



Keystone Native Plants

Northwestern Forested Mountains – Ecoregion 6

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 Northwestern Forested Mountains – Ecoregion 6

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 | <i>Prunus</i> | Oregon cherry (<i>Prunus emarginata</i>), Chokecherry (<i>Prunus virginiana</i>) | 206  | |
| | <i>Populus</i> | American aspen (<i>Populus tremuloides</i>), balsam poplar (<i>Populus balsamifera</i>) | 197  | |
| | <i>Betula</i> | Water birch (<i>Betula occidentalis</i>), Resin birch (<i>Betula glandulosa</i>) | 177  | |
| | <i>Quercus</i> | Red oak (<i>Quercus rubra</i>), Deer oak (<i>Quercus sadleriana</i>) | 169  | |
| | <i>Alnus</i> | Grey alder (<i>Alnus incana</i>), Sitka alder (<i>Alnus sinuata</i>) | 166  | |
| | <i>Pinus</i> | Lodgepole pine (<i>Pinus contorta</i>), Ponderosa pine (<i>Pinus ponderosa</i>) | 165  | |
| | <i>Malus</i> | Oregon crabapple (<i>Malus fusca</i>) | 139  | |
| | <i>Acer</i> | Bigleaf maple (<i>Acer macrophyllum</i>), Rocky Mountain maple (<i>Acer glabrum</i>) | 107  | |
| Shrubs | <i>Salix</i> | Shining willow (<i>Salix lasiandra</i>), Scouler's Willow (<i>Salix scouleriana</i>) | 256  | 26  |
| | <i>Vaccinium</i> | Dwarf bilberry (<i>Vaccinium caespitosum</i>), Black huckleberry (<i>Vaccinium membranaceum</i>) | 111  | |
| | <i>Chrysothamnus</i> | Yellow rabbitbrush (<i>Chrysothamnus viscidiflorus</i>) | 21  | 78  |
| | <i>Ericameria</i> | Rubber rabbitbrush (<i>Ericameria nauseosa</i>) | | 73  |
| Flowering Perennials | <i>Solidago</i> | Western goldenrod (<i>Solidago lepida</i>), Rocky Mountain goldenrod (<i>Solidago multiradiata</i>) | 52  | 48  |
| | <i>Helianthus</i> | Common sunflower (<i>Helianthus annuus</i>), Prairie sunflower (<i>Helianthus petiolaris</i>) | 39  | 81  |

| | | | | |
|--|-----------------------|---|--|--|
| | <i>Grindelia</i> | Idaho gumplant (<i>Grindelia nana</i>), Curlycup gumweed (<i>Grindelia squarrosa</i>) | 8  | 75  |
| | <i>Gutierrezia</i> | Broom snakeweed (<i>Gutierrezia sarothrae</i>) | | 72  |
| | <i>Heterotheca</i> | Hairy false goldenaster (<i>Heterotheca villosa</i>) | 8  | 56  |
| | <i>Erigeron</i> | Cutleaf daisy (<i>Erigeron compositus</i>), Shortray fleabane (<i>Erigeron lonchophyllus</i>) | 14  | 38  |
| | <i>Symphyotrichum</i> | Western aster (<i>Symphyotrichum ascendens</i>), Eaton's aster (<i>Symphyotrichum eatonii</i>) | 2  | 31  |
| | <i>Senecio</i> | Drawf mountain ragwort (<i>Senecio fremontii</i>), Arrow leaf ragwort (<i>Senecio triangularis</i>) | 22  | 29  |

 **Top 30 Keystone Plant Genera for Butterfly and Moth Caterpillar**

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

 **Top 30 Native Host Plants for Pollen Specialist Bees**

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