Keystone Native Plants
Temperate Sierras – Ecoregion 13

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 Temperate Sierras – Ecoregion 13

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	Quercus	Gambel oak (*quercus gambelii*), gray oak (*quercus grisea*)	294	
	Prunus	Oregon cherry (*prunus emarginata*), black cherry (*prunus serotina*)	194	
	Pinus	Colorado pinyon (*pinus edulis*), limber pine (*pinus flexilis*)	154	
	Populus	Eastern cottonwood (*populus deltoides*), American aspen (*populus tremuloides*)	153	
	Acer	Rocky Mountain maple (*acer glabrum*), box elder (*acer negundo*)	112	
	Alnus	Grey alder (*alnus incana*), Arizona alder (*alnus oblongifolia*)	90	
	Betula	Water birch (*betula occidentalis*)	89	
	Fraxinus	Single-leaf ash (*fraxinus anomala*), fragrant ash (*fraxinus cuspidata*)	67	
Shrubs	Salix	Peachleaf willow (*salix amygdaloides*), coyote willow (*salix exigua*)	193	
	Chrysothamnus	Long-flowered rabbitbrush (*chrysothamnus depressus*), rabbitbrush (*chrysothamnus viscidiflorus*)	26	55
	Ericameria	Rubber rabbitbrush (*ericameria nauseosa*), Parry's rabbitbrush (*ericameria parryi*)	17	49
Flowering perennials	Helianthus	Western sunflower (*helianthus anomalus*), Nuttall's sunflower (*helianthus nuttallii*)	66	65
	Gutierrezia	Sticky snakeweed (*gutierrezia microcephala*), broom snakeweed (*gutierrezia sarothrae*)	15	59

Plant type *continued*	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 *continued*	*Grindelia*	Arizona gumweed (*grindelia arizonica*), curlycup gumweed (*grindelia squarrosa*)	15	52
	Heterotheca	Rockyscree false goldenaster (*heterotheca fulcrata*), camphorweed (*heterotheca subaxillaris*)	18	50
	Verbesina	Cowpen daisy (*verbesina encelioides*)	11	47
	Machaeranthera	Tahoka daisy (*machaeranthera tanacetifolia*)	7	36
	Baileya	Desert marigold (*baileya multiradiata*)	2	31
	Solidago	Western goldenrod (*solidago lepida*), Missouri goldenrod (*solidago missouriensis*)	59	28

Top 30 Keystone Plant Genera for Butterfly and Moth Caterpillars

Genus	Common plant name	# of caterpillar species that use this as a host plant
Quercus	Oak	294
Prunus	Almond, apricot, cherry, peach, plum	194
Salix	Willow	193
Pinus	Pine	154
Populus	Aspen, cottonwood, poplar	153
Acer	Maple	112
Alnus	Alder	90
Betula	Birch	89
Fraxinus	Ash	67
Helianthus	Sunflower	66
Juglans	Walnut	65
Rosa	Rose	65
Ostrya	Hophornbeam	63
Vitis	Grape	61
Solidago	Goldenrod	59
Abies	Fir	57
Vaccinium	Blueberry, cranberry, deerberry	56
Rhus	Sumac	55
Rubus	Blackberry, raspberry	55
Picea	Spruce	54
Fragaria	Strawberry	53
Ulmus	Elm	51
Pseudotsuga	Douglas fir	50
Amelanchier	Serviceberry	50
Robinia	Locust	48
Gleditsia	Honey locust	45
Celtis	Hackberry	42
Juniperus	Juniper	41
Ceanothus	Ceanothus	40
Lotus	Bird's foot refoil, deervetch	40

Top 30 Native Host Plants for Pollen Specialist Bees

Genus	Common plant name	# of pollen specialist bee species that rely on this plant
Helianthus	Sunflower	65
Gutierrezia	Snakeweed	59
Chrysothamnus	Rabbitbrush	55
Grindelia	Gumweed	52
Heterotheca	Goldenaster	50
Ericameria	Goldenbush	49
Verbesina	Wingstem	47
Machaeranthera	Tansyaster	36
Baileya	Desert marigold	31
Solidago	Goldenrod	28
Erigeron	Fleabane	24
Cirsium	Thistle	22
Encelia	Brittlebush	22
Senecio	Ragwort	22
Isocoma	Goldenbush	20
Symphyotrichum	Aster	20
Pectis	Chinchweed	17
Sphaeralcea	Globemallow	17
Coreopsis	Tickseed	15
Heliomeris	Goldeneye	14
Rubeckia	Black-eyed Susan	14
Viguiera	Goldeneye	14
Gaillardia	Blanketflower	12
Prosopis	Mesquite	12
Baccharis	Baccharis	11
Heliopsis	Heliopsis	10
Larrea	Creosote bush	9
Hymenothrix	Thimblehead	8
Parkinsonia	Paloverde	8
Astragalus	Milkvetch	7