris punctata var. mucronata	Cusp blazing star							8 80	88	88	88	8 8	8 8	Н	Р	<u>Рк/Р</u>	3'	L	0	7	
Liatris pycnostachya 🖸	Prairie blazing star								88	88	8 8			Н	Р	PR	5'	М	0	23	
Oligoneuron rigidum	Stiff goldenrod								88	88	88			Н	Р	Y	4'	L	0	204	D
Salvia azurea	Pitcher sage					8 80	8 8	*	88	888 1	8 8	8 8		Н	Р	W/BL	5'	L	0	4	
Silphium laciniatum	Compassplant							8 8	88	888 1				Н	Р	<u>Y</u>	12'	L	0	6	F
Solidago nemoralis	Gray goldenrod								88	88	8 8			Н	Р	Y	2'	М	0	3	F
Solidago petiolaris	Downy ragged goldenrod								88	88	88	8 8		Н	Р	Y	3'	L/M	0	60	
Symphyotrichum ericoides	White heath aster								88	888 888	8 8			Н	Р	<u> W/Рк/Y</u>	3'	L	0	33	
Verbesina encelioides	Golden crownbeard							8 80	88	888 1988				Н	А	Y	3'	L	Ø	577	
Verbesina virginica	White crownbeard								*	88	88			Н	В	W	6'	L/M	Ø	211	

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- \checkmark Form: herb (H), shrub (S), vine (V), tree (T).
- ${\boldsymbol{\mathcal{C}}}$ Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (PK), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Solutions of observations received of monarch adults nectaring across their entire range.
- **Photograph** © Scott Seigfreid.

- A. Natural distribution in AR, KS, and OK (not TX). *A. sullivanti* also excellent (found in OK and KS).
- B. Natural distribution limited to TX.
- C. Grows best in alkaline soils with good drainage.
- D. Can be aggressive.
- E. Birds eat seeds.
- F. Drought tolerant.

GREAT LAKES

MONARCH BUTTERFLY NECTAR PLANTS



REGION 9: MI, E. MN, W. NY, OH, N.W. PA, WI

	N 19/4	\mathbf{x}	-		¥,		13	2	24	1	12.	24		3		M MA			1 the state		
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NNr	חר	AUG	SEP	0CT	NOV	DEC	V	\mathcal{C}	•	ĒŤ		Ŷ		(j)
Asclepias incarnata 🍆	Swamp milkweed	Γ						88	8	3				Н	Р	Рк	4'	М	0	76	
Asclepias syriaca 🍆	Common milkweed						8 80	88	8	3				Н	Р	<u>W/Pr</u>	5'	М	0	189	
Asclepias tuberosa 🍆	Butterfly milkweed						8 8	8 8	8	3 8 8				Н	Р	<u>0/Y</u>	2'	L	0	99	
Asclepias verticillata 🍆	Whorled milkweed						8 8	8 8	8	3 8 8	2			Н	Р	W	3'	L	0	196	
Cirsium discolor	Field thistle							8 8	*	3 8 8	8 8	2		Н	В	<u>Рк/Р</u>	7'	L	0	19	
Coreopsis tripteris	Tall tickseed							8 8	8	\$	88	2		Н	Р	<u>Y</u>	7'	L/M	0	1	А
Echinacea purpurea	Eastern purple coneflower						8 8	8 8	8	\$ 8 8				Н	Р	<u>Рк/Р</u>	5'	L	0	29	B, C
Eupatorium perfoliatum	Common boneset							8 8	8	\$	8 8	2		Н	Р	W	6'	M/H	0	9	D
Euthamia graminifolia	Flat-top goldentop							8 8	*	\$	8 8	2		Н	Р	<u>Y</u>	6'	Μ	0	10	
Eutrochium maculatum	Spotted Joe Pye weed							88	8	3 8 8				Н	Р	<u>Рк/Р</u>	6'	Μ	0	12	Е
Helianthus grosseserratus	Sawtooth sunflower							8 8	8	3 8 8	8 8	2		Н	Р	Y	10'	Μ	0	11	F
Helianthus maximiliani	Maximilian sunflower							8 8	8	3 8 8	8 8			Н	Р	Y/Br	10'	L	0	56	G
Heliopsis helianthoides	Smooth oxeye						8 8	88	8	\$ \$ \$				Н	Р	Y	5'	L/M	0	41	r.
Liatris aspera	Rough blazing star								8	3 8 8				Н	Р	<u>Рк/Р</u>	4'	L	0	16,451	С
Liatris cylindracea	Ontario blazing star							8 8	8	3 8 8				Н	Р	PR	2'	L	0	45	С
Liatris ligulistylis	Meadow blazing star								8	3 8 8				Н	Р	<u>Рк/Р</u>	5'	М	0	10	Н
Liatris spicata	Dense blazing star							8 8	8	3 8 8				Н	Р	PR	4'	Μ	0	5	
Monarda fistulosa 🖸	Wild bergamot						8 8	88	8	3 8 8				Н	Р	<u>W/Pk/Pr</u>	5'	L	0	57	
Monarda punctata	Spotted beebalm							8 8	8	3 8 8				Н	Р	<u> W/Рк/Y</u>	3'	L	0	9	
Oligoneuron rigidum	Stiff goldenrod								8	3 8 8	8 8			Н	Р	Y	5'	М	0	204	F
Rudbeckia hirta	Black-eyed Susan						8 8	8 8	8	3 8 8	- 8 8			Н	B/P	Y	2'	L	0	8	
Solidago speciosa	Showy goldenrod								*	3 8 8	\$ \$			Н	Р	Y	5'	L	0	6	
Symphyotrichum novae-angliae	New England aster								8	3 8 8	- 8 8			Н	Р	PK/PR	6'	М	0	36	
Symphyotrichum oblongifolium	Skyblue aster									*	*	8 8		Н	Р	PR	2'	L	Ø	101	I
Veronicastrum virginicum	Culver's root							88	8	3 8 8	88			Н	Р	W/PK/PR	6'	М	0 🎽	5	

<u>KEY</u>

- Bloom time: orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✔** Form: herb (H), shrub (S), vine (V), tree (T).
- \mathfrak{C} Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (B), pink (Pk), orange (O), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Availability: seeds available (2), plants available (2).
- Solutions of the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © The Xerces Society/Sarah Foltz Jordan.

- A. Also consider Coreopsis palmata.
- B. Deer resistant.
- C. Drought tolerant.
- D. Needs consistent moisture.
- E. Attractive to rusty patched bumble bee (Bombus affinis).
- F. May be too aggressive for small areas.
- G. Host for silvery checkerspot (*Chlosyne nycteis*) and bordered patch (*Chlosyne lacinia*) butterflies.
- H. Natural distribution in western part of region. *Liatris punctata* more common in eastern part of region.
- I. Fragrant foliage may deter deer browsing.

MIDWEST

MONARCH BUTTERFLY NECTAR PLANTS





REGION 10: IL, IN, IA, MO

	A REAL PROPERTY AND A REAL	_			_					-		_	_				_	_	-	181	
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NNr	JUL	AUG	SEP	OCT	NOV	DEC	V	\mathcal{C}	•	Ē₹		Ŷ		(i)
Amorpha canescens	Leadplant							8 8	8 8	8 8			Ī	S	Р	BL/PR	3'	L/M	0 🖌	6	Α
Asclepias incarnata 🍆	Swamp milkweed							88	8 8					Н	Р	Рк	4'	М	0	76	
Asclepias syriaca 🍆	Common milkweed						8 8	뿂	8 8					Н	Ρ	<u>W/Pr</u>	3'	L/M	0	189	
Asclepias tuberosa 🍆	Butterfly milkweed						8 8	88	8 8					Н	Р	<u>0/Y</u>	2'	L	0	99	A, B
Asclepias verticillata 🍆	Whorled milkweed						8 8	88	8 8	8 8				Н	Р	W	3'	L	0	196	
Bidens aristosa	Bearded beggarticks							88	8 8					Н	А	Y	4'	Н	Ø	1,893	
Brickellia eupatorioides	False boneset							8 8	%	8 8	8 80			Н	Р	W	4'	L	0	38	
Cephalanthus occidentalis	Common buttonbush						88 0	8 8						S	Р	W	12'	Н	0	11	С
Cirsium discolor 🖸	Field thistle						8 8	8 8	8 8	8 8				Н	В	<u>Рк/Р</u>	7'	L	Ø	19	
Coreopsis palmata	Stiff tickseed					8 8	8 8	88						Н	Р	Y	3'	L/M	0	11	Α
Echinacea pallida	Pale purple coneflower						8 8	뿂						Н	Р	PK/PR	3'	L	0	23	А
Echinacea purpurea	Eastern purple coneflower						88 0	8 8	%					Н	Р	<u>Рк/Р</u>	5'	Μ	0	29	A, D
Eupatorium altissimum	Tall thoroughwort								8 8	8 8	8 80			Н	Р	W	6'	L/M	Ø	5	Α
Helianthus grosseserratus	Sawtooth sunflower								%	8 8	8 80	8 80		Н	Р	<u>Y</u>	10'	Μ	0	11	
Helianthus maximiliani	Maximilian sunflower								8 8	8 8				Н	Р	Y/Br	10'	L	0	56	D
Liatris aspera	Tall blazing star								%	8 8	8 80			Н	Р	<u>Рк/Р</u>	3'	L	0	16,451	Α
Liatris cylindracea	Ontario blazing star							8 8	8 8	8 8				Н	Р	PR	2'	L/M	0	45	
Liatris pycnostachya	Prairie blazing star							8 8	%					Н	Р	PR	5'	Μ	0	23	E
Monarda fistulosa	Wild bergamot							8 8	8 8	8 8				Н	Р	<u>Рк/Р</u>	5'	L/M	0	57	
Oligoneuron r. var. rigidum	Stiff goldenrod								%	8 8	8 80			Н	Р	<u>Y</u>	5'	Μ	0	204	D
Pycnanthemum tenuifolium	Slender mountainmint						8 8	뿂	8 8					Н	Р	W	3'	L	0	1	
Rudbeckia hirta	Black-eyed Susan						8 8	8 8	8 8	8 8				Н	Р	Y	2'	М	0	8	Α
Symphyotrichum novae-angliae	New England aster								8 8	8 8				Н	Р	PK/Pr	6'	М	0	36	F
Verbena stricta	Hoary vervain					8 8	8 8	8 8	8 8	8 8				Н	Р	PR	4'	L/M	0	10	G
Veronicastrum virginicum	Culver's root					8 8	8 8	8 8	8 8				Τ	Н	Р	W/PK/BL	7'	M/H	0 1	5	

<u>KEY</u>

- **Bloom time: orange** months indicate monarchs are present.
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- **✓** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (PK), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Solutions of the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © The Xerces Society/James Eckberg.

- A. Drought tolerant.
- B. Easily grown from seed.
- C. Grows well in wet soils.
- D. Can be aggressive.
- E. Attractive to pink bleeding flower moth (Schinia sanguinea).
- F. Tolerates clay soils.
- G. Host for common buckeye (Junonia coenia) butterfly.

SOUTHEAST

MONARCH BUTTERFLY NECTAR PLANTS





REGION 11: AL, GA, KY, LA, MS, SC, TN

		-	-	2	10	2	-			C			2	20			1600 B					
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NNr							H	V	ζ	æ	E₹		Ŷ		(j)
Aralia spinosa	Devil's walking-stick	Π					88	8	8	\$ 8	3			Τ	S	Р	W	20'	М	0	2	A
Asclepias incarnata 🍆	Swamp milkweed							*	8	8	3				Н	Р	Рк	4'	М	0	76	
Asclepias tuberosa 🍆	Butterfly milkweed					8 8	88	8	8	8					Н	Р	<u>0/Y</u>	2'	L	0	99	
Asclepias verticillata 🍆	Whorled milkweed					8 8	88	8	8	\$ 8	3				Н	Р	W	3'	L	0	196	
Baccharis halimifolia 🖸	Eastern baccharis								Ą	8	3	₽			S	Р	W	15'	Μ	¥.	8	В
Cephalanthus occidentalis	Common buttonbush						88	8	8	8	3				S	Р	W	12'	М	0	11	
Cercis canadensis	Eastern redbud			8 8	88	8 8	,								Т	Р	Рк	30'	L	0	1	C, D
Cirsium discolor	Field thistle								Ą	8	3 8	\$ 8	8		Н	Р	PR	6'	М	0	19	E
Conoclinium coelestinum	Blue mistflower							*	8	8	3 8	8			Н	Р	BL/PR	3'	Μ	0	10	
Phlox paniculata	Garden phlox							*	8	8	3				Т	Р	<u> W/Рк</u>	3'	М	0	1	F
Eutrochium fistulosum	Joe Pye weed							*	8	8	3 8	8			Н	Р	<u>Рк/Pr</u>	7'	Μ	0	5	
Gaillardia pulchella	Beach blanket-flower				88	8 8	88	8	8	8	3				Н	A/B/P	<u>R/Y</u>	2'	L	0	2	G
Helianthus angustifolius	Narrowleaf sunflower									8	3 8	8			Н	Р	Y	3'	Μ	0	2	
Heliopsis helianthoides	Smooth oxeye					8 8	88	8	8	8	3	₽			Н	Р	<u>Y</u>	5'	L/M	0	41	
Liatris spicata	Dense blazing star							*	8	8	3				Н	Р	PR	4'	Μ	0	5	
Monarda punctata	Spotted beebalm							88	8	8	3				Н	Р	<u> W/Рк/Y</u>	3'	L	0	9	
Penstemon laevigatus	Eastern smooth beardtongue					88	88	8	}						Н	Р	<u>Рк/Pr</u>	3'	Μ	0	1	
Rudbeckia hirta	Blackeyed Susan						88	8	8	8	3 8	8			Н	B/P	Y/Br	3'	М	0	8	Н
Pycnanthemum tenuifolium	Slender mountainmint						88	8	8	8					Н	Р	W	3'	L	0	1	
Rhus aromatica	Fragrant sumac		8 8	8 8	88	8 8	•								S	Р	W	12'	L	¥	1	I
Rhus glabra	Smooth sumac					8 8	88	8	}						S	Р	W	20'	L	0	1	I
Solidago sempervirens	Seaside goldenrod								Ą	8 8	3 8	\$ 8	8	T	Н	Р	Y	8'	L	0	309	B, J
Solidago speciosa	Showy goldenrod								Ą	8	3 8	8			Н	Р	Y	8'	L	Ø	6	J
Verbesina alternifolia	Wingstem								Ą	8	3				Н	Р	Y	8'	L/M	Ø	1	K
Vernonia gigantea	Giant ironweed								Ą	8	3 8	8		T	Н	Р	PR	8'	М	Ø	2	

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- **Milkweeds** (*Asclepias* spp.) are monarch caterpillar host plants.
- **✓ Form:** herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E** Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Seeds available (2), plants available (2).
- Solutions of observations received of monarch adults nectaring across their entire range.
- **Photograph** © Rebekah D. Wallace, University of Georgia/Bugwood.org.

- A. There is an exotic invasive, Aralia alata, that should not be planted.
- B. Tolerates saltwater spray and sandy soil.
- C. Early bloom important for earliest monarchs arriving in southern part of region
- D. Source of nesting material for native leafcutter bees.
- E. Native thistles have declined due to control of Canada thistle (C. arvense).
- F. Phlox pilosa is also excellent and available, blooming Apr-May.
- G. Establishes easily from seed.
- H. Drought tolerant.
- I. Good for bank or soil stabilization.
- J. All goldenrods (Solidago spp.) are excellent.
- K. Considered undesirable plant in livestock forage. Excellent nectar source.

FLORIDA

MONARCH BUTTERFLY NECTAR PLANTS





REGION 12

		-		~	~	~	_						> ,			a						
SCIENTIFIC NAME	COMMON NAME	JAN	FEB	MAR	APR	MAY	NNr		AllG	2 ED				E E	V	\mathcal{C}	e	Ē₹		¥		(i)
Ampelaster carolinianus	Climbing aster									8	3 8	8			V	Р	PK/PR	36'	Н	0	1	
Asclepias incarnata 🍆 🖸	Swamp milkweed						88			3 8 8	3	₽			Н	Р	Рк	4'	М	0	76	
Asclepias perennis 🍆	Aquatic milkweed					8 8	88	88 88	8	3 8 8	3				Н	Р	<u> W/Рк</u>	2'	Н	ĩ	2	
Asclepias tuberosa 🍆	Butterfly milkweed					8 8	88	88 88	8	3 8 8	3	₽			Н	Р	<u>0/Y</u>	2'	L	0	99	
Asclepias verticillata 🍆	Whorled milkweed						88	88 88	8	3 8 8	3				Н	Р	W	3'	L	ĩ	196	
Baccharis halimifolia	Eastern baccharis								8	3 8 8	3	8	8		S	Р	W	12'	М	ĩ	8	A, B
Borrichia frutescens	Bushy seaside tansy	**	8 8	&	8 8	8 8	88	88 88	8	3 8 8	3	8	€	₽	S	Р	Y	3'	М	ĩ	1	А
Cephalanthus occidentalis	Common buttonbush			&	8 8	8 8	88	88 88	8	3 8 8	3				S	Р	W	12'	М	0	11	
Chromolaena odorata	Jack in the bush								88	3 8 8	3 8	8			S	Р	Pr	6'	L	Ť	2	
Chrysoma pauciflosculosa	Woody goldenrod									8	3 8	₿			S	Р	Y	3'	L	Ť	1	С
Conoclinium coelestinum	Blue mistflower						88	\$ 8 8	8	3 8 8	3 8	88	₽		Н	Р	BL/PR	3'	М	0	10	
Hamelia patens	Firebush	88	8 8	8 8	8 8	8 8	88	\$	8	3 8	3 8	88	₿ <i>§</i>	₽	S	Р	R	12'	М	Ť	1	
Helianthus angustifolius	Narrow-leaved sunflower									8	3 8	8			Н	Р	Y	3'	М	0	2	
Heliotropium angiospermum	Scorpion's-tail	88	8 8	8 8	8 8	8 8	88	\$	8	3 8	3 8	88	₿ <i>§</i>	₽	Н	A/P	W	2'	М	Ť	1	
Liatris spicata	Spiked blazing star							*	8	3 8 8	3 8	₽			Н	Р	PR	4'	М	0	5	
Monarda punctata	Spotted bee balm					8 8	88	88 88	8	3 8	3 8	88	₿ 	₽	Н	A/B/P	<u> W/Рк/Ү</u>	3'	L	0 🎽	9	
Pluchea odorata	Sweetscent							88	8	3 8 8	3 8	8			Н	A/P	PK/Pr	3'	L	Ø	2	
Prunus caroliniana	Carolina laurelcherry		8 8	8 8											Т	Р	W	36'	М	Ť	1	D
Rudbeckia hirta	Blackeyed Susan						88	\$ 8 8	8	3 8 8	3 8	8			Н	B/P	Y/Br	3'	L/M	0	8	С
Salvia azurea	Azure blue sage									8	3 8	88	₽		Н	Р	W/BL	5'	L	0	4	
Salvia coccinea	Scarlet sage		8 8	8 8	8 8	8 8	88	\$	8	3 8 8	3 8	8			Н	A/P	W/R/Pĸ	3'	М	Ĭ	1	
Salvia lyrata	Lyreleaf sage			&	8 8	8 8	88	}							Н	Р	W/BL/V	2'	L/M	Ť	1	
Solidago sempervirens	Seaside goldenrod	**	88€	8 8	8 80	8 8	88	8 8	8	3	3 8	8	88	₽	Н	Р	Y	8'	L	0	309	А
Verbesina virginica	Frostweed					8 8	88	8 8	8	3	3 8	8	8		Н	B/P	W	6'	L/M	Ø	211	E
Vernonia gigantea	Giant ironweed					8 8	88	8	- 88	3 8	3 8	8			Н	Р	PR	8'	М	0	2	

<u>KEY</u>

- **Bloom time:** orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✓** Form: herb (H), shrub (S), vine (V), tree (T).
- **C** Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Solutions of observations received of monarch adults nectaring across their entire range.
- Dependence of the service of the ser

- A. Tolerates saltwater spray.
- B. Good for erosion control.
- C. Drought tolerant.
- D. Birds eat berries.
- E. Short-lived, reseeds.

MID-ATLANTIC

MONARCH BUTTERFLY NECTAR PLANTS



<u>KEY</u>

- Bloom time: orange months indicate monarchs are present.
- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✓ Form:** herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (O), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Availability: seeds available (2), plants available (2).
- Solutions of the number of observations received of monarch adults nectaring across their entire range.
- **Photograph** © Mark Dumont/flickr.

- A. Drought tolerant.
- B. Considered undesirable in livestock forage.
- C. Spreads by rhizomes and seed.
- D. Tolerates saltwater spray and sandy soils
- E. Can spread quickly.
- F. Can grow 9' in length, but height is generally <1'.
- G. Great source for coastal fall migrating monarchs.
- H. Edible fruit.
- I. Understory species (shade tolerant).
- J. Host for pearl crescent (Phyciodes tharos) butterfly.

NORTHEAST

MONARCH BUTTERFLY NECTAR PLANTS





MAR APR AUG b NOV MAY Ę SEP V \mathcal{C} 9 Ē₹ Q (i) **COMMON NAME** N DEC SCIENTIFIC NAME JAN EB ** ** ** ** 0 Achillea millefolium Common yarrow Н Р W/Pĸ 3' 1 L Asclepias incarnata 🍆 Swamp milkweed ** Н Ρ 4' Μ 0 76 Рк Common milkweed *** Ρ Asclepias syriaca 🍆 Н W/<u>Pr</u> 8' L 0 189 Ρ Asclepias tuberosa 🍆 Butterfly milkweed \$8€ \$8€ Н **0/Y** 2' L 0 99 Cephalanthus occidentalis Buttonbush *** S Ρ W 12' Μ 0 11 *** S Ρ Ý Clethra alnifolia Coastal sweet-pepperbush W/Pĸ 12' Μ 2 Doellingeria umbellata Whitetop aster \$* \$* Н Ρ 5' Μ 0 9 W A, B ** ** ** Ρ 0 * 9 Eupatorium perfoliatum Boneset thoroughwort Н W 6' M/H *** Ρ 0 Euthamia graminifolia Flat-top goldentop Н γ 6' M/H 10 Eutrochium fistulosum Trumpetweed *** Н Ρ PK/PR 7' М 0 5 *** Sweetscented Joe Pye weed Н Ρ 0 1 Eutrochium purpureum PK/PR 6' М 2 Helianthus divaricatus Woodland sunflower *** Н Ρ 6' L 0 1 A, C Υ \$\$ \$ Northern blazing star Н Ρ 3' L 0 3 D Liatris scariosa PR **** V Ρ 10' 0 🎽 6 Mikania scandens Climbing hempvine Μ W Monarda fistulosa *** Ρ 5' 0 Wild bergamot Н PR L 57 *** Physostegia virginiana Obedient false dragonhead Н Ρ PK/PR 4' Μ 0 2 *** Rudbeckia hirta Blackeyed Susan Н A/B 3' 0 8 С L γ *** Solidago altissima Canada goldenrod Н Ρ γ 4' L 0 105 **** Solidago sempervirens Seaside goldenrod Н Ρ Y 8' L 0 309 Е *** Solidago speciosa Showy goldenrod Н Ρ γ 5' L/M 0 1 6 ** ** ** ** S Ρ Spiraea alba White meadowsweet W 4' M/H 0 5 F Symphyotrichum cordifolium Heart-leaved American-aster *** Н Ρ 3' L 0 3 А PR Symphyotrichum novae-angliae **** Н Ρ 0 🎽 New England aster PK/Pr 6' 36 L **** 0 Н Ρ 5' 1 Symphyotrichum novi-belgii New York aster PK/PR L \$<u>}</u> Ρ 0 5 Vernonia noveboracensis New York ironweed Н 8' L Pr

<u>KEY</u>

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- Milkweeds (Asclepias spp.) are monarch caterpillar host plants.
- **✔** Form: herb (H), shrub (S), vine (V), tree (T).
- C Lifecycle: annual (A), biennial (b), perennial (P).
- Flower color: red (R), pink (Pk), orange (0), yellow (Y), green (G), blue (BL), lavender (L), violet (V), purple (PR), brown (BR), white (W).
- **E**↑ Max height (in feet).
- Water needs: low (L), medium (M) and high (H).
- Section 2014 Availability: seeds available (20), plants available (20).
- Solutions of observations received of monarch adults nectaring across their entire range.
- **Photograph** © Uli Lorimer/flickr.

- A. Shade tolerant.
- B. Birds eat seeds.
- C. Drought tolerant.
- D. Plant only in residential areas to avoid hybridization with the endemic and at-risk *Liatris scariosa* var. *novae-angliae*.
- E. Tolerates saltwater spray and sandy soils.
- F. Spiraea tomentosa also excellent.



Habitat signs (like the one above) help improve understanding of habitat needs, and are a focal point for conversations. When children are involved in creating habitat, like this monarch habitat established as a demonstration site in Wisconsin, both they and those enjoying their creations tend to be more engaged. (Photographs © The Xerces Society/Thelma Heidel-Baker [left, right], and Kerry Lynch [center].)

Additional Resources

U.S. Department of Agriculture (USDA):

- Monarch Resources (including WHEGs): www.nrcs.usda.gov/monarchs
- Pollinator Resources: <u>http://plants.usda.gov/pollinators/nrcsdocuments.html</u>
- ↔ USDA People's Garden: <u>https://peoplesgarden.usda.gov</u>

The Xerces® Society for Invertebrate Conservation:

- Pollinator Habitat Assessment Guides: www.xerces.org/habitat-assessment-guides
- Monarch Conservation: <u>www.xerces.org/monarchs</u>
- Monarch Nectar Plant Guides:
 www.xerces.org/monarch-nectar-plant-guides
- Pollinator Conservation:
 www.xerces.org/pollinator-conservation

Other Ways to Help Monarchs

Adding signage to plantings to indicate you are supporting monarchs and other wildlife helps spread the word about the good work you are doing and helps promote pollinator plantings. Signs jump start conversations about habitat needs, native plants, and reducing negative impacts of herbicides and pesticides. Signs created by children are especially engaging. You can also join in monitoring efforts, logging monarch arrival and development, milkweed growth, etc. (see *Community Science Opportunities*).

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Community Science Opportunities:

- Western Monarch Milkweed Mapper: www.monarchmilkweedmapper.org
- Sevent: Western Monarch Count: www.westernmonarch.count.org
- ← Integrated Monarch Monitoring Program: https://monarchjointventure.org/immp

Other Sources:

- Celebrating Wildflowers (U.S. Forest Service): www.fs.fed.us/wildflowers
- Million Pollinator Garden Challenge: <u>http://millionpollinatorgardens.org</u>
- ↔ Journey North Monarchs: <u>https://journeynorth.org/monarchs</u>
- ↔ Monarch Joint Venture: <u>http://monarchjointventure.org</u>

Note on the Plant Lists

The plant species included in these lists are based on monarch nectaring observations compiled from numerous sources by the Xerces Society, including published and technical reports, species databases, research datasets, and personal communications with monarch researchers, botanists, and other experts. Over 1,200 observations of 358 native species were collated into a matrix that was then broken down into 14 regions.

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