



United States Department of Agriculture

Maintaining and Improving Habitat for Hummingbirds in Colorado, Wyoming and South Dakota



– A Land Manager's Guide –



Forest Service National Headquarters

**POLLINATOR
PARTNERSHIP**

Introduction



Hummingbirds play an important role in the food web, pollinating a variety of flowering plants, some of which are specifically adapted to pollination by hummingbirds. Some hummingbirds are at risk, like other pollinators, due to habitat loss, changes in the distribution and abundance of nectar plants (which are affected by climate change), the spread of invasive plants, and pesticide use.

This guide is intended to help you provide and improve habitat for hummingbirds, as well as other pollinators, in Colorado, Wyoming, and South Dakota. While hummingbirds, like all birds, have the basic habitat needs of food, water, shelter, and space, this guide is focused on providing food—the plants that provide nectar for hummingbirds. Because climate, geology, and vegetation vary widely in different areas, specific recommendations are presented for each ecoregion in Colorado, Wyoming, and South Dakota. (See the *Ecoregions in Colorado, Wyoming, and South Dakota* section, below.)

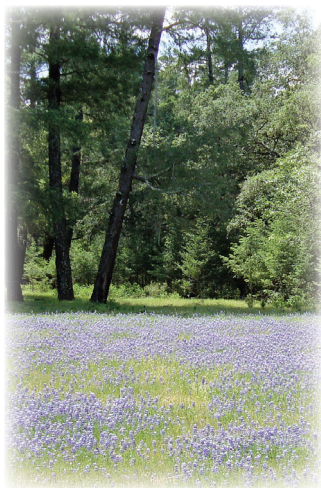
This guide also provides brief descriptions of the species that visit Colorado, Wyoming, and South Dakota, as well as some basic information about hummingbird habitat needs.

Whether you're involved in managing public or private lands, large acreages or small areas, you can make them attractive to our native hummingbirds. Even long, narrow pieces of habitat, like utility corridors, field edges, and roadsides, can provide important connections among larger habitat areas.



Rufous Hummingbird nest
Courtesy of Martin Hutten

Hummingbird Basics



Lupine meadow.
Courtesy of Marguerite Meyer

The hummingbirds of Colorado, Wyoming, and South Dakota are migratory, wintering in Mexico between September and April, and present in the US between April–August. Black-chinned, Calliope and Broad-tailed hummingbird breed in Colorado and Wyoming, while Ruby-throated Hummingbird breeds in Eastern South Dakota. Rufous hummingbirds will migrate as far north as Alaska in the summer, relying on habitat and nectar plants throughout Colorado, Wyoming, and South Dakota to fuel their southbound journey in mid-summer. For hummingbird species to thrive, they need to find suitable habitat all along their migration routes, as well as in their breeding, nesting, and wintering areas. Even small habitat patches along their migratory path can be critical to the birds by providing places for rest and food to fuel their journey.

Food

Hummingbirds feed by day on nectar from flowers, including annuals, perennials, trees, shrubs, and vines. Native nectar plants are listed in the table near the end of this guide. They feed while hovering or, if possible, while perched. They also eat insects, such as fruit-flies and gnats, and will consume tree sap, when it is available. They obtain tree sap from sap wells drilled in trees by sapsuckers and other hole-drilling birds.



Western columbine—*Aquilegia formosa*
Courtesy of Gary A. Monroe
USDA-NRCS PLANTS Database

Water

Hummingbirds get adequate water from the nectar and insects they consume. However, they are attracted to running water, such as a fountain, sprinkler, birdbath with a mister, or waterfall. In addition, insect populations are typically higher near ponds, streams, and wetland areas, so those areas are important food sources for hummingbirds.



Mountain stream.
Courtesy of Marguerite Meyer

Hummingbird Species in Colorado, Wyoming, and South Dakota

Following are brief descriptions of the hummingbird species most commonly found in Colorado, Wyoming, and South Dakota, as well as a list of other species that are uncommon or rare visitors.

Black-chinned Hummingbird (*Archilochus alexandri*)



RANGE—Black-chinned Hummingbirds occur in three Bird Conservation Regions (BCRs) in Colorado, Wyoming, and South Dakota, which are BCR's 10, 16, and 18. (See the Bird Conservation Regions section, below.) They can only be observed in the southwestern corner of Wyoming, and not at all in South Dakota. They are much more widely distributed in Colorado, but are uncommon in the eastern portion of the state. They migrate to this region for summer breeding and then return to the lowlands of western Mexico for the winter. Black-chinned Hummingbirds are most common in areas below 6000 feet and inhabit a variety of habitats associated with water (less than 1/2 mile), including canyons and gulches, riparian corridors, open woodlands, oak and scrub areas, and urban settings.

NESTING—Habitat includes canyons or floodplain riparian communities, especially near sycamore or cottonwood. In urban areas, they prefer settings with tall trees and many flowering shrubs and vines. After breeding, they may move to more elevated mountain habitats to feed on nectar-producing flowers. Many will move or stay in urban areas, where flowering plants and feeders are attractive. Typically arriving in April, they migrate south in August or early September.

APPEARANCE—Unlike other North American hummingbirds, the wingtips of the Black-chinned Hummingbird look relatively broad and curved when the bird is at rest. While hovering, they pump their tail almost constantly. The adult male is dull green to emerald green above, pale gray to whitish below, becoming dull green on the sides. It has a velvety black gorget with an iridescent purple band below; the purple band can look black in poor light. White on the breast extends around the sides of the neck, contrasting strongly with the all-dark head. The central two tail feathers are green; the others are black, often with a purplish sheen.

The adult female is dull green to golden green above and pale gray below. The sides are gray-green and often have a tawny or cinnamon-colored patch on the lower flank. The throat of the female can be unmarked or have dusky streaking



Black-chinned—male
Courtesy of Scott Carpenter



Black-chinned—female
Courtesy of Scott Carpenter

or spotting in the center of the gorget. The tail is greenish or blackish, with the three outer pairs of tail feathers broadly tipped with white. Immature birds look similar to adult females; refer to a field guide for more information.

Ruby-throated Hummingbird (*Archilochus colubris*)



RANGE—Ruby-throated Hummingbirds are the only hummingbirds that breed in eastern North America, including southern Canada from Newfoundland to just west of the Alberta-British Columbia border. They occur regularly in 38 eastern states but only rarely as vagrants in the western U.S. By mid-October nearly all ruby-throats migrate to central Mexico or Central America as far south as western Panama, returning to Gulf Coast states as early as February before dispersing northward. Migration routes are not well-understood; some ruby-throats have been observed in trans-Gulf migration, but it is likely others migrate overland through Mexico. Ruby-throated Hummingbirds show remarkable site fidelity; banded individuals have been captured in the same nesting areas for as many as nine years, and recent studies have shown similar site fidelity on the species' wintering grounds in Costa Rica and Belize.



Ruby-throated Hummingbird—male
Courtesy of Hugh Vandervoort

Ruby-throated Hummingbirds occur in Bird Conservation Region (BCR) 11 in South Dakota (See the Bird Conservation Regions section, below). They are only present in significant numbers in eastern South Dakota. They migrate to this region for summer breeding and then return to the lowlands of southern Mexico and central America (as far as Panama) for the winter. Ruby-throated Hummingbirds are ecologically highly similar to Black-chinned Hummingbirds (their sister species). They are most common in areas below 6000 feet and inhabit a variety of habitats associated with water (less than 1/2 mile), including canyons and gulches, riparian corridors, open woodlands, oak and scrub areas, and urban settings.

Although small numbers of Ru-



Ruby-throated Hummingbird—female
Courtesy of Hugh Vandervoort

by-throated Hummingbirds historically overwintered in southern Florida and on the Gulf Coast, in recent winters they have become increasingly common northward to North Carolina's Outer Banks and, in some cases, even at inland locales in the southern U.S. (Most winter hummingbirds in the eastern U.S. are western species, especially Rufous Hummingbirds.) With their vast distribution across North and Central America, Ruby-throated Hummingbirds are arguably the most abundant of all 340-plus hummingbird species. As opportunistic non-specialists, their populations appear stable or on the increase.

NESTING— Ruby-throats are birds of the edge; the female typically builds her nest near an open area on a downward-angled branch, sometimes overhanging water. They are far more common in hardwoods than in coniferous forests, from sea level to at least 6,000 feet in the Appalachian Mountains. Because of the density of green vegetation in the eastern U.S., Ruby-throated Hummingbird nests are often less obvious (and more poorly studied) than those for western hummingbirds. Nests have been reported in deciduous and evergreen trees at heights from eye level to 60 feet above ground.

APPEARANCE— The adult male Ruby-throated Hummingbird's bright metallic red gorget gives the species its name. Adult males also have iridescent green backs, dark flanks, and forked tails with pointed dark feathers. Females of any age are green-backed and all white beneath, including the throat; tips of the outer three tail feathers are rounded and white. Immature (first year) males resemble females—including the tail; their throats may be all white, streaked in green or black, and/or with one or more red feathers. Although adult males in some other western North American species have metallic red gorgets (e.g., Broad-tailed Hummingbirds), they should not be called or confused with "ruby-throats."

Female ruby-throats are up to 25% larger than males. Both sexes have straight black bills. Because all Ruby-throated Hummingbird colors except white and black are iridescent, even individual birds will look different as light conditions change.

Calliope Hummingbird (*Selasphorus calliope*)



The Calliope Hummingbird is the smallest breeding bird in North America and is the smallest long-distance avian migrant in the world.

RANGE— Calliope Hummingbirds occur in BCRs 10, 16, and 18 in Colorado, Wyoming, and South Dakota. They are common summer residents in mountain habitats of western Wyoming. They are less common in Colorado, occurring only transiently as they migrate between their preferred breeding habitats further north and their wintering habitats in western Mexico, and cannot be observed at all in South Dakota. Spring migration peaks in April, when the birds pass through lowland, coastal habitats along the Pacific Flyway. During migration they tend to co-occur with migrating Rufous Hummingbirds, and Rufous Hummingbirds are often more abundant than this species. Fall migration is through both the Pacific and Rocky Mountain Flyways,



Calliope Hummingbird—male
Courtesy of Scott Carpenter

at a wider range of elevations, from mountains to desert riparian corridors.

The adult male is bright green above and creamy white below with a green wash on the sides and flanks. The adult male's gorget is iridescent, wine-red to magenta-red, and, unlike other North American hummingbirds, separated into distinct rays that fan across its throat. The male can elevate the rays into a starburst display against the white background of its throat. Wingtips extend to or slightly beyond the short tail. Tail feathers are dull gray, variably edged with cinnamon at the base.

The adult female is bright green to golden green above and creamy white below, with a rusty wash on the sides, flanks, and across the lower breast. The gorget is evenly spotted with dusky to brownish bronze. The tail usually falls short of the wingtips. The adult female looks much like female Rufous or Allen's Hummingbirds, but it is smaller with a shorter bill, shorter tail, and less rust at the base of the tail. Immature birds look similar to adult females. Calliope Hummingbirds often cock their tails upward, perpendicular to the body, while hovering.



Calliope Hummingbird—female
Courtesy of Scott Carpenter

NESTING—Preferred nesting habitat is montane conifer forests, primarily in shrub-sapling seral stage into second-growth following fires or logging, and usually near (within 1 mile) of riparian habitat. They breed mostly in mountain areas from British Columbia to California, Nevada, and Utah. They breed mainly at middle elevations (4,000 to 7,000 feet), but sometimes as high as timberline (above 9,000 feet) and down to lower forest margins (500 feet).

APPEARANCE—The male Calliope Hummingbird weighs about the same as a penny—the smallest bird in North

Broad-tailed Hummingbird (*Selasphorus platycercus*)



Broad-tailed Hummingbird—male
Courtesy of David Inouye

RANGE—The Broad-tailed Hummingbird is a long-winged, high elevation hummingbird whose migratory breeding populations range north across the Rocky Mountains to southern Montana and west through forested regions of Nevada and just barely make it into eastern California.

They occur in BCRs

16, 17, and 18 in Colorado, Wyoming, and South Dakota. They can be observed in western Wyoming, western Colorado, and, though rarely in recent years, in the Black Hills of western South Dakota. They migrate to this region for summer breeding and spend the winter in Mexico. They breed above 6,000 feet (and so only rarely overlap with the lower-elevation Black-chinned Hummingbird). This species occupies high elevation mountain habitats - including piñon-juniper, pine-oak, montane riparian areas and wet meadows, and areas of open mixed conifers including fir, spruce, and pine.

FOOD—Broad-tailed Hummingbirds primarily consume nectar from flowers such as red columbine, Indian paintbrush, sage species, currants, and scarlet mint. Broad-tailed Hummingbirds also feed from flowers that are not typically used by other hummingbirds, including pussywillows, and glacier lilies. They will



Broad-tailed Hummingbird—female
Courtesy of David Inouye

also eat small insects, gleaning them from leaves and snatching them from midair.

NESTING—Nest site selection and construction is done entirely by the female and can begin as early as late April, and ends by late July. Nests are typically observed

on low horizontal branches of willows, alders, cottonwoods, pines, firs, spruces, or aspens, generally 3-13 feet above ground. Their nests are often located over water. Broad-tailed Hummingbirds mainly breed between 6,000-10,000 feet but have been observed nesting at elevations over 10,700 feet. After breeding, they follow the path of blooming plants.

APPEARANCE— These mid-sized hummingbirds have longer tail and wings than any other North American *Selasphorus* species. The male is green above and white below with an iridescent, rosy-red gorget. The male may be known at once due to the loud, cricket-like wing trill it produces with its wings during flight. These specialized flight feathers allow him to be heard from about a 100-yard distance, making his presence obvious.

The female is green above and white below with rusty sides and rust at the base of the tail. Females can be distinguished from other *Selasphorus* species by a white eye-ring and long rectrices, which make their tails look longer and broader when fanned.

Rufous Hummingbird (*Selasphorus rufus*)



RANGE—The Rufous Hummingbird travels farther north than any other hummingbird, wintering in Mexico and migrating to breeding sites as distant as Alaska. Although a relatively small hummingbird, it has an aggressive nature and frequently chases larger hummingbirds from nectar sources. The Rufous Hummingbird occurs in BCRs 10, 16, and 18 in Colorado, Wyoming, and South Dakota, primarily during southbound migration. It occurs only transiently as a migrant throughout Colorado



Rufous Hummingbird—female
Courtesy of Jim Cruce

and southern Wyoming, settling down for summer breeding in northwestern Wyoming and across the Pacific Northwest. Only rare and isolated observations of the Rufous Hummingbird have been recorded in South Dakota. Fall migration begins in June and is split between the Pacific and Rocky Mountain Flyways. As with other hummingbirds, Rufous Hummingbirds typically move to higher elevations for the fall migration, following nectar flowers. Rufous Hum-

mingbirds are found in a wide variety of habitats.

NESTING—For breeding, they prefer second-growth forest communities and openings, but they will also use mature forests, parks, and residential areas—from sea

level to 6,000 feet. Spring migration is mostly along the Pacific Flyway.

APPEARANCE—The back of the adult male Rufous Hummingbird is cinnamon-colored (rufous), sometimes spangled with green and rarely more than half green. The underparts are creamy white with a rufous “vest.” The crown is bright green, and the gorget is iridescent scarlet to orange, appearing golden or yellow-green from some angles. The tail extends past the wingtips. The rufous tail feathers are black-tipped and pointed.

The adult female is bright green above and white below, strongly washed with rufous on the sides, flanks, and undertail coverts. The face and sides of the gorget are also washed rufous. The gorget is off-white, spangled with green to bronze (concentrated on the sides). The throat is marked with red-orange, from just a few spangles to a large patch. The rounded tail extends past the wingtips; it is rufous at the base and banded with black. The outer three pairs of tail feathers have white tips. Immature birds look similar to the adult female, although the immature males typically show more rufous on the rump and lower back as well as heavier markings on the throat.



Rufous Hummingbird—male
Courtesy of Jim Cruce

Others



A few other hummingbird species are sometimes, though rarely, seen in Colorado, Wyoming, and/or South Dakota. They include:

Anna's Hummingbird (*Calypte anna*)

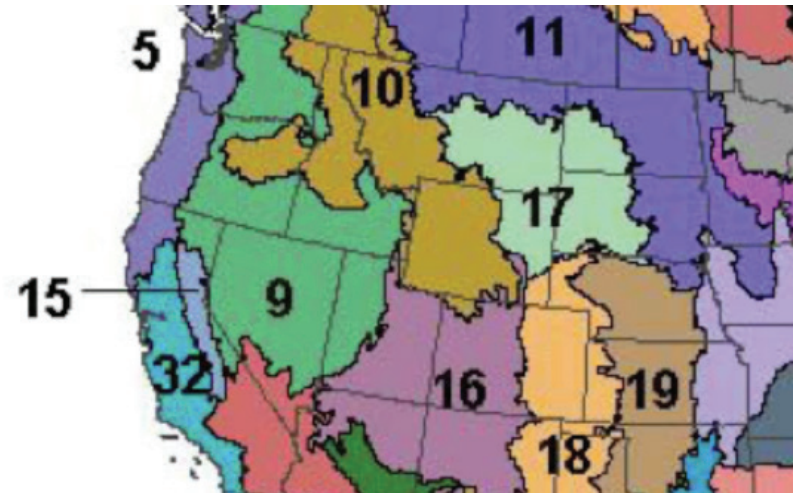
Broad-billed Hummingbird (*Cynanthus latirostris*)

White-eared Hummingbird (*Hylocharis leucotis*)

Bird Conservation Regions in Colorado, Wyoming and South Dakota

The United States North American Bird Conservation Initiative Committee is a coalition of government agencies, private organizations, and bird initiatives in the United States. The committee is working to ensure the long-term health of North America's native bird populations. Bird conservation initiatives have produced national and international conservation plans for birds as well as regional plans for numerous BCRs, which are ecologically distinct regions in North America with similar bird communities, habitats, and resource management issues. The regional plans provide more detailed information on population objectives and habitat needs for birds in specific landscapes.

The five BCRs in Colorado, Wyoming, and South Dakota, the Southern Rockies/Colorado Plateau (BCR 16), the Shortgrass Prairie (BCR 18), the Northern Rockies (BCR 10), Prairie Potholes (BCR 11), and the Badlands and Prairies (BCR 17), are shown on the map (below).



Ecoregions in Colorado, Wyoming, and South Dakota

Land within Colorado, Wyoming, and South Dakota lies within nine ecoregions (see below—codes in parentheses), which are shown on the map: Ecoregions in Colorado, Wyoming, and South Dakota. The ecoregion boundaries differ from those of the BCRs and their relationship is as below.

(313) Colorado Plateau Semi-Desert (CPSD) – lies within BCR 16

(342) Intermountain Semi-Desert (ISD) – lies within BCR 16

(331) Great Plains-Palouse Dry Steppe (GPPDS) – lies within BCR 17 and BCR 18

(332) Great Plains Steppe (GPS) – lies within BCR 11 and BCR 17

(341) Intermountain Semi-Desert and Desert (ISDD) – lies within BCR 10

(M334) Black Hills Coniferous Forest (BHCF) – lies within BCR 17

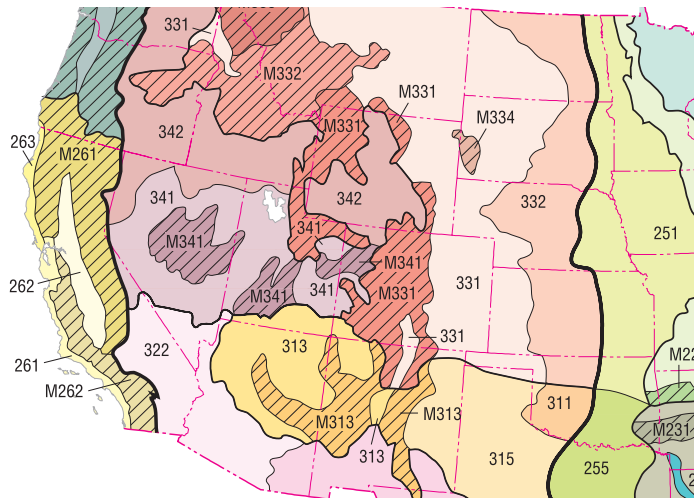
(M341) Nevada-Utah Mountains (NEUTM) – lies within BCR 16

(251) Prairie Parkland (Temperate) (PPT) – lies within BCR 11

(M331) Southern Rocky Mountain Steppe (SRMS) – lies within BCR 16 and BCR 10

Note: Ecoregion map adapted from <http://www.fs.fed.us/rm/ecoregions/images/maps/ecoregions-united-states-sample.jpg>

The Pollinator Partnership website (www.pollinator.org) will show you which ecoregion you are in just by entering your postal zip code (under “Planting Guides” on the website). If you wish to supplement the information presented in this guide, for example, to attract other pollinators or to learn about other ecoregions, the Pollinator Partnership offers planting guides for ecoregions throughout the United States. The website provides additional tools and connections to useful resources for pollinator and plant information.



Hummingbird Nectar Plants for Ecoregions in Colorado, Wyoming, and South Dakota

The following table (*Hummingbird Nectar Plants for Ecoregions in Colorado, Wyoming, and South Dakota*) lists some plants that are nectar sources for hummingbirds. These plants are native to Colorado, Wyoming, and/or South Dakota, and are adapted to conditions in the ecoregions indicated in the table. The table also provides basic information on habitat and light, soil, and water needs. Finally, the tables provide seed sources for each plant valid as of July 2015. A directory of the seed sources follows the tables. Use locally-adapted genetically appropriate plants in all your restoration and pollinator enhancement work. Seed zones—areas with genetically similar plants—help determine the right plant materials to use; poorly chosen plants usually fail to thrive. See http://fs.bioe.orst.edu/web_maps/Seed_Zones.html for provisional seed zones of Colorado, Wyoming, and South Dakota, and select plant materials from your zone. Planting non-natives to attract hummingbirds is against policy and destructive: these plants can become invasive and disrupt ecosystems. For example, yellow toadflax (*Linaria vulgaris*, also called “butter and eggs”) is attractive to hummingbirds but is a noxious weed.



Yellow Toadflax
Courtesy of Colorado State
University Extension–Adams County

Hummingbird Nectar Plants for Ecoregions
in Colorado, Wyoming and South Dakota

Botanical Name	Common Name	Ecoregion ¹										Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources ²
		CPSD	ISD	GPPDS	GPS	ISDD	BHCF	NEUTM	PPT	SRMS						
Trees and Shrubs																
<i>Arctostaphylos patula</i>	Greenleaf Manzanita		X									Apr-Jun	Sun	Moist, well drained, slightly acidic	Open, coniferous, montane forests; 2000-9000	
<i>Arctostaphylos uva-ursi</i>	Kinnikinnick							X		X		Mar-Jun	Sun-shade	Dry to moist, rocky or sandy, acid soils	Rocky, open woods; dry, sandy hills; mountainous regions	AVS, GSC, PBS
<i>Lonicera involucrata</i>	Honeysuckle							X		X		Apr-Jul	Partial shade	Moist, well drained	Open woods and thickets	
<i>Lonicera utahensis</i>	Utah Honeysuckle		X							X		Jun-Jul	Sun to partial shade	Moist	High-elevation shrub communities, wooded slopes, coniferous woods	
<i>Lycium pallidum</i>	Pale Desert-thorn	X										Apr-Jun	Full sun	Various	Sandy to rocky flats, washes in deserts, to 6000'	
<i>Mahonia repens</i>	Creeping Barberry		X							X		May-Jul	Partial shade	Dry to moist, well drained	Dry, open woods & hills at high elevations	AVS, GSC, PBS, WNS, WRS
<i>Menziesia ferruginea</i>	Rusty Menziesia		X							X		May-Jun	Sun to shade	Moist	Shady to open coniferous woods with acid humus, moist slopes, streambanks	
<i>Ribes spp</i>	Various Currants															AVS, GSC, WRS
<i>Ribes aureum</i>	Golden Currant							X				Apr-May	Sun to partial shade	Dry to moist	Moist to drier hillsides & river valleys	GSC, WRS
<i>Ribes cereum</i>	Squaw Currant		X							X		Apr-Jul	Sun to partial shade	Dry to moist, rocky to sandy	Pine forests; wood openings; dry slopes & ridges	AVS, GSC, WRS
<i>Ribes inerme</i>	Whitestem Gooseberry		X							X		Apr-Jun	Sun to shade	Moist	Mountain forests, woodlands, and meadows	
<i>Ribes montigenum</i>	Mountain Gooseberry		X					X		X		Jun-Aug	Sun	Dry, rocky	Middle subalpine zone to timberline	AVS, WNS
<i>Robinia neomexicana</i>	New Mexico Locust		X					X		X		May-Jul	Sun	Dry	4000 and 8500' along streams, in the bottoms of valleys, and on the sides of canyons	
<i>Rosa woodsii</i>	Woods' Rose									X		late spring	Partial sun	Moist	Understory of dry and moist forest communities, sagebrush, chaparral, pinyon-junpier	AVS, GSC, PBS, WRS
<i>Rubus parviflorus</i>	Thimbleberry					X				X		May-Aug	Sun to shade	Rocky	Open, wooded hillsides; stream banks; canyons	
<i>Sambucus racemosa</i>	Red Elderberry		X							X		May-Jun	Sun to partial shade	Moist	Woodland, Savannah, Wet Meadow/ Prairie/Field, Riparian	AVS, GSC, WRS
<i>Symphoricarpos albus</i>	Common Snowberry						X			X		May-Jun	Sun to shade	Wet to moist	Wooded hillsides; rocky, open slopes	AVS, GSC, WRS
<i>Symphoricarpos rotundifolius</i>	Round-leaved snowberry	X								X		Jun-Aug	Sun	Dry, rocky	Subalpine and alpine woodlands	
Perennial Herbs																
<i>Aconitum columbianum</i>	Colombian Monkshood		X							X		Jul-Aug	Shade	Moist, rich soils	Moist woods; stream banks; wet thickets	

Botanical Name	Common Name	Ecoregion ¹										Bloom Season	Sunlight	Soils, Water	General habitat/elevation	Seed Sources ²
		CPSD	ISD	GPPDS	GPS	ISDD	BHCF	NEUTM	PPT	SRMS						
<i>Agastache urticifolia</i>	Nettleleaf Giant Hyssop					X	X	X		X		Jun-Aug	Partial shade	Moist	Open slopes in woods	ASC, ST, WNS
<i>Aquilegia caerulea</i>	Colorado Columbine							X		X		Jun-Jul	Sun-shade	Moist, rich soils	Moist woodlands	ASC, AVS, BBB, GSC, MRS, PBS, ST, WNS
<i>Aquilegia canadensis</i>	Wild Columbine								X			Apr-Jul	Partial shade, shade	Sandy, well drained	Calcareous, shaded woodlands	ASC, BBB, GSC, MS, ST
<i>Asclepias incarnata</i>	Swamp Milkweed								X			Jun-Oct	Sun to partial shade	Moist	Grows in prairies, open woods, canyons, and hillsides	ASC, AVS, BBB, MRS, MS, WNS, WRS
<i>Asclepias speciosa</i>	Showy Milkweed			X	X				X			May-Sep	Sun	Dry to moist	Savannahs, prairies, road-sides, old fields, and meadows	ASC, AVS, BBB, PBS, WRS
<i>Asclepias tuberosa</i>	Milkweed, butterfly weed								X			May-Jul	Sun to partial shade	Dry	Wet Meadow, Prairie, Field, Riparian, Swamp, Marsh	ASC, AVS, BBB, GSC, MRS, MS
<i>Astragalus canadensis</i>	Canadian Milkvetch		X	X	X					X		May-Jul	Sun to partial shade	Moist to wet	Moist to dry prairies; stream banks; open woods	ASC, GSC, MRS, MS, PBS
<i>Camassia quamash</i>	Small Camas		X							X		Apr-Jun	Sun	Heavy, spring-moist soils	Seasonally wet meadows	GSC, ST
<i>Campanula rotundifolia</i>	Bluebell Bellflower	X	X	X	X	X	X	X	X	X		Jun-Sep	Sun to shade	Dry, well drained	Moist, rocky, montane slopes; dry meadows & prairies; open woods; limey cliffs; beaches	GSC
<i>Castilleja applegatei</i>	Wavyleaf Indian Paintbrush		X			X						Apr-Jun	Sun to partial shade	Rocky, dry, well drained	Sagebrush, open conifer woods	GSC
<i>Castilleja chromosa</i>	Desert Indian Paintbrush		X	X		X				X		Mar-May	Sun	Dry, well drained	Grasslands, semi-desert, foothills, canyons, grasslands	AVS
<i>Castilleja integra</i>	Wholeleaf Indian Paintbrush	X								X		May-Sep	Full sun	Rocky mineral	Arid hills, plains and mesa	
<i>Castilleja linariifolia</i>	Wyoming Indian Paintbrush	X	X		X	X	X	X	X	X		May-Oct	Partial shade	Moist to dry, well drained	Open woods & brush areas from 2500-12,000	GSC, ST
<i>Castilleja miniata</i>	Giant Red Indian Paintbrush					X		X		X		May-Sept	Partial shade	Moist	Montane, subalpine meadows and woods	ST
<i>Castilleja rhexiifolia</i>	Spitleaf Indian Paintbrush		X			X		X		X		Jun-Aug	Partial shade	Dry, rocky	Moist, open, alpine to subalpine woods & slopes	GSC
<i>Castilleja scabridera</i>	Barneby's Indian Paintbrush		X			X						May-Jun	Sun	Sandy soils	Semi-desert, foothills. Canyons, pinyon-juniper zone	
<i>Chamerion angustifolium</i>	Fireweed		X	X		X	X	X		X		Jul-Sep	Sun	Moist to dry	Disturbed soil in cool areas, burned areas	
<i>Corydalis caseana</i>	Sierra Fumewort					X		X		X		Jul-Aug	Shade	Moist	Shady moist areas in mountains	
<i>*Delphinium barbeyi</i>	Barbey's Delphinium							X				Jul-Aug				
<i>Delphinium glaucum</i>	Sierra Larkspur							X		X		Jul-Sep	Partial shade	Moist to wet	Wet, subalpine to alpine meadows & stream banks	BBB
<i>*Delphinium nuttallianum</i>												early summer				
<i>Delphinium scaposum</i>	Desert Larkspur	X	X			X				X		Mar-May	Sun	Dry, gravelly	Semi-desert and low foothills	
<i>Epilobium alpinum</i>	Alpine Willowherb		X							X		Jun-Sep	Sun	Wet to moist	Sub-alpine to alpine wet meadows	

Botanical Name	Common Name	Ecoregion ¹										Bloom Season	Sunlight	Soils, Water	General habitat/elevation	Seed Sources ²
		CPSD	ISD	GPPDS	GPS	ISDD	BHCF	NEUTM	PPT	SRMS						
<i>Epilobium canum sub garrettii</i>	Hummingbird Trumpet		X							X		Jul-Oct	Sun to partial shade	Dry, well drained	Rocky outcrops, canyons, mountains, foothills	
<i>Erythronium grandiflorum</i>	Glacier Lily									X		May-Jul	Part shade	Moist	Grows in alpine or subalpine meadows, forest openings, among sagebrush	
<i>Frasera speciosa</i>	Elkweed		X				X			X		May-Aug	Sun to partial shade	Rich, moist	Woodland openings, from moderate to high elevations	
<i>Geranium viscosissimum</i>	Sticky Geranium							X				May-Sep	Sun to partial shade	Dry, well drained	Foothills, canyons, open woodlands to montane environments	ASC, GSC, PBS, ST, WRS
<i>Hydrophyllum capitatum</i>	Ballhead Waterleaf		X							X		Mar-Jul	Shade	Moist	Brushy areas and open woods	
<i>Ipomopsis aggregata</i>	Scarlet Gilia	X	X					X		X		Jun-Aug	Sun	Dry, well drained	Desert canyons and cliffs, montane meadows, and subalpine rock fields	GSC, PBS, WRS
<i>Ipomopsis aggregata ssp. formosissima</i>	Scarlet Gilia	X	X									May-Oct	Full sun to partial shade	Rocky mineral	Desert canyons and cliffs, montane meadows, and subalpine rock fields	
<i>Iris missouriensis</i>	Western Blue Flag Iris		X			X	X	X		X		May-Jul	Sun to partial sun	Moist to wet	Marshes; wet meadows	ASC, AVS, BBB, GSC, MRS, PBS, ST, WRS
<i>Lilium michiganense</i>	Michigan Lily								X			Jul-Aug	Partial shade	Moist	Prairies	
<i>Lilium philadelphicum</i>	Wood Lily						X			X		Jul-Aug	Sun to shade	Well-drained, humus-rich soils	Woodland openings, prairies	
<i>Lithospermum ruderales</i>	Western Stoneweed		X							X		Apr-Jun	Sun	Moist	Open places in sagebrush, juniper, or pine	
<i>Lupinus perennis</i>	Lupine, Sundial Lupine								X			Apr-Jul	Sun to partial shade	Dry, sandy	Sand hills & clearings; open woods	ASC, BBB, GSC, MRS, MS, PBS, WRS
<i>Mertensia oblongifolia</i>	Oblongleaf bluebells					X		X		X		Apr-Jul	Sun to partial shade	Moist to wet	With sagebrush or on open slopes	
<i>Mimulus cardinalis</i>	Crimson Monkeyflower					X		X		X		Apr-Aug	Partial shade	Moist	Stream banks & seeps below 8000'	
<i>Mimulus guttatus</i>	Seep Monkeyflower	X	X	X	X	X	X	X	X	X		Apr-Jul	Partial to full shade	Moist to wet	Stream banks; wet places to 10,000'	GSC, WNS
<i>Mimulus lewisii</i>	Purple Monkeyflower		X	X						X		Jun-Sep	Partial shade	Moist to wet	Stream banks, moist meadows & seeps from 4000-10,000'	ST
<i>Monarda fistulosa</i>	Wild Bergamot								X			May-Sept	Sun to partial shade	Well drained, moist, sandy, loamy, clay	Dry open woods, fields, wet meadows and ditches	ASC, AVS, BBB, GSC, MRS, MS, PBS, WRS
* <i>Penstemon barbatus</i>	Beardlip Penstemon	X										May-Jul	Full sun to partial shade	Well drained, mineral	Semi-desert, foothills. Woodlands, openings	GSC, WNS
* <i>Penstemon eatonii</i>	Firecracker Penstemon		X			X						Apr-May	Sun	Dry, well drained	Mesas; fields; roadsides; dry, rocky slopes at lower elevations	ASC, AVS, BBB, GSC, MRS, PBS, ST, WNS, WRS
<i>Penstemon fruiticosus</i>	Shrubby Penstemon		X							X		May-Aug	Sun	Dry, rocky	Open, rocky or wooded foothill & higher elevation sites	GSC, ST
<i>Penstemon procerus</i>	Small-flowered Penstemon									X		Jun-Jul	Sun	Dry to moist	Alpine meadows	GSC, ST, WRS
* <i>Penstemon rostriflorus</i>	Bridge's Penstemon	X										Jun-Aug	Sun	Rocky or sand, dry	Dry slopes in pinyon & ponderosa pine forests; 4500 to 10,000	

Botanical Name	Common Name	Ecoregion ¹										Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources ²
		CPSD	ISD	GPPDS	GPS	ISDD	BHCF	NEUTM	PPT	SRMS						
<i>Penstemon rydbergii</i>	Rydberg's Penstemon							X				May-Jul	Sun	Moist to dry, well drained	Slopes, meadows and streambanks from valleys to sub alpine and alpine sites	BBB, GSC, ST, WNS
<i>Penstemon speciosus</i>	Showy Penstemon							X				May-Jul	Sun	Dry, well drained	Dry plains; wooded or shrubby slopes; 3500-8500	
<i>Penstemon strictus</i>	Rocky Mountain Penstemon									X		late spring	Full sun	Moist	Subalpine to valley sagebrush & conifer forests	ASC, AVS, BBB, GSC, MRS, PBS, ST, WRS
<i>Penstemon whippleanus</i>	Whipple's Penstemon							X				Jul-Sep	Sun to partial shade	Dry meadows, well drained	Meadows or on wooded slopes, moist areas	BBB, WNS
<i>Phlox spp.</i>	Phlox								X			Mar-Jun	Sun to partial shade	Dry		ASC, AVS, GSC, MB, WRS
<i>Phlox longifolia</i>	Long-leaved Phlox		X			X		X		X		May-Jun	Sun	Dry, rocky	Dry slopes; open, rocky areas; dry plains	
<i>Phlox multiflora</i>	Rocky Mountain Phlox		X			X				X		May-Aug	Sun	Dry, well drained	Sagebrush steppe, grasslands, open forests; montane to lower alpine	
Vines																
<i>Campsis radicans</i>	Trumpet Vine or Creeper								X			Jul-Sep	Sun to partial shade	Moist, well drained	Trees of moist woods or along fence rows in old fields	
<i>Clematis ligusticifolia</i>	Western White Clematis									X		Apr-Aug	Sun-shade	Moist, rich, well drained	Woods along streams; moist, brushy coulees	ST

*Hummingbird adapted or preferred nectar sources

1 Ecoregions:

CPSD = Colorado Plateau Semi-Desert
ISD = Intermountain Semi-Desert
GPPDS = Great Plains-Palouse Dry Steppe
GPS = Great Plains Steppe
ISDD = Intermountain Semi-Desert and Desert
BHCF = Black Hills Coniferous Forest
NEUTM = Nevada-Utah Mountains
PPT = Prairie Parkland (Temperate)
SRMS = Southern Rocky Mountain Steppe

2 Seed Sources:

ASC = Applewood Seed Co.
AVS = Arkansas Valley Seed Inc.
BBB = Beauty Beyond Belief Wildflower Seed
GSC = Granite Seed Company
MS = Millborn Seeds
MRS = Montane Restoration Seed
PBS = Pawnee Buttes Seed Inc.
ST = Seeds Trust
SS = Southwest Seed Inc.
WNS = Western Native Seed
WRS = Wind River Seed

Directory of Seed and Plant Sources

Applewood Seed Co.
5380 Vivian Street
Arvada, CO 80002
(303) 431-7333
sales@applewoodseed.com
www.applewoodseed.com

Arkansas Valley Seed Inc.
4300 Monaco Street
Denver, CO 80216
(303) 320-7500
(877) 907-3337
www.avseeds.com

Beauty Beyond Belief Wildflower Seed
6595 Odell Place, Unit G
Boulder, CO 80301
(303) 530-1222
info@bbbseed.com
www.bbbseed.com

Granite Seed Company
490 East 76th Ave., Unit A
Denver, CO 80229
(888) 577-5650
www.graniteseed.com

Millborn Seeds
1335 Western Avenue
Brookings, SD 57006
(605) 697-6306
(888) 498-7333
info@millbornseeds.com
www.millbornseeds.com

Montane Restoration Seed
P.O. Box 702
Salida, CO 81201
(720) 249-2520
(604) 487-4418
montane_seed@mac.com

Pawnee Buttes Seed Inc.
P.O. Box 100
605 25th Street
Greeley, CO 80632
(970) 356-7002
(800) 782-5947
www.pawneebuttesseed.com

Seeds Trust
5870 S. Long Ln.
Littleton, CO 80121
(720) 335-3436
http://secure.seedstrust.com/index.php?option=com_content&view=article&id=10&Itemid=115

Southwest Seed Inc.
13260 Rd. 29
Dolores, CO 81323
(970) 565-8722
www.southwestseed.com

Western Native Seed
P.O. Box 188
Coaldale, CO 81222
(719) 942-3935
info@westernnativeseed.com
www.westernnativeseed.com

Wind River Seed
3075 Lane 51 1/2
Manderson, WY 82432
800-967-1798
307-568-3361
www.windriverseed.com

This list of seed sources is not exhaustive, and is only meant to serve as a starting point for land managers. Seed inventories are constantly fluctuating, and some species are offered on a seasonal basis. Please check

the availability of specific species before visiting a particular seed source. Wholesale suppliers sometimes require a minimum quantity to place an order.

In addition, the Native Seed Network (www.nativeseednetwork.org) is an online resource that provides search tools and information on all aspects of native seed. You can search the network to find additional sources for native seeds.

Additional Resources



Rufous Hummingbird
Courtesy of Scott Carpenter

- The Western Hummingbird Partnership (WHP) is a developing network of partners collaborating to build an effective and sustainable hummingbird conservation program: www.westernhummingbird.org
- Native Seed Network: www.nativeseednetwork.org
- North American Bird Conservation Initiative: www.nabci-us.org
- e-bird is a real-time, online checklist program and a way for the birding community to report and access information about birds: www.ebird.org
- Partners in Flight is a coalition of partners working to combine, coordinate, and increase resources of public and private entities in order to conserve bird populations: www.partnersinflight.org
- Pollinator Partnership: www.pollinator.org

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