

# Maintaining and Improving Habitat for Hummingbirds in Nevada and Utah



# – A Land Manager's Guide





Forest Service National Headquarters



## 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



Rufous Hummingbird nest Courtesy of Martin Hutten

pollinators, in Nevada and Utah. 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 Nevada and Utah. (See the Ecoregions in Nevada and Utah section, below.)

This guide also provides brief descriptions of the species that visit Nevada and Utah, 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.

## Hummingbird Basics



Utah fall colors. Courtesy of Marguerite Meyer

In general, the hummingbird species of Nevada and Utah are migratory, generally wintering in the southwestern US and Mexico and then travelling to this region, as well as further north, in search of summer breeding habitat. Rufous hummingbirds will migrate as far north as Alaska in the summer, relying on habitat and nectar plants throughout Nevada and Utah to fuel their journey. Anna's and Costa's Hummingbird can be found year-round in the far southern parts of Nevada and extreme southwestern Utah. 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.



Moab Utah river. Courtesy of Marguerite Meyer

## Hummingbird Species in Nevada and Utah

Following are brief descriptions of the hummingbird species most commonly found in Nevada and Utah, 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 all five Bird Conservation Regions (BCRs) in Nevada and Utah, which are BCR's 9, 10, 15, 16, and 33. (See the *Bird Conservation Regions* section, below.) They are found in all parts of Nevada and Utah, as they use this region for breeding in the summer. 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.



Courtesy of Scott Carpenter

NESTING—Habitat includes canyons or floodplain riparian communities, especially near sycamore or

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 to or stay in urban areas, where flowering plants and feeders are attractive. Typically arriving in April, they migrate south in August.

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



Black-chinned—female Courtesy of Scott Carpenter

throat of the female can be unmarked or have dusky streaking 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.

## Anna's Hummingbird (Calypte anna)

RANGE—The Anna's Hummingbird is the largest hummingbird on the West Coast. Once a chaparral specialist, it is now a year-round resident of the Pacific coast, from southern British Columbia to northern Baja California. Since the mid-1930s, its range has expanded greatly, likely due to its effective use of non-native plants and feeders in urban and suburban areas. This species is a year-round resident in urban environments in southern Nevada (i.e., Las Vegas). Anna's Hummingbird occurs in two Bird Conservation Regions (BCRs) in Nevada, which are BCRs 9 and 33, and generally does not occur in Utah.

NESTING— This species begins nesting in winter (November/December) after the arrival of the winter rains, from sea level up to 5,700 feet. In summer, they inhabit shrubland communities such as chaparral-oak areas and brushy riparian areas, as well as urban and suburban areas. After breeding, they may move to higher elevations (up to 11,000 feet) in search of nectar plants. They do not migrate long distances. Instead, like tropical hummingbirds, they migrate up and down in elevation, different populations migrate to different places, and some populations (especially in cities) are sedentary.



Anna's Hummingbird—female Courtesy of Scott Carpenter



Anna's Hummingbird—male Courtesy of Jim Cruce

APPEARANCE—Males are more vocal than any other North American hummingbird. The male has a dry, scratchy, buzzy song that it sings throughout the year, but especially during the breeding season, November-June. Adult males (and some young males) have an iridescent rose/red crown and gorget with elongated feathers projecting to the sides. Males turn their head from side to side as they sing, flashing their iridescent head as a signal to other hummingbirds. They have a green back and are grayish below. Outer tail feathers are gray, darker at the edges. The tail extends well

#### beyond the wingtips.

Adult females also have a green back and grayish underparts. Gorget (throat) markings vary from bronzy gray mottling to a central splotch of rose/red feathers. Very rarely, rose feathers may occur on the crown. The tail extends to or beyond the wingtips. Tail feathers are broad, rounded, banded in dull gray-green, blackish, and white. Immature birds look somewhat similar to the adult females, although immature males have heavier mottling in the gorget. The Anna's Hummingbird typically holds its tail still while hovering.

## Costa's Hummingbird (Calypte costae)

RANGE—The Costa's Hummingbird is a common species found in hot deserts and other xeric habitats. This species breeds in three major habitat types: Sonoran Desert scrub, Mohave Desert scrub, and California coast. Costa's Hummingbird can be observed in southwestern Nevada and Utah across the northeastern reaches of the Mohave Desert, where it is an occasional breeder, such as near Las Vegas. It leaves

the Sonoran and Mojave Desert scrub habitat of Arizona after the peak of breeding season (mid-March through mid-April), and by May most of the birds have migrated from the area. During the non-breeding season, individuals may wander, and have occasionally been observed slightly above 7,800 feet in elevation in chaparral, scrub, or woodland habitat. Records



Costa's Hummingbird—male and female Courtesy of Cindy Thill

indicate that the Costa's Hummingbird's breeding range is expanding northward. In areas with a year-round food supply (i.e., feeders), this species may remain resident year-round.

FOOD—These hummingbirds feed on a variety of plants and insects, with particular focus on two shrubs in desert scrub areas, chuparosa and ocotillo. Additional nectar plants include desert lavender, thornbush, honeysuckle, beardtongue, coral bean, and New Mexico thistle.

NESTING—Nest construction begins as early as mid-January. In desert habitats, nests are found primarily in foothill paloverde trees, but have also been found in many other types of bushes and trees. Nests are placed anywhere from 1 to 40 feet above ground.

APPEARANCE—The male Costa's Hummingbird has an iridescent violet crown and gorget that runs along both sides of its throat. Both males and females have green upperparts. Females have a white throat and underparts, with occasional violet feathers.

## 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. Calliope Hummingbirds occur in all five BCRs in Nevada and Utah.

RANGE—They are common summer residents in northern parts of Nevada and Utah, occurring only transiently in the rest of the two states as they migrate between their summer breeding habitats to the north and their wintering habitats in western Mexico. They migrate through both montane and lowland habitats. Spring migration is mainly through higher elevations along the Pacific Flyway. Fall migration is through both the Pacific and Rocky Mountain Flyways, at a wider range of elevations, from mountains to desert riparian corridors.

NESTING—Preferred nesting habitat is montane conifer forests, primarily in shrub-sapling seral stage into second-growth following fires or logging. They breed mostly in mountain areas from British Columbia to California, Nevada,



Calliope Hummingbird—male Courtesy of Scott Carpenter

and Utah, and winters in Mexico. They breed mainly at middle elevations (4,000 to 7,000



Calliope Hummingbird—female Courtesy of Scott Carpenter

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—about half as much as a male Anna's Hummingbird. 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.

## Broad-tailed Hummingbird (Selasphorus platycercus)

RANGE—The Broad-tailed Hummingbird is a long-bodied hummingbird whose migratory breeding populations range north across the Rocky Mountains to southern Montana and west through forested regions of Nevada and California. They breed above 6000 feet (and so only rarely overlap with Black-chinned Hummingbirds) They can be seen in all five BCRs in Nevada and Utah. This species occupies a wide variety of 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, 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 also eat small

Broad-tailed Hummingbird—female Courtesy of David Inouye

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. 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



Broad-tailed Hummingbird—male Courtesy of David Inouye

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 bodies 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 "wing trill" sound it produces with its wings. 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. It can be found throughout Nevada and Utah as it migrates between its summer breeding habitats in the Pacific North-



Rufous Hummingbird—female Courtesy of Jim Cruce

west and its wintering habitats in central and western Mexico, especially during the mid-summer months when the birds are on their southbound migration, which 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. The Rufous Hummingbird occurs in all five BCRs in Nevada and Utah. Rufous Hummingbirds are found in a wide variety of habitats.

NESTING— Rufous hummingbird does not breed in Nevada or Utah. Spring migration towards summer breeding grounds is mostly along the Pacific Flyway. APPEARANCE—The back of the adult male

Rufous Hummingbird is

sometimes spangled with

cinnamon-colored (rufous),



Rufous Hummingbird—male Courtesy of Jim Cruce

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.

## Others

A few other hummingbird species are sometimes, though rarely, seen in Nevada and/ or Utah. They include:

Ruby-throated Hummingbird (Archilochus colubris) Broad-billed Hummingbird (Cynanthus latirostris) Blue-throated Hummingbird (Lampornis clemenciae) Allen's Hummingbird (Selasphorus sasin)

## Bird Conservation Regions in Nevada and Utah

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 Nevada and Utah, the Southern Rockies/Colorado Plateau (BCR 16), the Great Basin (BCR 9), the Northern Rockies (BCR 10), the Sierra Nevada (BCR 15), and the Sonoran and Mohave Deserts (BCR 33), are shown on the map (below).



## Ecoregions in Nevada and Utah

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

(341) Intermountain Semi-Desert and Desert (ISDD) – lies within BCR 9, BCR 16, and BCR 33

(M341) Nevada-Utah Mountains Semi-Desert (NEUTMSD) – lies within BCR 9 and BCR 16

(322) American Semi-Desert and Desert (ASDD) - lies within BCR 33

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

(M331) Southern Rocky Mountains Steppe (SRMS) - lies within BCR 16

(342) Intermountain Semi-Desert (ISD) - lies within BCR 9 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 Nevada and Utah

The following table *(Hummingbird Nectar Plants for Ecoregions in Nevada and Utah)* lists some plants that are nectar sources for hummingbirds. These plants are native to Nevada, Utah, or both, 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 Nevada and Utah, and select plant materials from your zone. Planting non-natives to attract hummingbirds is against policy and destructive: these plants 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

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# Hummingbird Nectar Plants for Ecoregions in Nevada and Utah

Botanical Name	Common Name			Ecoreg	ion¹			Bloom Season	Sunlight	Soils, Water	General Habitat/ Elevation	Seed Sources <sup>2</sup>
		ISDD	NEUTMSD	ASDD	CPSD		ISD					
Trees and Shrubs												
*Agave parryi	Parry's Agave			Х	Х			Jun-Aug	Full sun	Rocky, well drained	High desert	
Agave utahensis	Utah Agave			Х				May-Aug	Sun	Dry, rocky	Canyons, rocky slopes (generally limestone) in mixed shrub to pinyon-juniper communities	
Arctostaphylos patula	Greenleaf Manzanita		Х			Х		Apr-Jun	Partial shade	Moist to dry, well drained	Open coniferous forests at moderate to high elevation	CS, SSS
Arctostaphylos pungens	Pointleaf Manzanita				Х			Jan-Feb	Partial shade	Well drained, sandy	Mixed shrub and sagebrush communities, pinyon-juniper woods, canyons, lower mountain slopes	GSC
Arctostaphylos uva-ursi	Kinnikinnick		Х			Х		Mar-Jun	Sun-shade	Dry to moist, rocky or sandy, acid soils	Rocky, open woods; dry, sandy hills; mountainous regions	GSC, SIS
Chilopsis linearis	Desert Willow	Х						Apr-Sep	Sun	Dry, well drained	Desert washes	GSC
*Fouquieria splendens	Ocotillo			Х				Feb-May	Full sun	Rocky, well drained	Desert washes	
*Lonicera involucrata	Twinberry Honeysuckle		Х			Х		Apr-Jul	Partial shade	Moist, well drained	Moist or wet, open woods from sea level-10,000	
Lycium andersonii	Anderson's Wolfberry	Х		Х				Mar-May	Sun	Dry	Dry, stony hills, mesas & washes	GSC
Lycium pallidum	Pale Desert-thorn				Х			Apr-Jun	Full sun	Various	Sandy to rocky flats, washes in deserts, to 6000'	
Mahonia repens	Creeping Barberry	Х	Х		Х	Х		May-Jul	Partial shade	Dry to moist, well drained	Dry, open woods & hills at high elevations	GBS, GSC, WNS
Parkinsonia florida	Blue Paloverde			Х				Apr-May	Sun	Dry, well drained	Desert washes	GSC
*Ribes aureum	Golden Currant		Х					Apr-Jul	Sun to partial shade	Moist, well drained	Foothills, along streams and ponds	CS, GSC, SIS
Ribes cereum	Wax Currant		Х		Х	Х		Apr-Jul	Sun to partial shade	Dry to moist, rocky to sandy	Pine forests; wood openings; dry slopes & ridges	CS, GSC, SIS, SSS
Ribes inerme	Whitestem Gooseberry		Х		Х	Х		Apr-Jun	Sun to shade	Moist	Mountain forests, woodlands, and meadows	
Ribes leptanthum	Trumpet Gooseberry	Х	Х		Х			Apr-Jul	Sun to partial shade	Moist, well drained	Montane streamsides	
Ribes montigenum	Mountain Gooseberry		Х		Х			Jun-Aug	Sun	Dry, rocky	Middle subalpine zone to timberline	SIS, WNS
Ribes nevadense	Sierra Currant	Х						Jun-Aug	Sun to partial shade	Dry to wet, well drained	Forest and riparian habitats, 3000- 10000'	SSS
Ribes viscosissimum	Sticky Currant		Х		Х	Х		May-Aug	Sun to shade	Moist to dry	Streambanks, moist to dry woodlands, mid to high elevation	
Robinia neomexicana	New Mexico Locust			Х	Х	Х		Jul-Aug	Sun	Moist	4000 and 8500' along streams, in the bottoms of valleys, and on the sides of canyons	
Rosa woodsii	Woods' Rose					Х		May-Jul	Partial sun	Moist	Understory plant in dry and moist forest communities	CS, GBS, GSC, SIS
Rubus parviflorus	Thimbleberry	Х	Х			Х	X	May-Aug	Sun to shade	Rocky	Open, wooded hillsides; stream banks; canyons	SSS
Sambucus racemosa	Red Elderberry		Х		Х	Х		May-Jun	Sun to partial shade	Moist	Woodland, savannah, wet meadow/ prairie/field, riparian	GSC, GBS, SIS

#### Hummingbird Nectar Plants for Ecoregions in Nevada and Utah

Botanical Name	Common Name			Ecoreg	ion¹			Bloom Season	Sunlight	Soils, Water	General Habitat/ Elevation	Seed Sources <sup>2</sup>
		ISDD	NEUTMSD	ASDD	CPSD		ISD					
*Symphoricarpos albus	Snowberry		Х					May-Aug	Sun to shade	Wet to moist	Wooded hillsides; rocky, open slopes	CS, GSC, SIS, SSS
Symphoricarpos longiflorus	Desert Snowberry	Х		Х	Х		Х	May-Jun	Sun	Dry	Moister spots in the desert mountains	
Symphoricarpos oreophilus	Mountain Snowberry	Х	Х		Х	Х		May-Aug	Partial shade	Moderate to well drained	Brushy, mt. hillsides & valleys, often on river banks; 5000-10,000'	CS, GBS, GSC, SIS
Symphoricarpos rotundifolius	Round-leaved snowberry	Х	Х		Х	Х		Jun-Aug	Sun	Dry, rocky	Montane, subalpine woodlands	
Perennial Herbs												
Aconitum columbianum	Columbian Monkshood							Jul-Aug	Shade	Moist, rich soils	Moist woods; stream banks	SSS
Aliciella subnuda	Coral Gilia	Х			Х			May-Jul	Sun	Dry	Semi-desert, foothills	
*Aquilegia caerulea	Colorado Columbine		Х			Х		Jun-Jul	Sun to shade	Moist, rich soils	Montane, subalpine	GSC, SIS, WNS
Aquilegia elegantula	Red Columbine		Х			Х		Jun-Aug	Sun to shade	Moist, rich soils	Montane, subalpine	
Aquilegia formosa	Western Columbine		Х			Х		Jun-Aug	Sun to shade	Moist, rich soils	Moist, open woods, banks & seeps; 4000-9000	GSC, SIS, SSS
Astragalus coccineus	Scarlet Milkvetch	Х		Х				Mar-June	Sun	Dry, well drained	Open gravelly ridges	
*Castilleja spp	Various Paintbrushes											GBS, GSC, SIS, SSS
Castilleja angustifolia	Desert Indian Paintbrush	Х	Х	Х	Х	Х	Х	Mar-May	Sun	Dry	Grasslands, semi-desert, foothills, canyons, grasslands	
Castilleja applegatei	Wavyleaf Indian Paintbrush	Х					Х	Apr-Jun	Sun to partial shade	Rocky, dry, well drained	Sagebrush, open conifer woods	GSC, SIS
Castilleja integra	Wholeleaf Indian Paintbrush				Х	Х		May-Sep	Full sun	Rocky mineral, moist to dry	Arid hills, plains and mesa	
Castilleja linariifolia	Wyoming Indian Paintbrush	Х	Х	Х	Х	Х	Х	May-Oct	Partial shade	Moist to dry, well drained	Open woods & brush areas from 2500-12,000	GSC
*Castilleja miniata	Giant Red Indian Paintbrush		Х			Х		May-Sept	Partial shade	Moist	Montane, subalpine meadows and woods	SSS
Castilleja rhexiifolia	Splitleaf Indian Paintbrush		Х			Х		Jun-Aug	Partial shade	Dry, rocky	Moist, open, alpine to subalpine woods & slopes	GSC, SIS
Castilleja scabrida	Barneby's Indian Paintbrush	Х	Х					May-Jun	Sun	Sandy soils	Semi-desert, foothills. Canyons, pinyon-juniper zone	
Chamerion angustifolium	Fireweed	Х	Х	Х	Х	Х	Х	Jul-Sep	Sun	Moist to dry	Disturbed soil in cool areas, burned areas	
*Cirsium arizonicum	Arizona Thistle	Х	Х			Х		Summer	Sun	Dry, rocky, well drained	Desert mountains	
Cirsium neomexicanum	New Mexico Thistle	Х	Х		Х			Mar-Jul	Sun to partial shade	Dry, sandy or gravelly	Desert flats, bajadas, and moderate slopes, 2500-7000'	
Cirsium occidentale	Snowy Thistle	Х	Х		Х	Х		Jun-Sep	Sun	Dry, well drained	Mountains, valleys, Mojave desert	
Corydalis caseana	Sierra Fumewort		Х			Х		Jul-Aug	Shade	Moist	Shady moist areas in mountains	SSS
*Delphinium barbeyi	Barbey's Delphinium		Х			Х		Jul-Aug	Shade	Moist	Moist, subalpine Aspen woods	

#### Hummingbird Nectar Plants for Ecoregions in Nevada and Utah...continued

Name	Common Name			Ecoregi	ion <sup>1</sup>			Bloom Season	Sunlight	Soils, Water	General Habitat/ Elevation	Seed Sources <sup>2</sup>
		ISDD	NEUTMSD	ASDD	CPSD		ISD					
Delphinium glaucum	Sierra Larkspur		Х			Х		Jul-Sep	Partial shade	Moist to wet	Wet, subalpine to alpine meadows & stream banks	
*Delphinium nuttallianum	Twolobe Larkspur					Х		Early summer	Partial sun	Moist	Woodlands, openings	SIS
Delphinium robustum	Robust Delphinium		Х			Х		Summer		Moist	Moist woodlands	
Delphinium scaposum	Desert Larkspur	Х	Х	Х	Х		Х	Mar-May	Sun	Dry, gravelly	Semi-desert and low foothills	
Dudleya pulverulenta	Chalk Dudlyea	Х						May-Jul	Sun to partial shade	Dry, rocky	Rocky cliffs and canyons below 3000'	
*Echinocereus coccineus	Scarlet Hedgehog Cactus	Х						Apr-Jun	Sun	Dry, well drained	Rocky desert slopes, dry mountain woodlands	
*Echinocereus triglochidiatus	Kingcup Cactus	Х	Х	Х	Х	Х		Apr-May	Sun	Dry, well drained	Rocky desert slopes, dry mountain woodlands	
Epilobium alpinum	Alpine Willowherb	Х					Х	Summer	Sun	Wet	Montane, subalpine, alpine, wet areas	
*Epilobium canum sub garrettii	Fire Chalice	Х	Х					Jul-Oct	Sun	Dry to moist, well drained	Damp canyons	
Erysimum capitatum	Wallflower	Х	Х	Х	Х	Х	Х	Mar-Jul	Sun	Dry, well drained	Plains; foothills; high elevation coniferous forests	
Frasera speciosa	Elkweed		Х		Х	Х		May-Aug	Sun to partial shade	Rich, moist	Woodland openings, from moderate to high elevations	
Fritillaria recurva	Scarlet Fritillary	Х					Х	May-Jul	Partial shade	Dry, rocky	Rocky, brush covered slopes	SSS
Geranium viscosissimum	Sticky Geranium	Х	Х			Х	Х	May-Sep	Sun to partial shade	Dry, well drained	Foothills, canyons, open woodlands to montane environments	GBS, GSC, SIS
Hydrophyllum capitatum	Ballhead Waterleaf	Х					Х	Mar-Jul	Shade	Moist	Brushy areas and open woods	
*lpomopsis aggregata	Scarlet Gilia		Х		Х	Х		May-Oct	Full sun to partial shade	Rocky mineral	Semi-desert, foothills, montane. Woodlands, meadows, openings	GSC, SIS, SSS
lpomopsis arizonica	Arizona Firecracker			Х				May-Oct	Sun	Rocky, dry	Pinyon-Juniper and Coniferous forests, 5000-8000'	
Iris missouriensis	Western Blue Flag	Х	Х	Х		Х	Х	May-Jul	Sun to partial sun	Moist to wet	Marshes; wet meadows	CS, GSC, SIS
Lithospermum ruderale	Western Stoneweed	Х	Х			Х	Х	Apr-Jun	Sun	Moist	Open places in sagebrush, juniper, or pine	
*Lobelia cardinalis	Cardinal Flower			Х	Х				Sun to shade	Moist to wet	Ravines, Depressions, Woodlands edge, Openings	
Mertensia oblongifolia	Oblongleaf bluebells		Х		Х	Х	Х	Apr-Jul	Sun to partial shade	Moist to wet	With sagebrush or on open slopes	
*Mimulus cardinalis	Crimson Monkeyflower	Х		Х	Х			Apr-Aug	Partial shade	Moist	Stream banks & seeps below 8000'	CS
Mimulus eastwoodiae	Eastwood's Monkeyflower			Х	Х			Jul-Aug	Partial shade	Moist	Shallow caves and seeps on steep canyon walls. Elev. 4700-5800	
Mimulus glabratus	Yellow Monkeyflower	Х	Х		Х	Х		Jun-Aug	Sun	Wet, rich	Marshes, springs	
Mimulus lewisii	Purple Monkeyflower		Х			Х		Jun-Sep	Partial shade	Moist to wet	Stream banks, moist meadows & seeps from 4000-10,000'	CS
*Monarda fistulosa	Wild Bergamot		Х			Х	Х	May-Sept	Sun to partial shade	Well drained, moist, sandy, loamy, clay	Dry open woods, fields, wet meadows and ditches	GSC

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#### Hummingbird Nectar Plants for Ecoregions in Nevada and Utah...continued

Botanical Name	Common Name			Ecoreg	ion¹			Bloom Season	Sunlight	Soils, Water	General Habitat/ Elevation	Seed Sources <sup>2</sup>
		ISDD	NEUTMSD	ASDD	CPSD		ISD					
Monardella odoratissima	Coyotemint		Х			Х	Х	Jun-Aug	Partial shade	Moist, sandy	Wet or dry, rocky, forest openings from 3500-11,000	SSS
*Penstemon barbatus	Beardlip Penstemon				Х			May-Jul	Full sun to partial shade	Well drained-mineral	Open, rocky soil in mixed conifer	GSC, SIS, US, WNS
											forests, mostly south	
*Penstemon eatonii	Firecracker Penstemon	Х					Х	Apr-May	Sun	Dry, well drained	Dry slopes and flats in sagebrush, pinyon-juniper, ponderosa pine, 3000-8000'	CS, GBS, GSC, NDF, SIS, US, WNS
Penstemon newberryi	Mountain Pride	Х	Х			Х		Jun-Aug	Partial shade		Rocky places from moderate to high elevations	SSS, US
*Penstemon rostriflorus	Bridge's Penstemon	Х	Х	Х	Х			Jun-Aug	Sun	Rocky or sand, dry	Dry slopes in pinyon & ponderosa pine forests; 4500 to 10,000	US
Penstemon rydbergii	Rydberg's Penstemon		Х					May-Jul	Sun	Dry, well drained	Slopes, meadows and streambanks from valleys to sub alpine and alpine sites	CS, GBS, GSC, SIS, SSS, US, WNS
Penstemon speciosus	Showy Penstemon		Х					May-Jul	Sun	Dry, well drained	Plateau and foothill scrub and subalpine mountain forests	SIS, SSS, US
Penstemon strictus	Rocky Mountain Penstemon		Х	Х	Х	Х		late spring	Full sun	Moist	Pinyon-Juniper woods and lower montane elevations	CS, GBS, GSC, SIS, US
Penstemon utahensis	Utah Penstemon			Х	Х			Mar-May	Sun	Dry, well drained	Desert scrub, woodlands, canyons	US
Penstemon whippleanus	Whipple's Penstemon		Х					Jul-Sep	Sun to partial shade	Moist, well drained	Meadows or on wooded slopes, moist areas	US, WNS
Phlox speciosa	Showy Phlox	Х	Х				Х	Apr-Jun	Sun	Dry, rocky	Sagebrush, low, arid shrubland and open ponderosa pine forest	
Polemonium brandegeei	Brandegee's Jacob's Ladder		Х			Х		Jul-Aug	Sun	Dry, rocky	Alpine scree slopes	
Salvia dorrii	Hairy Sage	Х						May-Jun	Sun	Dry	Dry, open scabland & sagebrush	
*Sarcodes sanguinea	Snowplant		Х			Х		May-Jul	Shade	Parasitic on conifers	Humus of coniferous woods	
Vines												
Clematis ligusticifolia	Western White Clematis							Apr-Aug	Sun-shade	Moist, rich, well drained	Woods along streams; moist, brushy coulees	

#### \*Hummingbird adapted or preferred nectar sources

#### 1 Ecoregions:

ISDD = Intermountain Semi-Desert and Desert NEUTMSD = Nevada-Utah Mountains Semi-Desert ISD = Intermountain Semi-Desert

ASDD = American Semi-Desert and Desert SRMS = Southern Rocky Mountains Steppe CPSD = Colorado Plateau Semi-Desert

#### 2 Seed Sources:

2 Seed Sources: CSC = Carpenter Seed Co. CS = Comstock Seed GSC = Granite Seed Company GBS = Great Basin Seed NDF = Nevada Division of Forestry Seed Bank SSS = Sierra Seed Supply SIS = Stevenson Intermountain Seed, Inc. US = Utah Seed, LLC WNS = Western Native Seed

The Ruby-throated Hummingbird *(Archilochus colubris)* is sometimes, though rarely, seen in Nevada and/or Utah. Courtesy of Hugh Vandervoort



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### **Directory of Seed and Plant Sources**

Carpenter Seed Co. 1030 S. State St. Provo, UT 84606 (801) 373-3740

Comstock Seed 917 HWY 88 Gardnerville, NV 89460 (775) 265-0090 sales@comstockseed.com www.comstockseed.com

Granite Seed Company 1697 West 2100 North Lehi, UT 84043 (801) 768-4422 www.graniteseed.com

Great Basin Seed 450 South 50 East Ephraim, UT 84627 (435) 283-1411 www.greatbasinseeds.com

Nevada Division of Forestry Seed Bank 2478 Fairview Drive Carson City, NV 89701 (775) 684-2510 eroussel@forestry.nv.gov http://forestry.nv.gov/ndf-state-forest-nurseries/ndf-seedbank/ Sierra Seed Supply 358 Williams Valley Rd. Greenville, CA 95947 (530) 284-7926 orders@sierraseedsupply.com www.sierraseedsupply.com

Stevenson Intermountain Seed, Inc. P.O Box 2 Ephraim, UT 84627 (435) 283-6639 sales@siseed.com www.stevensonintermountainseed.com

Utah Seed, LLC 10220 West 11600 North Bothwell, UT 84337 PO Box 245 Tremonton, UT 84337 (435) 854-3720 www.utahseed.com

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

est-nurseries/ndf-seedbank/

• 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

network.org

• The Western Hummingbird Partner-

ship (WHP) is a developing network of

partners collaborating to build an effective

and sustainable hummingbird conservation

program: www.westernhummingbird.org

· Native Seed Network: www.nativeseed-

• Nevada Division of Forestry Seed Bank.

http://forestry.nv.gov/ndf-state-for-

• 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

#### References

• All About Birds, www.allaboutbirds.org

• Arizmendi, M.C. and H. Berlanga. 2014. *Hummingbirds of Mexico and North America. Conabio.* Mexico.

- Birds of North America online, http://bna.birds.cornell.edu/bna/
- CalFlora, ww.calflora.org

• Grant, Karen A., and Grant, Verne. 1968. *Hummingbirds and their Flowers*. Columbia University Press, New York, NY

• Howell, Steve. 2002. *Hummingbirds of North America: The Photographic Guide*. Academic Press, Waltham, MA.

• Tyrrell, Esther Q. 1997. *Hummingbirds: Their Life and Behavior*. Crown Publishing Group, New York, NY.

• Williamson, Sheri L. 2001. *Peterson Field Guide to Hummingbirds of North America*. Houghton Mifflin Company, New York, NY.

• US Department of Agriculture, Forest Service, Rocky Mountain Research Station. 2013. "Ecoregions of the United States." Accessed June 5, 2013. http://www.fs.fed.us/ rm/ecoregions/images/maps/ecoregions-united-states-sample.jpg

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