

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.

To find species by zip code, check out the [Native Plant Finder](#).

Plant type	Plant genus	Sample of common species (not all encompassing)	# of caterpillar species that use this as a host plant	# of pollen specialist bee species that rely on this plant
Trees	<i>Quercus</i>	Bur oak (<i>quercus macrocarpa</i>), post oak (<i>quercus stellata</i>), blackjack oak (<i>quercus marilandica</i>)	253	
	<i>Prunus</i>	American plum (<i>prunus americana</i>), chokecherry (<i>prunus virginiana</i>)	222	
	<i>Betula</i>	River birch (<i>betula nigra</i>), paper birch (<i>betula papyrifera</i>)	189	
	<i>Populus</i>	Eastern cottonwood (<i>populus deltoides</i>)	180	
	<i>Alnus</i>	Tag alder (<i>alnus serrulata</i>)	164	
	<i>Malus</i>	Prairie crabapple (<i>malus ioensis</i>)	162	
	<i>Carya</i>	Shagbark hickory (<i>carya ovata</i>), bitternut hickory (<i>carya cordiformis</i>)	153	
	<i>Acer</i>	Box elder (<i>acer negundo</i>), silver maple (<i>acer saccharinum</i>)	145	
Shrubs	<i>Salix</i>	Peachleaf willow (<i>salix amygdaloides</i>), sandbar willow (<i>salix interior</i>)	214	20
	<i>Vaccinium</i>	Sparkleberry (<i>vaccinium arboreum</i>), deerberry (<i>vaccinium stamineum</i>)	146	
	<i>Chrysothamnus</i>	Rabbitbrush (<i>chrysothamnus viscidiflorus</i>)		52
	<i>Ericameria</i>	Rubber rabbitbrush (<i>ericameria nauseosa</i>)		41
Flowering perennials	<i>Helianthus</i>	Plains sunflower (<i>helianthus petiolaris</i>), stiff sunflower (<i>helianthus pauciflorus</i>)	58	89
	<i>Grindelia</i>	Curlycup gumweed (<i>grindelia squarrosa</i>), narrowleaf gumweed (<i>grindelia lanceolata</i>)	7	68
	<i>Solidago</i>	Tall goldenrod (<i>solidago altissima</i>), Missouri goldenrod (<i>solidago missouriensis</i>)	71	56

Plant type <i>continued</i>	Plant genus	Sample of common species (not all encompassing)	# of caterpillar species that use this as a host plant	# of pollen specialist bee species that rely on this plant
Flowering Perennials <i>continued</i>	<i>Gutierrezia</i>	Broom snakeweed (<i>gutierrezia sarothrae</i>)	6 	50 
	<i>Heterotheca</i>	Camphorweed (<i>heterotheca subaxillaris</i>), stiffleaf goldenaster (<i>heterotheca stenophylla</i>)		50 
	<i>Symphyotrichum</i>	White heath aster (<i>symphyotrichum ericoides</i>), white prairie aster (<i>symphyotrichum falcatum</i>)	7 	43 
	<i>Verbesina</i>	Golden crownbeard (<i>verbesina encelioides</i>)	8 	34 
	<i>Rudbeckia</i>	Black-eyed Susan (<i>rudbeckia hirta</i>), cutleaf coneflower (<i>rudbeckia laciniata</i>)	10 	32 



Top 30 Keystone Plant Genera for Butterfly and Moth Caterpillars



Top 30 Native Host Plants for Pollen Specialist Bees

Genus	Common plant name	# of caterpillar species that use this as a host plant
<i>Quercus</i>	Oak	253
<i>Prunus</i>	Almond, apricot, cherry, peach, plum	222
<i>Salix</i>	Willow	214
<i>Betula</i>	Birch	189
<i>Populus</i>	Aspen, cottonwood, poplar	180
<i>Malus</i>	Apple	162
<i>Carya</i>	Hickory	153
<i>Vaccinium</i>	Blueberry, cranberry, deerberry	146
<i>Acer</i>	Maple	145
<i>Pinus</i>	Pine	145
<i>Ulmus</i>	Elm	109
<i>Larix</i>	Larch	99
<i>Castanea</i>	Chestnut	98
<i>Tsuga</i>	Hemlock	92
<i>Tilia</i>	Basswood	91
<i>Crataegus</i>	Hawthorn	90
<i>Juglans</i>	Walnut	89
<i>Rubus</i>	Blackberry, raspberry	88
<i>Fraxinus</i>	Ash	86
<i>Abies</i>	Fir	85
<i>Corylus</i>	Hazel	76
<i>Picea</i>	Spruce	75
<i>Rosa</i>	Rose	75
<i>Pseudotsuga</i>	Douglas fir	74
<i>Solidago</i>	Goldenrod	71
<i>Amelanchier</i>	Serviceberry	69
<i>Cornus</i>	Dogwood	65
<i>Vitis</i>	Grape	60
<i>Helianthus</i>	Sunflower	58

Genus	Common plant name	# of pollen specialist bee species that rely on this plant
<i>Helianthus</i>	Sunflower	89
<i>Grindelia</i>	Gumweed	68
<i>Solidago</i>	Goldenrod	56
<i>Chrysothamnus</i>	Rabbitbrush	52
<i>Gutierrezia</i>	Snakeweed	50
<i>Heterotheca</i>	Goldenaster	50
<i>Symphyotrichum</i>	Aster	43
<i>Ericameria</i>	Goldenbush	41
<i>Verbesina</i>	Wingstem	34
<i>Rudbeckia</i>	Black-eyed Susan	32
<i>Cirsium</i>	Thistle	30
<i>Erigeron</i>	Fleabane	30
<i>Machaeranthera</i>	Tansyaster	28
<i>Coreopsis</i>	Tickseed	27
<i>Baileya</i>	Desert marigold	25
<i>Senecio</i>	Ragwort	22
<i>Salix</i>	Willow	20
<i>Gaillardia</i>	Blanketflower	18
<i>Bidens</i>	Beggartick	16
<i>Isocoma</i>	Goldenbush	16
<i>Baccharis</i>	Baccharis	14
<i>Ratibida</i>	Prairie coneflower	14
<i>Astragalus</i>	Milkvetch	13
<i>Chrysopsis</i>	Goldenster	13
<i>Dalea</i>	Prairie clover	12
<i>Heliomeris</i>	Goldeneye	12
<i>Vernonia</i>	Ironweed	12
<i>Heliopsis</i>	Heliopsis	11
<i>Oenothera</i>	Evening primrose	11
<i>Helenium</i>	Sneezeweed	10