Garden FOR Wildlife™
by National Wildlife Federation

Keystone Native Plants
Northern Forests – Ecoregion 5

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 Northern Forests - Ecoregion 5

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*	White oak *(Quercus alba)*, Black oak *(Quercus velutina)*	445	
	Prunus	American plum *(Prunus americana)*, Black cherry *(Prunus serotina)*, Chokecherry *(Prunus virginiana)*	409	
	Betula	Yellow birch *(Betula alleghaniensis)*, Paper birch *(Betula papyrifera)*	385	
	Populus	American aspen *(Populus tremuloides)*, Balsam poplar *(Populus balsamifera)*	337	
	Malus	Sweet crabapple *(Malus coronaria)*	285	
	Acer	Silver maple *(Acer saccharinum)*, Sugar maple *(Acer saccharum)*	276	
	Alnus	Gray alder *(Alnus incana)*	245	
	Pinus	Red pine *(Pinus resinosa)*, Eastern white pine *(Pinus strobus)*	235	
Shrubs	*Vaccinium*	Lowbush blueberry *(Vaccinium angustifolium)*, Cranberry *(Vaccinium macrocarpon)*	276	6
	Salix	Pussy willow *(Salix discolor)*, Prairie willow *(Salix humilis)*, Black willow *(Salix nigra)*	397	12
Flowering Perennials	*Solidago*	Canada goldenrod *(Solidago canadensis)*, Gray goldenrod *(Solidago nemoralis)*, Giant goldenrod *(Solidago gigantea)*	120	22
	Symphyotrichum	Calico aster *(Symphyotrichum lateriflorum)*, Swamp aster *(Symphyotrichum puniceum)*, New England aster *(Symphyotrichum novae-angliae)*	9	16
	Helianthus	Pale leaf sunflower *(Helianthus strumosus)*, Thin leaf sunflower *(Helianthus decapetalus)*	53	22

	Rudbeckia	Black-eyed Susan *(Rudbeckia hirta)*, Green-headed coneflower *(Rudbeckia laciniata)*	14	17
	Grindelia	Curlycup gumweed *(Grindelia squarrosa)*		16
	Coreopsis	Lanceleaf coreopsis *(Coreopsis lanceolata)*, Plains coreopsis *(Coreopsis tinctoria)*		9
	Bidens	Nodding bur marigold *(Bidens cernua)*, Three-lobe beggarticks *(Bidens tripartita)*		7
	Cirsium	Swamp thistle *(Cirsium muticum)*		7
	Verbesina	Wingstem *(Verbesina alternifolia)*		7

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	445
Prunus	almond, apricot, cherry, peach, plum	409
Salix	willow	397
Betula	birch	385
Populus	aspen cottonwood poplar	337
Malus	apple	285
Acer	maple	276
Vaccinium	blueberry, cranberry deerberry	276
Alnus	alder	245
Pinus	pine	235
Carya	hickory	206
Ulmus	elm	187
Picea	spruce	144
Crataegus	hawthorn	156
Rubus	blackberry raspberry	153
Tilia	basswood	146
Fraxinus	ash	133
Juglans	walnut	125
Corylus	hazel	129
Solidago	goldenrod	120
Fagus	beech	127
Castanea	chestnut	121
Abies	fir	116
Rosa	rose	119
Cornus	dogwood	116
Larix	larch	113
Amelanchier	serviceberry	113
Viburnum	viburnum	102
Tsuga	hemlock	110
Symphyotrichum	aster	108

Top 30 Native Host Plants for Pollen Specialist Bees

Genus	Common Plant Name	# of Pollen Specialist Bee Species Relying on this Plant
Helianthus	sunflower	22
Solidago	goldenrod	22
Rudbeckia	Black-eyed Susan	17
Grindelia	gumweed	16
Symphyotrichum	aster	16
Salix	willow	12
Coreopsis	tickseed	9
Bidens	beggartick	7
Cirsium	thistle	7
Verbesina	wingstem	7
Euthamia	goldentop	6
Silphium	rosinweed	6
Vaccinium	blueberry, cranberry deerberry	6
Erigeron	fleabane	5
Ratibida	prairie coneflower	5
Vernonia	ironweed	5
Cornus	dogwood	4
Heterotheca	goldenaster	4
Physalis	groundcherry	4
Astragalus	milkvetch	3
Dalea	prairie clover	3
Echinacea	coneflower	3
Lotus	bird's foot trefoil, deervetch	3
Lysimachia	loosestrife	3
Eurybia	aster	2
Gaillardia	blanketflower	2
Heliopsis	heliopsis	2
Hieracium	hawkweed	2
Kalmia	laurel	2
Lupinus	lupin	2