Garden FOR Wildlife™
by National Wildlife Federation

Keystone Native Plants
Great Plains - Ecoregion 9

Native plants have tight relationships with wildlife, formed over many thousands of years, providing natural sources of food, cover and places to raise young. Without healthy native plant communities, wildlife cannot survive. Every ecoregion has different native plant communities.

Keystone plants are native plants critical to the food web and necessary for many wildlife species to complete their life cycle. Without keystone plants in the landscape, butterflies, native bees, and birds will not thrive. 96% of our terrestrial birds rely on insects supported by keystone plants.

There are two types of keystone plants:

🦋 Host plants that feed the young caterpillars of approximately 90% of butterflies and moths (Lepidoptera).

🐝 Plants that feed specialist bees who only eat pollen from specific plants. Keystone plants for native bees feed both specialist and generalist bees.

Entomologist Dr. Doug Tallamy, and his University of Delaware research team have identified the keystone plants that support butterfly and moth species. Native host plants of pollen specialist bees were researched by pollinator conservationist Jarrod Fowler.

Top Keystone Plant Genera in Great Plains - Ecoregion 9

A genus is a taxonomic category of plants that contains one or more species of plants with similar characteristics. Species within each genus have adapted to local conditions and are the appropriate native species or varieties suited to a specific ecoregion.

Plant Type	Plant Genus	Sample of Common Species (not all encompassing)	# Caterpillar Species that Use this as a Host Plant	# of Pollen Specialist Bee species that Rely on this Plant
Trees	*Quercus*	Bur oak (*Quercus macrocarpa*), Post oak (*Quercus stellata*), Blackjack oak (*Quercus marilandica*)	253 🦋	
	Prunus	American plum (*Prunus americana*), Chokecherry (*Prunus virginiana*)	222 🦋	
	Betula	River birch (*Betula nigra*), paper birch (*Betula papyrifera*)	189 🦋	
	Populus	Eastern cottonwood (*Populus deltoides*)	180 🦋	
	Alnus	Tag alder (*Alnus serrulata*)	164 🦋	
	Malus	Prairie crabapple (*Malus ioensis*)	162 🦋	
	Carya	Shagbark hickory (*Carya ovata*), Bitternut hickory (*Carya cordiformis*)	153 🦋	
	Acer	Box elder (*Acer negundo*), Silver maple (*Acer saccharinum*)	145 🦋	
Shrubs	*Salix*	Peachleaf willow (*salix amygdaloides*), Sandbar willow (*Salix interior*)	214 🦋	20 🐝
	Vaccinium	Sparkleberry (*Vaccinium arboreum*), Deerberry (*Vaccinium stamineum*)	146 🦋	
	Chrysothamnus	Rabbitbrush (*Chrysothamnus viscidiflorus*)		52 🐝
	Ericameria	Rubber rabbitbrush (*Ericameria nauseosa*)		41 🐝
Flowering Perennials	*Helianthus*	Plains sunflower (*Helianthus petiolaris*), Stiff sunflowr (*Helianthus pauciflorus*)	58 🦋	89 🐝
	Grindelia	Curlycup gumweed (*Grindelia squarrosa*), narrowleaf gumweed (*Grindelia lanceolata*)	7 🦋	68 🐝

	Genus		Butterfly	Bee
	Solidago	Tall goldenrod (*Solidago altissima*), Missouri goldenrod (*Solidago missouriensis*)	71 🦋	56 🐝
	Gutierrezia	Broom snakeweed (*Gutierrezia sarothrae*)	6 🦋	50 🐝
	Heterotheca	Camphorweed (*Heterotheca subaxillaris*), Stiffleaf goldenaster (*Heterotheca stenophylla*)		50 🐝
	Symphyotrichum	White heath aster (*Symphyotrichum ericoides*), White prairie aster (*Symphyotrichum falcatum*)	7 🦋	43 🐝
	Verbesina	Golden crownbeard (*Verbesina encelioides*)	8 🦋	34 🐝
	Rudbeckia	Black-eyed Susan (*Rudbeckia hirta*), Cutleaf coneflower (*Rudbeckia laciniata*)	10 🦋	32 🐝

Top 30 Keystone Plant Genera for Butterfly and Moth Caterpillar

Genus	Common Plant Name	# of Caterpillar Species that use this as a Host Plant
Quercus	oak	253
Prunus	almond, apricot, cherry, peach, plum	222
Salix	willow	214
Betula	birch	189
Populus	aspen cottonwood poplar	180
Alnus	alder	164
Malus	apple	162
Carya	hickory	153
Vaccinium	blueberry, cranberry deerberry	146
Acer	maple	145
Pinus	pine	145
Ulmus	elm	109
Larix	larch	99
Castanea	chestnut	98
Tsuga	hemlock	92
Tilia	basswood	91
Crataegus	hawthorn	90
Juglans	walnut	89
Rubus	blackberry, raspberry	88
Fraxinus	ash	86
Abies	fir	85
Corylus	hazel	76
Picea	spruce	75
Rosa	rose	75
Pseudotsuga	douglas fir	74
Solidago	goldenrod	71
Amelanchier	serviceberry	69
Cornus	dogwood	65
Vitis	grape	60
Helianthus	sunflower	58

Top 30 Native Host Plants for Pollen Specialist Bees

Genus	Common Plant Name	# of Pollen Specialist Bee Species Relying on this Plant
Helianthus	sunflower	89
Grindelia	gumweed	68
Solidago	goldenrod	56
Chrysothamnus	rabbitbrush	52
Gutierrezia	snakeweed	50
Heterotheca	goldenaster	50
Symphyotrichum	aster	43
Ericameria	goldenbush	41
Verbesina	wingstem	34
Rudbeckia	black eyed susan	32
Cirsium	thistle	30
Erigeron	fleabane	30
Machaeranthera	tansyaster	28
Coreopsis	tickseed	27
Baileya	desert marigold	25
Senecio	ragwort	22
Salix	willow	20
Gaillardia	blanketflower	18
Bidens	beggartick	16
Isocoma	goldenbush	16
Baccharis	baccharis	14
Ratibida	prairie coneflower	14
Astragalus	milkvetch	13
Chrysopsis	goldenster	13
Dalea	prairie clover	12
Heliomeris	goldeneye	12
Vernonia	ironweed	12
Heliopsis	heliopsis	11
Oenothera	evening primrose	11
Helenium	sneezeweed	10