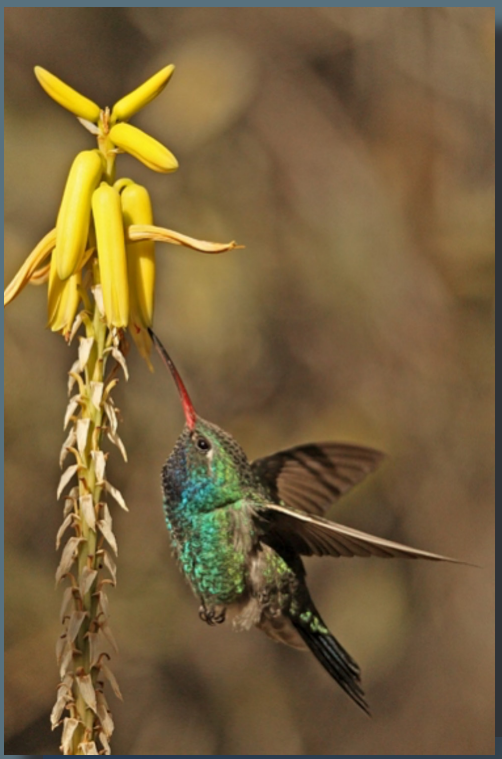
USDA United States Department of Agriculture

Maintaining and Improving Habitat for Hummingbirds in Arizona and New Mexico

— A Land Manager's Guide —



Forest Service FS-1039c July 2017

About This Guide

Anna's Hummingbird—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

Hummingbirds play an important role in the food web by pollinating a variety of flowering plants, some of which are specifically adapted to pollination by hummingbirds. Hummingbird numbers are declining, like those of 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 and other pollinators in Arizona and New Mexico. 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 Arizona and New Mexico. (See the *Ecoregions in Arizona and New Mexico* section at the end of this guide.)

This guide also provides brief descriptions of hummingbird species that visit the Southwest, 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

In general, the hummingbird species of Arizona and New Mexico are migratory. In Arizona, as many as 11 different species may be seen throughout the warmer months as they migrate to the State for breeding and nesting purposes. New Mexico has at least 6 species that breed and nest locally. Additional migrating hummingbirds can be seen in these two States during spring migration—from late March to early April—or the fall migration—from September to early October. For hummingbird species to thrive, they need to find suitable habitat along their migration routes, as well as in their

breeding, nesting, and wintering areas. Even small patches of habitat 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. Hummingbirds feed while hovering or, if possible, while perched. They also eat insects, such as mosquitoes 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 red columbine
(*Aquilegia elegantula*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

Scarlet gilia
(*Ipomopsis aggregata*)
Photo by V.E. Grant, hosted by the U.S. Department of Agriculture-Natural Resources Conservation Service PLANTS Database

Feeding at sap well
Courtesy of Bob Armstrong
(www.naturebob.com)

Water

Hummingbirds get adequate water from the nectar and insects they consume. They are, however, attracted to running water, such as fountains, sprinklers, birdbaths with a mister, or waterfalls. Because insect populations are typically higher near ponds, streams, and wetland areas, these areas are important food sources for hummingbirds.

Spring in Coconino National Forest
Courtesy of Darryl Atchison, Forest Service

Hummingbird Species Common in Arizona and New Mexico

Black-chinned Hummingbird (*Archilochus alexandri*)

RANGE—Black-chinned Hummingbirds occur in all five Bird Conservation Regions (BCRs) in Arizona and New Mexico—BCRs 16, 18, 33, 34, and 35 (see the *Bird Conservation Regions in Arizona and New Mexico* section below). They are typically found in lowlands and foothills up to 7,700 feet in elevation and inhabit a wide variety of habitats, including canyons and gulches, riparian corridors, open woodlands, oak and scrub areas, and urban settings. Migration dates are earlier for the low deserts of Arizona and later for the high desert areas of both States. They typically begin to arrive in Arizona by late February and in New Mexico by April. Southbound departure occurs in both States by mid-September.

Subalpine larkspur (*Delphinium barbeyi*)
Photo ©Al Schneider (www.swcoloradowildflowers.com)

FOOD—Black-chinned Hummingbirds feed on nectar from flowers, small insects and spiders, and sugar water at feeders. These hummingbirds have been documented feeding at a variety of nectar-producing plants including beardtongue, century-plants, desert-honeysuckle, larkspur, paintbrush, sage, skyrockets, thistle, and vines.

NESTING—Nesting habitat includes canyons or floodplain riparian communities. Nests are located in a variety of plant, tree, or shrub species. In urban areas, this species prefers settings with tall trees and many flowering shrubs and vines. Nesting begins in mid- to late-April in southern New Mexico, with a second nesting period in mid-July. Nests are found anywhere from 3 to 23 feet above the ground.

Black-chinned Hummingbird—male
Courtesy of Chuck Roberts (www.flickr.com/photos/colorob/)

APPEARANCE—While hovering, Black-chinned Hummingbirds pump their tails 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 (distinctively colored band or patch on the throat) 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.

Black-chinned Hummingbird—female
Courtesy of Joe Turner
(www.drjoephoto.com)

The adult female is dull green to golden above and pale gray below. The sides are gray-green and the throat 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.

Broad-tailed Hummingbird (*Selasphorus platycercus*)

RANGE—The Broad-tailed Hummingbird is a long-bodied hummingbird whose migratory breeding populations range on the north across the Rocky Mountains to southern Montana and west through forested regions of Nevada and California. These hummingbirds can be seen in early March in Arizona and in late March through September in New Mexico. 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, currants, and glacier lilies. They will also eat small insects, gleaning them from leaves and snatching them from midair.

Western red columbine
(*Aquilegia elegantula*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

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 to 13 feet above ground. Their nests are often located over water. Broad-tailed Hummingbirds 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.

Broad-tailed Hummingbird—male
Photo ©Jim Burns (www.jimburnsphotos.com)

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.

Broad-tailed Hummingbird—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

Broad-billed Hummingbird (*Cynanthus latirostris*)

RANGE—Broad-billed Hummingbirds occur in both Arizona and New Mexico in BCRs 34 and 35. These primarily migratory hummingbirds have been confirmed breeding as far north as southeastern Arizona, southwestern New Mexico, and west Texas. Habitat includes rocky canyons in Sierra Madre Occidental and Chihuahuan desert mountain habitats. They can also be found around mountain slopes, canyons, foothills, arroyos, and along stream habitats ranging from 1,700 to 5,800 feet in elevation. Typically arriving in mid-March, they migrate south in early September.

FOOD—Broad-billed Hummingbirds are common visitors to feeding stations in or around their preferred habitat. They prefer feeding on the nectar of red or red and yellow flowers, including agave, desert honeysuckle, milkweed, Bouvardia, bird-of-paradise, Indian paintbrush, desert willow, New Mexico thistle, fireweed, coral bean, ocotillo, trumpet honeysuckle, scarlet bugler, Mojave beardtongue, superb penstemon, and Texas betony.

Northwestern Indian paintbrush
(*Castilleja angustifolia*)
Photo by Gary S. Monroe, hosted by the
U.S. Department of Agriculture-Natural Resources
Conservation Service PLANTS Database

NESTING— The hummingbirds' preferred nesting habitat is thickets near canyon edges with northern exposure and bordered by rock outcroppings with hackberry, algerita, and mesquite. Nests can be found 4 to 7 feet above the ground on the small branch of a tree, the stalk of a vine, or in a shrub. In New Mexico, the species only breeds regularly in Guadalupe Canyon in the Peloncillo Mountains. In Arizona, Broad-billed Hummingbirds can be seen in abundance from the western slope of the Baboquivari Mountains, east to Patagonia, and north to the Santa Catalina Mountain foothill drainages. They also make rare appearances in canyons of the Peloncillo Mountains. Nesting can begin as early as mid-March.

APPEARANCE—Male Broad-billed Hummingbirds are one of the most colorful hummingbirds found in North America. The adult male has a dark metallic bronze-green body with a metallic blue gorget, glossy blue-black tail, white undertail coverts, brownish-gray flight feathers, and a white tuft of feathers on each side of the tail. They have a bill that is red at the base, black-tipped, and curves slightly downward toward the tip.

Broad-billed Hummingbird—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

Female Broad-billed Hummingbirds have duller metallic green upperparts with a grayish central belly and throat. They typically have a distinguishable white streak at the back of the eye, followed with a fuzzy dark gray ear patch. Females have a square-tipped tail that is bronze-green at the base, becoming blue-black or greenish-black terminally, tipped with white. The base portion of the lower bill is often red, gradually changing to black at the tip.

Rufous Hummingbird (*Selasphorus rufus*)

RANGE—Rufous Hummingbirds travel farther north than any other hummingbird, wintering in Mexico and migrating to breeding sites as distant as Alaska. Although they are relatively small hummingbirds, they have an aggressive nature and frequently chase larger hummingbirds from nectar sources. These birds visit Arizona and New Mexico primarily during fall migration, which takes place from July through October.

Rufous Hummingbird—males
Courtesy of Bob Armstrong
(www.naturebob.com)

Rufous Hummingbirds are one of the most common and widespread hummingbird species in Arizona and New Mexico and occur in all five BCRs in both States. Rufous Hummingbirds are found in a wide variety of habitats. Unfortunately, the population of this species has declined by about 60 percent over the last 50 years. At least one climate change model predicts this species will lose its entire nonbreeding habitat in the United States by the end of this century because of climate change.

FOOD—Rufous Hummingbirds feed primarily on nectar from colorful, tubular flowers, including columbine, scarlet gilia, penstemon, Indian paintbrush, mints, lilies, fireweeds, larkspurs, currants, and heaths. The hummingbirds get protein and fat from eating insects, particularly gnats, midges, and flies taken from the air and aphids taken from plants.

Penstemon
(*Penstemon lentus*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

Rufous Hummingbird—female
Fireweed (*Chamerion angustifolium*)
Courtesy of Bob Armstrong
(www.naturebob.com)

Rufous Hummingbird—female
Courtesy of Bob Armstrong
(www.naturebob.com)

NESTING—These birds do not breed in Arizona or New Mexico. They prefer to breed and nest in the Northwest and Alaska in second-growth forest communities and openings, but they will also use mature forests, parks, and residential areas. 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 tail feathers are black-tipped and pointed.

The adult female is bright green above and white below, strongly washed with rufous color 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—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

Rufous Hummingbird—male
Photo ©Jim Burns
(www.jimburnsphotos.com)

Anna's Hummingbird (*Calypte anna*)

RANGE—Anna's Hummingbirds are year-round residents of the Pacific coast, ranging from southern Alaska to northern Baja California. Since the mid-1930s, the birds' range has expanded greatly, likely due to their effective use of nonnative plants and feeders in urban and suburban areas. Anna's Hummingbirds occur in BCRs 16, 33, and 35 in Arizona and New Mexico. The species is fairly common in southern Arizona, with some resident urban populations. They are a regular wintering bird in southwestern New Mexico and are occasionally found as far north as Albuquerque and Los Alamos.

Migration of this particular species is not well understood. They do not migrate in the traditional latitudinal sense; instead, they tend to migrate along ranges of altitude. Winter habitat is almost always in lower elevations near human residences with hummingbird feeders and dense cover for nighttime roosting. Some individual birds have also been known to migrate east to west.

Manzanita
(*Arctostaphylos patula*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

FOOD—Anna's Hummingbirds eat nectar from many flowering plants, including currant, gooseberry, manzanita, and many introduced species, such as eucalyptus. They eat a wide variety of insects, primarily targeting smaller ones, like midges, whiteflies, and leafhoppers. They also feed on tree sap leaking out from holes made by sapsuckers.

NESTING—Nesting occurs in Arizona, but typically not in New Mexico. Breeding begins in the fall, making it one of the earliest breeding species in Arizona. Habitat includes urban areas and parks, from sea level to 6,400 feet. In summer, they inhabit shrubland communities such as chaparral-oak areas and brushy riparian areas, as well as urban and suburban areas. Nest placement occurs in a variety of settings; nests have been spotted in oaks, chaparral, and vines ranging from less than 3 to 30 feet above ground.

Anna's Hummingbird—male
Courtesy of Eleanor Briccetti
(www.briccettiphoto.com)

APPEARANCE—Males are more vocal than any other North American hummingbird. In the United States, Anna's Hummingbirds are the only hummingbird species that sings. The

male has a distinctive, dry, scratchy, buzzy "song" that it sings throughout the year. 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 gray, darker at the edges. The tail extends well beyond the wingtips.

Anna's Hummingbird—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

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

Blue-throated Hummingbird (*Lampornis clemenciae*)

RANGE—Blue-throated Hummingbirds breed in the mountains of southeastern Arizona, southwestern New Mexico, and central-western Texas. Blue-throated Hummingbirds are noticeably larger than most of the other hummingbird species found in Arizona and New Mexico. Magnificent Hummingbirds are the only other hummingbirds similar in size. This very particular species occupies pine-oak, deciduous woodlands, and moist mountain canyon habitats. Blue-throated Hummingbirds are commonly seen at an elevation range from 4,900 to 10,800 feet. This short distance migrant typically arrives in mid-March and departs in September.

Parry's agave
(*Agave parryi*)
Photo by Jeff MacMillian, hosted by the U.S. Department of Agriculture-Natural Resources Conservation Service PLANTS Database

FOOD—These hummingbirds may ingest only invertebrates during drier times of the year, between plant blooming seasons. The diet focuses primarily on flies and spiders, with additional components of harvestmen, parasitic

wasps, true bugs, and beetles. Plants visited for nectar include penstemon, cardinal monkeyflower, Texas betony, sage, agave, gilias, desert honeysuckle, columbine, twinberry, tree tobacco, New Mexican locust, Arizona thistle, and coral bells.

NESTING—Blue-throated Hummingbirds found in southeastern Arizona have been noted nesting at sites as low as 4,800 feet in elevation. The female builds the nest in covered areas, such as rock canyon walls, rock overhangs, or under human structures, unlike any other hummingbird species found in the southwest. Females also tend to nest close to, or over, running water. They have been observed returning and adding to the same nest site for several years. Nest placement is fairly low for this species, typically 4 to 14 feet above the ground. They have been known to rear as many as three broods per year. The first in late April, the second in early June through early July, and the third in late July through early August. In Arizona, they regularly occur in the Huachuca, Santa Rita, and Chiricahua Mountains.

Blue-throated Hummingbird—male
Photo ©Jim Burns
(www.jimburnsphotos.com)

APPEARANCE—The adult male is much heavier than the female Blue-throated Hummingbird and is slightly longer. The male's upperparts are dull iridescent green, and the long broad bluish-black tail has outer feathers broadly tipped with white. A white streak appears at the back of the eye and at the base of the bill along the neck. Males have a metallic blue gorget and gray belly. The female is very similar with green upperparts; however, the throat and belly are gray like the underparts.

Blue-throated Hummingbird—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

Calliope Hummingbird (*Selasphorus calliope*)

RANGE—Calliope Hummingbirds are the smallest breeding birds in North America and are the smallest long-distance avian migrant in the world. They are common residents in the mountain habitats of the Southwest. The hummingbirds migrate through both montane and lowland habitats. Spring migration is mainly through higher elevations along the Pacific Flyaway. They arrive in Arizona and New Mexico in July and are gone by the end of August.

FOOD—Calliope Hummingbirds consume both floral nectar and small insects. This species visits plants with red tubular flowers and a wide variety of those with yellow, white, blue, and purple flowers. Examples include larkspur, columbine, creeping mahonia, bee plant, fireweed, paintbrushes, monkeyflower, and beardtongues.

Rocky Mountain beeplant
(*Cleome serrulata*)
Photo by Clarence A. Rechenthin, hosted by the U.S. Department of Agriculture-Natural Resources Conservation Service PLANTS Database

NESTING—Preferred nesting habitat is montane conifer forests, primarily those in the shrub-sapling seral stage transitioning to second-growth forests created after fires or logging. They breed mostly in mountain areas—from British Columbia to California, Nevada, and Utah—and winter in Mexico.

Calliope Hummingbird—male
Courtesy of Eleanor Briccetti
(www.briccettiphoto.com)

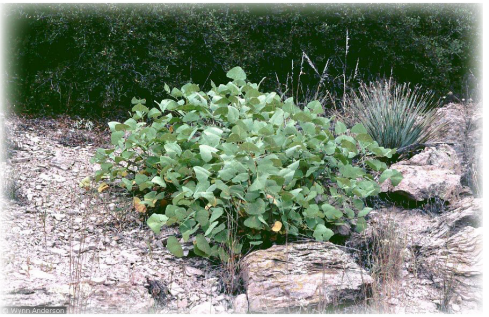
APPEARANCE—Male Calliope Hummingbirds weigh about the same as a penny—about half as much as male Anna's Hummingbirds. The adult male is bright green above and creamy white below with a green sash on the sides and flanks. The adult male's gorget is an iridescent wine-red to magenta-red and, unlike other North American hummingbirds, is separated into distinct rays that fan across the 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 the female Rufous or Allen's Hummingbirds, but is smaller and has 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
Photo ©Jim Burns
(www.jimburnsphotos.com)

Costa's Hummingbird (*Calypte costae*)

RANGE—The Costa's Hummingbirds are 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. 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. Post-breeding destinations are largely unknown. The species returns to Arizona and California deserts when desert lavender or chuparosa begin flowering. Costa's Hummingbird can be seen in Guadalupe Canyon in the Peloncillo Mountains in extreme southwestern New Mexico from mid-March to mid-August. During the nonbreeding season, individuals have been observed slightly above 7,800 feet in elevation in chaparral, scrub, or woodland habitat.



Coral bean
(*Erythrina flabelliformis*)
Photo by Wynn Anderson, hosted by the
U.S. Department of Agriculture-
Natural Resources Conservation Service
PLANTS Database

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—Costa's Hummingbird's breeding populations begin to arrive in southwestern Arizona in mid to late October, nesting at elevations from 100 to 4,700 feet. Nest construction begins as early as mid-January. Nests are found primarily in foothill paloverde trees but have also been found in jojoba, blue paloverde, ironwood, canyon ragweed, hopbush, and goldenweed. Nests are placed anywhere from 1 to 9 feet above ground. The greatest threats to Costa's Hummingbirds in Arizona are desert wildfires and urban development.

Costa's Hummingbird—male
Courtesy of Eleanor Briccetti
(www.briccettiphoto.com)

Costa's Hummingbird—female
Courtesy of Amy McAndrews
(www.flickr.com/photos/34470420@N02/)

APPEARANCE—Male Costa's Hummingbirds have an iridescent violet crown and gorget that run along both sides of the throat. Both males and females have green upperparts. Females have a white throat and underparts, with occasional violet feathers.

Magnificent Hummingbird (*Eugenes fulgens*)

RANGE—Magnificent Hummingbirds were known as Rivoli's Hummingbirds until the mid-1980s. These hummingbirds occupy deciduous woods, streamside areas, and pine-oak woods on mountain slopes and ridges above 5,000 feet in elevation. They arrive in early to mid-March and begin their southbound departure in August; a few individuals stay until mid-October.

FOOD—As with other hummingbirds, Magnificent Hummingbirds consume both plant nectars and insects. Although research is lacking, plants believed to

be important for Magnificent Hummingbirds include giant trumpet, century plants, columbine, bouvardia, Indian paintbrush, hedgehog cactus, penstemon, Jacob's ladder, sage, and Indian pink.

NESTING—Magnificent Hummingbirds breed in the mountains of southeastern Arizona and southwestern New Mexico. Nest construction begins as early as April. Nests are generally placed 10 to 15 feet above the ground on a horizontal branch or in a shrub near streams or drainages. They have been found in ponderosa pine, Chihuahuan pine, Douglas-fir, Arizona walnut, and sycamore.

Scarlet Bugler
(*Penstemon barbatus*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

Magnificent Hummingbird—male
Courtesy of Laura Gooch
(www.flickr.com/photos/lgooch/)

APPEARANCE—Magnificent Hummingbirds are the second-largest hummingbird found in the United States. Males have deep green upperparts; a long bronze, black-tipped tail; and black underparts. They have a spectacular iridescent purple crown and bright blue-green gorget.

Females have olive green upperparts, gray underparts, and light gray tips on the outer tail feathers.

Magnificent Hummingbird—female
Courtesy of Carol Foil
(www.flickr.com/photos/dermoidhome/)

Lucifer Hummingbird (*Calothorax lucifer*)

RANGE—Lucifer Hummingbirds can be found in dry canyons, arid mesas, foothills in semidesert habitats, and on cactus-covered slopes from 4,000 to 7,400 feet. They are often seen in habitats with many century plant agaves and ocotillo. These hummingbirds can be seen in late March through late September.

Desert penstemon
(*Penstemon pseudospectabilis*)
Photo by Gary A. Monroe, hosted by the U.S. Department of Agriculture-Natural Resources Conservation Service PLANTS Database

FOOD—Lucifer Hummingbirds eat mainly nectar from agave, penstemon, the anisacanth shrub, as well as paintbrushes, willow, trumpet flower, and cholla. They also eat insects and spiders and especially offer these protein-rich foods to their young.

NESTING—Lucifer Hummingbirds are a rare breeder in southern Arizona (Santa Rita Mountains, Chiricahua Mountains, and Swisshelm Mountains), southwestern New Mexico (Peloncillo Mountains), and in the Chisos Mountains of western Texas. In Arizona, nests have been found in netleaf hackberry, desert hackberry, and Arizona sycamore. They have also been observed nesting on the seed pods of dead agave stalks, in cholla cactus, and ocotillo, 4 to 6 feet above the ground.

Lucifer Hummingbird—male
Photo ©Jim Burns
(www.jimburnsphotos.com)

APPEARANCE—The most distinctive features of the Lucifer Hummingbird are its long decurved bill and narrow, forked tail. When sunlight hits just right, males show a bright purple gorget. They have green backs, whitish chests, and buff sides.

Females have a green back and crown and buff-colored chest. Like the males, they have a decurved bill but lack the forked tail.

Lucifer Hummingbird—female
Photo ©Jim Burns
(www.jimburnsphotos.com)

Violet-crowned Hummingbird (*Amazilia violiceps*)

RANGE—Violet-crowned Hummingbirds occur in BCR 34 in Arizona and New Mexico. They prefer desert riparian canyons with sycamore trees and are generally associated with streamside plants in the desert and foothills. Violet-crowned Hummingbirds begin to arrive in Arizona and New Mexico in March. These hummingbirds are frequently observed from June through early September.

FOOD—Violet-crowned Hummingbirds eat nectar and small flying insects and spiders. They frequently visit a wide variety of plants, including ocotillo, creeper, desert tobacco, honeysuckle, firecracker bush, coral bean, spurge, and hedge-nettle.

Scarlet hedge nettle
(*Stachys coccinea*)
Photo by Patrick J. Alexander, hosted by the U.S. Department of Agriculture-Natural Resources Conservation Service PLANTS Database

NESTING—This species breeds in the Huachuca and Chiricahua Mountains of southern Arizona and Guadalupe Canyon in the Peloncillo Mountains of southwestern New Mexico. These birds have also been spotted in the Animas Mountains of New Mexico during the breeding season. In Guadalupe Canyon, they typically nest at the edge of riparian zones, next to xeric hillsides. Nests are typically found in sycamore trees, about 25 to 40 feet above the ground.

Violet-crowned Hummingbird
Photo ©Jim Burns
(www.jimburnsphotos.com)

APPEARANCE—True to the name, male Violet-crowned Hummingbirds have a violet-blue crown and emerald green back. They have a white neck and breast and a red bill tipped with black. Females are almost identical to males, but their crowns are slightly less brilliant.

Uncommon and Rare Hummingbirds

A few other hummingbird species are sometimes, though rarely, seen in Arizona and/or New Mexico.

Allen's Hummingbird (*Selasphorus sasin*)

RANGE—The Allen's Hummingbirds are closely related to the Rufous Hummingbirds. The two species look very similar, making identification a challenge in areas where the species' ranges overlap. This species breeds only in narrow, moist, costal zones from sea level to 1,000 feet. It breeds in coastal areas from California into southern Oregon and winters mostly in central Mexico and also along the Gulf Coast to Alabama. Allen's Hummingbirds are passing migrants in Arizona, with males beginning their southward fall migration in mid-May and arriving in their winter range as early as August.

White-eared Hummingbird (*Hylocharis leucotis*)

White-eared Hummingbirds are an irregular summer visitor to the mountains of extreme southeastern Arizona and a rare visitor to southwestern New Mexico. They prefer the scrubby undergrowth of oak forests, pine woods, pine-oak forests, high mountain fir forests, forest edges, and partially open mountain country with scattered trees and shrubs. Breeding has only been documented in the Huachuca Mountains (Miller, Carr, Ramsey, and occasionally Sawmill canyons) and Cave Creek in the Chiricahua Mountains. One pair was documented in the Pinaleño Mountains in 1997. White-eared Hummingbird nests are almost always found in shrubs and relatively low trees. Both male and female White-eared Hummingbirds have a prominent white ear stripe behind their eyes and red bills with black tips.

Berylline Hummingbird (*Amazillia beryllina*)

The Berylline Hummingbirds are endemic to the southern and western Mexican foothills and highlands; however, they make very rare appearances as a visitor and breeder in southeastern Arizona. Berylline Hummingbirds have been noted to arrive in Arizona by mid- to late April. The common nesting period for this species occurs during Arizona's monsoon season from late June through mid-August. Some individuals, however, have been documented nesting as early as May.

Plain-capped Starthroat Hummingbird (*Heliomaster constantii*)

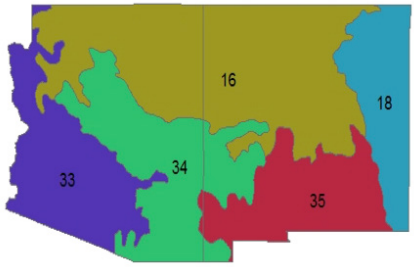
The Plain-capped Starthroat Hummingbirds are a very rare visitor to Arizona, with fewer than 20 documented sightings. They have been spotted as far north as the Santa Rita Mountains. In New Mexico, there was a possible sighting in Hidalgo County.

Ruby-throated Hummingbird (*Archilochus colubris*)

These hummingbirds, common in the Eastern United States, have made rare appearances in Pima County (Tucson) and Santa Cruz County (Patagonia), Arizona. Please refer to a field guide for more information about these species.

Bird Conservation Regions in Arizona and New Mexico

Bird Conservation Regions (BCRs) are ecologically distinct regions in North America with similar bird communities, habitats, and resource management issues. The five BCRs in Arizona and New Mexico—Southern Rockies/Colorado Plateau (BCR 16), Shortgrass Prairie (BCR 18), Sonoran and Mohave Deserts (BCR 33), Sierra Madre Occidental (BCR 34), and Chihuahuan Desert (BCR 35)—are shown on the map at right.



The U.S. North American Bird Conservation Initiative Committee is a coalition of government agencies, private organizations, and bird initiatives in the United States. The committee ensures the long-term health of North America's native bird populations. Bird conservation initiatives have produced national and international conservation plans for birds and regional plans for numerous BCRs. The regional plans provide more detailed information on population objectives and habitat needs for birds in specific landscapes.

Ecoregions in Arizona and New Mexico

Land within Arizona and New Mexico lies within seven ecoregions, which are shown on the map (facing page): Ecoregions of Arizona and New Mexico. The ecoregion boundaries differ from those of the BCRs. Those ecoregions, their relationship to the BCRs, and their descriptions are as follows.

313—Colorado Plateau Semidesert Province (CPSD)—CPSD lies within BCRs 16 and 34 and is composed of tablelands interrupted by volcanic mountains and narrow, widely spaced stream valleys. Habitat types include grassland, woodland, montane, and subalpine.

M313—Arizona-New Mexico Mountains, Semidesert, Open Woodland, Coniferous Forest, Alpine Meadow Province (AZNMM)—AZNMM is

located within BCRs 16, 34, and 35. It is characterized by steep foothills and mountains with occasional deeply dissected high plateaus. Vegetation includes grass, brush woodland, conifer forests, aspen, and alpine.

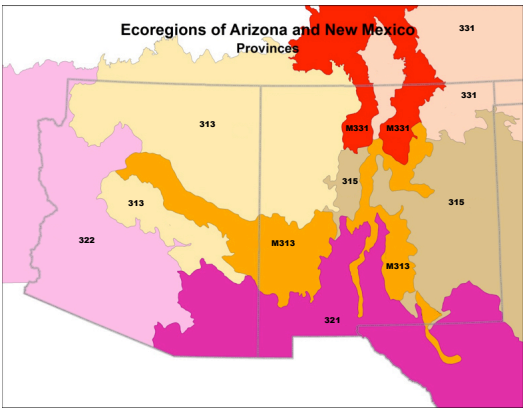
315—Southwest Plateau and Plains Dry Steppe and Shrub Province (SWPPSS)—SWPPSS lies within BCRs 16, 18, and 35 and features irregular plains and tablelands intermixed with rolling plains, hills, and plateaus dissected by moderate canyons. Arid grasslands dominate this province with juniper, mesquite, and live oak occurring in some areas.

321—Chihuahuan Desert Province (CHD)—CHD lies within BCRs 34 and 35. This ecoregion is a distinctly arid area of undulating plains and somewhat isolated mountains. Short grass and shrubs characterize the vegetation, with mesquite often the dominant plant.

322—American Semi-Desert and Desert Province (ASD)—ASD falls within BCR 33 and includes the Sonoran and Mohave deserts. Creosote bush is the most widely distributed plant, sparsely accompanied by cacti, shrubs, and herbs.

331—Great Plains-Palouse Dry Steppe Province (GPPDS)—GPPDS is within BCR 16 and includes the upper Rio Grande and Chama River valleys and smooth plains and tablelands of northeastern New Mexico. It is dominated by shortgrass prairie with occasional sparse tree savannas.

M331—Southern Rocky Mountain Steppe, Open Woodland, Coniferous Forest, Alpine Meadow Province (SRMSWFM)—SRMSWFM falls within BCR 16 and is comprised of mountains and high-elevation meadows. Vegetation includes cold desert shrub, piñon-juniper, ponderosa pine, mixed conifer, spruce-fir, and alpine tundra.



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

Courtesy of Yvonne Chauvin, University of New Mexico

All images, except as noted, courtesy of Esteban Muldavin, University of New Mexico

To find out which ecoregion you are in, enter your postal ZIP Code (under "Planting Guides" on the Pollinator Partnership Web site (http://www.pollinator.org)). If you wish to supplement the information presented in this guide, for example, to attract other pollinators or to learn about other ecoregions, explore the planting guides for ecoregions throughout the United States. The Web site also provides additional tools and connections to useful resources for pollinator and plant information.

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico

The following table (Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico) lists some plants that are nectar sources for hummingbirds.

Ecoregion 321, Southern New Mexico
Courtesy of Esteban Muldavin, University of New Mexico

These plants are native to Arizona, New Mexico, 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 table provides seed sources for each plant, valid as of December 2015. Please check with the seed suppliers for current availability. A directory of the seed sources follows the tables. Use locally adapted, genetically appropriate plants in all your restoration and pollinator enhancement work.

Rocky Mountain Penstemon
(*Penstemon strictus*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

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/S_Zones_1Oct2013.html for provisional seed zones of the Southwest and select plant materials from your zone.

Because nonnataive plants become invasive and disrupt ecosystems, the Forest Service, an agency of the U.S. Department of Agriculture, does not recommend planting them to attract hummingbirds. This practice is destructive. For example, yellow toadflax (*Linaria vulgaris*, also called "butter and eggs") is attractive to hummingbirds but is a noxious weed.

Nonnative, Invasive, Yellow Toadflax
Linaria vulgaris
Courtesy of Colorado State
University Extension–Adams County

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico

Botanical Name	Common Name	Ecoregion[1]					
		CHD	ASD	SWPPSS	SRMSWFM	CPSD	AZNMM
Trees and Shrubs							
**Anisacanthus thurberi*	Thurber's desert honeysuckle	X	X			X	X
Arctostaphylos pungens	Pointleaf manzanita	X	X			X	X
**Bouvardia ternifolia*	Firecracker bush	X	X				
**Buddleja sessiliflora*	Rio Grande butterfly bush		X				
Calliandra eriophylla	Fairyduster	X	X			X	X
Ceanothus fendleri	Fendler's ceanothus	X	X		X	X	X
Ceanothus integerrimus	Deerbrush	X	X			X	X
**Erythrina flabelliformis*	Coral-bean	X	X				
**Justicia californica*	Beloperone		X				
**Justicia candicans*	Red justicia		X				
**Lanicera involucrata*	Bearberry honeysuckle				X		X
Lycium andersonii	Anderson wolfberry	X	X			X	X

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources[2]
Mar.–May	Sun	Rocky	Rocky banks and floodplains; 2,500–5,500 ft.	
Jan.–Feb.	Part shade	Sandy to gravelly; well drained	Mixed shrub and sage-brush communities, piñon-juniper, canyons, lower mountain slopes	GS
May–Nov.	Part shade	Various	Among boulders and rim-rock of dry mountain sites	
Apr.–July	Part shade	Moist	Streams and river banks	
Apr.–June	Sun	Dry, gravelly; neutral–alkaline	Dry slopes and mesas	DS, GS, RSI
June–July	Part sun	Dry	Pine forests of foothills and mountains; 5,000–10,000 ft.	
May–July	Sun to part shade	Light, well-drained soils	Chaparral, open coniferous forests, and high-elevation grasslands; 3,500–7,000 ft.	
June	Sun	Rocky; dry	Dry, rocky slopes and washes	
Mar.–June	Sun	Rocky; dry	Rocky desert washes; 1,000–4,000 ft.	
Feb.–Nov.	Sun to part shade	Sandy, well drained	Deserts; 0–2,500 ft.	
June–July	Shade	Moist	Along streams and in moist coniferous forests from 6,000–10,500 ft.	
Feb–May	Sun	Dry, gravelly	Dry, stony hills, mesas, and washes	

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico—continued

Botanical Name	Common Name	Ecoregion[1]					
		CHD	ASD	SWPPSS	SRMSWFM	CPSD	AZNMM
Trees and Shrubs—continued							
Lycium berlandieri	Berlandier's wolfberry	X	X				
**Lycium pallidum*	Pale desert thorn					X	
Pomaria jamesii	James' holdback	X		X	X	X	X
Ribes cereum	Wax current	X	X		X	X	X
Tecoma stans	Yellow trumpet bush	X	X				
Rosa woodsia	Woods' rose				X		X
Cactus and Agave							
Agave parryi	Parry's agave		X			X	
Cylindropuntia imbricata	Tree cholla	X		X	X	X	X
Echinocereus triglochidiatus	Kingcup cactus	X		X	X	X	X
Opuntia macrocentra	Purple prickly pear	X	X				X

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources[2]
Feb.–Oct.	Sun to part shade	Gravelly, sandy; medium or clay loam	Hillsides and slopes	
Apr.–June	Sun	Various	Semidesert and shrubland openings	
May–Sept.	Sun	Limestone; well drained	Grasslands, desert plains, and slopes	
Apr.–June	Sun to part shade	Rocky or sandy; dry to moist	Pine forest openings; dry slopes and ridges	
Apr.–Nov.	Sun to part shade	Well-drained, rocky; limestone, sand, or loam	Hillsides, slopes, and canyons; 3,000–5,500 ft.	
May–July	Full sun to full shade	Clay loam to sandy loam; moderately drought tolerant	Variable depending on subspecies.	AVS, CS, CCI, DS, FNS, GS, HAI, LMN, PBS, PSW, RSI
June–Aug.	Sun	Well-drained, rocky slopes	High deserts; 4,500–8,000 ft.	
Mar.–Aug.	Sun	Sandy or gravelly limestone-based soils	Semideserts; sandy and rocky openings, plains and canyons; grasslands; 3,900–7,500 ft.	
Apr.–June	Sun	Volcanic	Rocky desert slopes and dry mountain woodlands	
Mar.–June	Sun	Dry; wide range of soil substrates	Sandy desert flats, rocky hills or valley grasslands below 5,000 ft.	

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico—continued

Botanical Name	Common Name	Ecoregion[1]					
		CHD	ASD	SWPPSS	SRMSWFM	CPSD	AZNMM
Vines							
Maurandya antirrhiniflora	Snapdragon vine	X	X	X		X	X
Annual Herbs							
Cleome serrulata	Rocky Mountain beeplant				X	X	X
**Cuphea wrightii*	Wright's waxweed	X	X				
Perennial Herbs							
**Agastache pallidiflora*	Bill Williams Mountain giant hyssop						X
**Aquilegia chrysantha*	Golden columbine	X	X			X	X
**Aquilegia desertorum*	Desert columbine					X	
**Aquilegia elegantula*	Western red columbine				X	X	X
Asclepias subulata	Rush milkweed		X				
Castilleja angustifolia	Northwestern Indian paintbrush					X	

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources[2]
Mar.–Oct.	Part shade	Various, especially limestone; well drained	Among shrubs in washes, on rocky slopes, and in piñon-juniper woodlands; 1,500–6,000 ft.	
Jul–Sept.	Sun to part shade	Moist and light or sandy alkaline soils	Prairies, open woods, washes, and disturbed sites; 4,500–7,000 ft.	AVS, CS, FNS, GS, NNN, PBS, PSW, RSI, SIS, SSC
Aug–Oct.	Sun to part shade	Sandy clay; moderately moist	Canyons and moist soil pockets on rocky hillsides and in piñon/juniper/oak communities; 4,000–6,000 ft.	
July–Oct.	Part shade to shade	Moist, loamy	Coniferous forests and along mountain streams; 7,000–10,000 ft.	
Apr.–Sept.	Part shade to shade	Sandy, rocky, loamy, or limestone; moist and well drained	Sheltered canyons in the Chihuahuan and Sonoran deserts; 3,000–11,000 ft.	DS,FNS, LMN, NAS, PSW, SSC
May–Oct.	Sun, part shade, shade	Moist soils	Open rocky areas; 700–8,000 ft.	FNS
May–July	Sun to part shade	Moist soils	Coniferous forests, especially along streams; 5,000–9,800 ft.	
Apr.–Nov.	Sun	Dry, rocky or sandy soils	Dry slopes, mesas, plains and desert washes to 3,000 ft.	
Apr.–Aug.	Shade	Dry open soils	Cold deserts of N. Arizona and NW New Mexico	

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico—continued

Botanical Name	Common Name	Ecoregion[1]					
		CHD	ASD	SWPPSS	SRMSWFM	CPSD	AZNMM
Perennial Herbs—continued							
Castilleja lanata	Woolly paintbrush	X	X				
Castilleja miniata	Giant red Indian paintbrush			X	X		
Castilleja mogollonica	Mogollon paintbrush						X
Delphinium barbeyi	Subalpine larkspur						X
Delphinium carolinianum	Carolina larkspur	X		X			
Delphinium scaposum	Tall mountain larkspur		X			X	X
**Epilobium canum*	Hummingbird trumpet	X	X			X	X
**Heliomeris multiflora*	Showy goldeneye	X	X		X	X	X
**Heuchera sanguinea*	Coralbells		X				
**Ipomopsis aggregata*	Scarlet gilia				X	X	X
Ipomopsis thurberi	El Paso skyrocket	X	X				
**Lobelia cardinalis*	Cardinal flower	X	X			X	X

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources[2]
Mar.–Aug.	Sun to part shade	Dry granite or limestone soils	Arid slopes and desert; 2,500–7,000 ft.	
May–Sept.	Sun	Wet to moist well-drained soils	Wet mountain meadows and streambanks below 11,000 ft.	
July–Aug.	Sun to part shade	Moist basalt soils with high organic content	Moderately drained sites within wet grassy meadows and cienegas; 8,500–9,500 ft.	
July–Aug.	Shade	Wet soils	Moist meadows, wet forests, aspen woodlands, and streambanks	
Apr.–July	Part shade	Sandy, dry	Dry, open woods, sandy hills and brushlands	
Mar.–May	Sun	Gravelly, dry	Open deserts and gravelly mesas below 5,000 ft.	
June–Aug.	Sun to part shade	Dry to moist soils	In the Southwest, this plant occurs in damp canyons	
July–Sept.	Sun	Rich, well drained	Roadsides, aspen woodlands, and dry open slopes	
Mar.–Oct.	Full shade	Rocky; moist through summer	Shady foothill woodlands; 4,000–8,500 ft.	
May–Oct.	Sun to part shade	Rocky, mineral soils	Roadsides and openings in coniferous forests; 5,000–9,000 ft.	
Aug.–Oct.	Sun	Rocky, well drained	Open slopes and canyons; 4,000–6,000 ft.	
May–Oct.	Sun, part shade, shade	Medium clay-loam and limestone; moist to wet	Ditches, ravines, depressions, woodland edges, openings, stream-banks, roadsides, prairie; 3,000–7,500 ft.	

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico—continued

Botanical Name	Common Name	Ecoregion[1]					
		CHD	ASD	SWPPSS	SRMSWFM	CPSD	AZNMM
Perennial Herbs—continued							
**Lobelia laxiflora*	Sierra Madre lobelia	X					
Mahonia repens	Creeping barberry		X		X	X	X
Mimulus cardinalis	Crimson monkey flower	X	X			X	X
Mimulus langsdorffii	Yellow monkey flower	X	X		X	X	X
**Penstemon barbatus*	Beardlip penstemon					X	
**Penstemon cardinalis*	Cardinal beardtongue	X					
**Penstemon parryi*	Parry's beardtongue		X				X
**Penstemon pseudospectabilis*	Desert penstemon	X	X			X	X
Penstemon strictus	Rocky Mountain penstemon				X		
**Penstemon subulatus*	Hackberry beardtongue		X			X	X
**Penstemon superbus*	Superb beardtongue	X	X				
Penstemon virgatus	Upright blue beardtongue						X

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources[2]
May–Sept.	Sun to part shade	Moist	Canyon bottoms and along streams; 4,000–5,000 ft.	
Apr.–July	Part shade	Rich and sandy, loamy, chalky, or granitic soils; well drained	Open coniferous forests and wooded slopes; 5,000–10,000 ft.	
Apr.–Oct.	Part shade	Moist	Streambanks and seeps below 8,000 ft.	
Mar.–Aug.	Part shade	Moist	Streambanks and wet places to 10,000 ft.	
May–Sept.	Sun to part shade	Mineral; well drained	Oak woods, coniferous forests and roadsides; 4,000–10,000 ft.	
May–July	Sun	Rocky; well drained	Canyon bottoms and rocky slopes in piñon-juniper woodlands and lower montane coniferous forests	
Mar.–Apr.	Sun	Dry; well drained	Mountain canyons, desert washes and grassland slopes; 1,500–5,000 ft.	CCI, DS, GS, LMN, PSW, SIS
Feb.–May	Sun	Dry; well drained	Roadsides, hillsides and canyons; 2,000–7,000 ft.	DS, GS, LMN, PSW, RSI
May–July	Sun	Moist	Subalpine to valley sagebrush and conifer forests; 7,000–8,000 ft.	CS, CCI, FNS, GS, LMN, LLP, PBS, PSW, RSI, SIS, WF
Mar.–July	Sun to part shade	Dry; well drained	Dry hillsides and cliffs up to 4,500 ft.	
Apr.–June	Sun to part shade	Sandy; well drained	Roadsides and along washes; 3,000–6,000 ft.	DS, GS, PSW
June–Sept.	Sun	Rocky, mineral	Pine forests and mountain meadows; 5,000–11,000 ft.	

Hummingbird Nectar Plants for Ecoregions in Arizona and New Mexico—continued

Botanical Name	Common Name	Ecoregion[1]					
		CHD	ASD	SWPPSS	SRMSWFM	CPSD	AZNMM
Perennial Herbs—continued							
Polemonium pauciflorum	Few-flower Jacob's ladder	X					
Salvia penstemonoides	Big red sage	X					
Silene laciniata	Cardinal catchfly	X			X	X	X
Stachys coccinea	Scarlet hedge nettle	X	X				X

*Hummingbird-adapted or preferred nectar sources

[1] Ecoregion
CHD = Chihuahuan Desert Province (321)
ASD = American Semi-desert and Desert Province (322)
SWPPSS = Southwest Plateau and Plains Dry Steppe and Shrub Province (315)
SRMSWFM = Southern Rocky Mountain Steppe, Open Woodland, Coniferous Forest, Alpine Meadow Province (M331)
CPSC = Colorado Plateau Semi-desert Province (313)
AZNMM = Arizona–New Mexico Mountains, Semi-desert, Open Woodland, Coniferous Forest, Alpine Meadow Province (M313)

Wax Currant
(*Ribes cereum* variety *cereum*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed Sources[2]
July–Sept.	Sun to part shade	Well drained	Gravelly or rocky slopes, canyons, and conifer and oak forests	
June–Sept.	Sun to part shade	Various; well drained	Stream and riverbanks, ditches, ravines, and depressions	
May–Aug.	Part shade	Rich, gravelly	Pine forests, grassy or brushy slopes; 5,500–9,000 ft.	
Mar.–Oct.	Part shade	Moist, well-drained sand, loam or clay	Moist crevices of steep slopes and canyons	

[2] Seed Sources:
AVS = Arkansas Valley Seeds, Inc.
CS = Comstock Seed
CCI = Curtis and Curtis, Inc.
DS = Desert Survivors
FNS = Flagstaff Native Plant and Seed
GS = Granite Seed Company
HAI = Hydra Aquatics, Inc.
LMN = Lone Mountain Natives, Inc.
LLP = Los Lunas Plant Materials Center (NRCS)
NAS = Native American Seed Company
NNN = Nighthawk Natives Nursery
PBS = Pawnee Buttes Seed, Inc.
PSW = Plants of the Southwest
RSI = Rainier Seeds, Inc.
SIS = Stevenson Intermountain Seed
SSC = Stover Seed Company
WF = Wildseed Farms

Wood's Rose
(*Rosa woodsii*)
Photo ©Al Schneider
(www.swcoloradowildflowers.com)

Directory of Seed and Plant Sources

Western columbine—*Aquilegia formosa*
Photo by Gary A. Monroe, hosted by
U.S. Department of Agriculture-
Natural Resources Conservation Service
PLANTS Database

Arkansas Valley Seeds, Inc.
4300 Monaco Street
Denver, CO 80216
(877) 907-3337
Fax: (303) 320-7516
email: RAvila@arkansasvalleyseed.com
http://www.avseeds.com/

Bamert Seed Company
1897 CR 1018
Muleshoe, TX 79347
(800) 262-9892
email: natives@bamertseed.com
http://www.bamertseed.com/

Browning Seed, Inc.
3101 S. IH 27
Plainview, TX 79072
(800) 243-5271
Fax: (806) 293-9050
email: john@browningseed.com
http://www.browningseed.com/

Central Texas Plant Materials Center
NRCS 3776 FM 1292
Knox City, TX 795290-2514
(940) 658-3922
Fax: (940) 658-3047
http://www.nrcs.usda.gov/wps/portal/
nrcs/main/plantmaterials/pmc/central/

Clyde Robins Seed Company
P.O. Box 411
Santa Clara, CA 84765-0411
(510) 315-6720
Fax: (435) 216-5414
email: sales@clyderobin.com
http://www.clyderobin.com/

Comstock Seed
917 Hwy 88
Gardnerville, NV 89460
(775) 265-0090
Fax: (775) 265-0040
email: sales@comstockseed.com
http://www.comstockseed.com/

Curtis and Curtis, Inc.
4500 N. Prince, Star RT. Box 8A
Clovis, NM 88101
(575) 762-4759
Fax: (575) 763-4213
email: seed@curtisseed.com
http://www.curtisseed.com/

Desert Survivors
1020 W. Starr Pass Blvd.
Tucson, AZ 85713
(520) 791-9309
email: jim@desertsurvivors.org
http://www.desertsurvivors.org/

Flagstaff Native Plant and Seed
400 E. Butler Avenue
Flagstaff, AZ 86001
(928) 773-9406
email: info@nativeplantandseed.com
http://www.nativeplantandseed.com/

Granite Seed Company
490 E. 76th Avenue, Unit A
Denver, CO 80229
(888) 577-5650
Fax: (888) 695-5450
email: tren@graniteseed.com
http://www.graniteseed.com

Hydra Aquatics, Inc.
1614 Escalante Ave., SW
Albuquerque, NM
87104 (505) 249-9139
Fax: (505) 244-8342
http://www.hydraaquatic.com/

Lone Mountain Natives, LLC
14 Cooper Vista Road
Silver City, NM 88061
(575) 538-4345
email: lonemtn@q.com
http://www.lonemountainnatives.com

Mesa Garden
P.O. Box 72
Belen, NM 87002
(505) 864-3131
Fax: (877) 248-2664
email: cactus@swcp.com
http://www.mesagarden.com/

Mistletoe-Carter Wholesale Seeds
780 N. Glen Annie Road
Goleta, CA 93117
(805) 968-4818
Fax: (805) 968-2242
email: sales@mcseeds.com
http://mcseeds.com/

Native American Seed Co./River Run Ranch
4111 N U.S. Highway 377
Junction, TX 76849
(325) 446-4141
info@seedsource.com
http://www.seedsource.com/

Nighthawk Natives Nursery and Wildlands Restoration
2944 N. Castro Avenue
Tucson, AZ 85705
(520) 882-0969
email: garyberni@aol.com

Pawnee Buttes Seed, Inc.
P.O. Box 100
Greeley, CO 80632
(800) 782-5947
Fax: (970) 356-7263
email: info@pawneebuttesseed.com
http://www.pawneebuttesseed.com/

Plants of the Southwest
6680 4th St., NW
Albuquerque, NM 87107
(505) 344-8830
email: plantsofthesouthwest@gmail.com
http://www.plantsofthesouthwest.com/

Rainier Seeds, Inc.
1404 Fourth Street
P.O. Box 1064
Davenport, WA 99122
(800) 828-8873
Fax: (509) 725-7015
email: rainierseeds@rainierseeds.com
http://www.rainierseeds.com/

S & S Seeds
P.O. Box 1275
Carpinteria, CA 93014-1275
(805) 684-0436
Fax: (805) 684-2798
email: info@ssseeds.com
http://www.ssseeds.com/

Sharp Bros. Seed Co.
104 East 4th Street Road
Greeley, CO 80631
(800) 421-4234
Fax: (970) 356-1267
email: info@buffalobrandseed.com
http://www.buffalobrandseed.com/

Southwest Seed
13514 CR 29
Dolores, CO 81323-9356
(970) 565-8722
Fax: (970) 565-2576
http://www.southwestseed.com/

Stevenson Intermountain Seed
P.O. Box 2
Ephraim, UT 84627
(435) 283-6639
Fax: (435) 283-4155
email: sales@siseed.com
http://www.stevensonintermountainseed.com/

Stover Seed Company
P.O. Box 1579
Sun Valley, CA 91353
(800) 621-0315
Fax: (213) 626-4920
email: customer_service@stoverseed.com
http://www.stoverseed.com/

Wildseed Farms
100 Legacy Drive
P.O. Box 3000
Fredericksburg, TX 78624
(800) 848-0078
Fax: (830) 990-8090
email: orders1@wildseedfarms.com
http://www.wildseedfarms.com/

Additional vendors may be available that are more local or supply different species. Visit http://www.rngr.net/resources/directory to search by State, product, or nursery type.

Additional Resources

The Western Hummingbird Partnership (WHP) is a developing network of partners collaborating to build an effective and sustainable hummingbird conservation program: http://www.westernhummingbird.org.

The Native Seed Network is a resource for both the restoration community and the native seed industry, providing powerful search tools and information on all aspects of native seed: http://www.nativeseednetwork.org.

The U.S. North American Bird Conservation Initiative Committee is a forum of government agencies, private organizations, and bird initiatives helping partners across the continent meet their common bird conservation objectives: http://www.nabci-us.org.

eBird is a real-time, online checklist program and a way for the birding community to report and access information about birds: http://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: http://www.partnersinflight.org.

The Pollinator Partnership's mission is to promote the health of pollinators, critical to food and ecosystems, through conservation, education, and research: http://www.pollinator.org.

The Xerces Society is a nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat: http://www.xerces.org.

Golden columbine (*Aquilegia chrysantha*)
Photo by J.S. Peterson, hosted by the
U.S. Department of Agriculture-
Natural Resources Conservation Service
PLANTS Database

References

Arizona Field Ornithologists. 2007. Ruby-throated Hummingbird. http://www.azfo.org/gallery/rthu_patons.html. (22 January 2015).

Arizona Field Ornithologists. 2014. Plain-capped Starthroat Hummingbird. http://www.azfo.org/gallery/2014/html05/PCST_Foothills_Cohen_15_August_2014_635439260262688795.html. (22 January 2015).

Baltosser, W.H.; Scott, P. E. 1996. Costa's Hummingbird (*Calypte costae*), the birds of North America online. Poole, A., Ed. Ithaca: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/251. (8 January 2015).

Baltosser, W. H.; Russell, S.M. 2000. Black-chinned Hummingbird (*Archilochus alexandri*), the birds of North America online. Poole, A., Ed. Ithaca: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/ species/495. (22 January 2015).

Bird Studies Canada and North American Bird Conservation Initiative (NABCI). 2014. NABCI bird conservation regions. http://www.birdscanada.org/research/gislab/index.jsp?targetpg=bcr (9 December 2014).

Calder, W.A.; Calder, L.L. 1994. Calliope Hummingbird (*Selasphorus calliope*), the birds of North America online. Poole, A., Ed. Ithaca: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/135. (8 January 2015).

Camfield, A.F.; Calder, W.A.; Calder, L.L. 2013. Broad-tailed Hummingbird (*Selasphorus platycercus*), the birds of North America online. Poole, A., Ed. Ithaca: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/016. (8 January 2015).

Corman, T.E.; Wise-Gervais, C. 2005. Arizona breeding bird atlas. Albuquerque, NM: University of New Mexico Press. 636 pp.

DeGraaf, R.M.; Scott,V. E.; Hamre, R.H.; Ernst, L.; Anderson, S. H. 1991. Forest and rangeland birds of the United States: natural history and habitat use. Washington, DC: U.S. Department of Agriculture, Forest Service, Agriculture Handbook 688.

eBird. 2012. eBird: An online database of bird distribution and abundance [Web application]. Ithaca, NY: eBird. http://www.ebird.org. (24 December 2015).

Greeney, H.F.; Wethington, S.M. 2009. Proximity to active accipiter nests reduces nest predation of Black-chinned Hummingbirds. The Wilson Journal of Ornithology. 121(4):809-812. http://www.bioone.org/doi/abs/10.1676/08-174.1.

National Audubon Society. 2014. Audubon's birds and climate change report: A primer for practitioners. Contributors: Langham, G.; Schuetz, J.; Soykan, C.; Wilsey, C.; Auer, T.; LeBaron, G; Sanchez, C.; Distler, T. New York, NY: National Audubon Society New York. Version 1.2. http://climate.audubon.org/sites/default/files/Audubon-Birds-Climate-Report-v1.2.pdf. (7 March 2016).

Nature Serve. 2014. Nature Serve Explorer: An online encyclopedia of life [web application]. Version 7.1. http://explorer.natureserve.org. (1 October 2014).

New Mexico Avian Conservation Partners. Species accounts. http://avianconservationpartners-nm.org/bird-conservation-plan-2/chapter-4-species-accounts/. (17 April 2017).

Powers, D.R. 2013. Magnificent Hummingbird (*Eugenes fulgens*), the birds of North America online. Poole, A., Ed. Ithaca, NY: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/221. (8 January 2015).

Powers, D.R.; Wethington, S.M. 1999. Broad-billed Hummingbird (*Cynanthus latirostris*), the birds of North America online. Poole, A., Ed. Ithaca, NY: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/430. (8 January 2015).

The Cornell Lab of Ornithology. 2011. All about birds (Costa's and Broad-billed Hummingbirds). http://www.allaboutbirds.org/Page.aspx?pid=1189. (23 August 2014).

Wethington, S.M. 2002. Violet-crowned Hummingbird (*Amazilia violiceps*), the birds of North America online. Poole, A., Ed. Ithaca, NY: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/688. (12 January 2015).

Williamson, S.L. 2000. Blue-throated Hummingbird (*Lampornis clemenciae*), the birds of North America online. Poole, A., Ed. Ithaca, NY: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/531. (8 January 2015).

Early Morning Moonset
Over the Gila National Forest,
Southwest New Mexico
Courtesy of Karl Malcolm

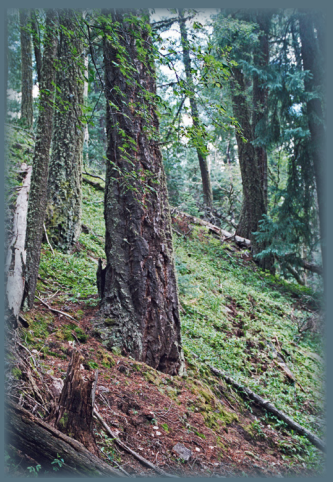
Vista Overlooking Valle Vidal,
Northern New Mexico
Courtesy of Brian Dykstra

Hummingbirds Feeding at Sunset,
Tularosa Basin, New Mexico
Courtesy of Karl Malcolm

Front cover:
Male Broad-billed
Hummingbird
Courtesy of Jim Burns
(www.jimburnsphotos.com)

Mogollon Rim Cactus Bloom
Courtesy of Brady Smith

Male Anna's Hummingbird
Courtesy of Eleanor Briccetti
(www.briccettiphoto.com)



Spruce-Fir Forest,
Northern New Mexico
Courtesy of Phil Tonne

Sunlight Through Smoke,
Mogollon Rim,
Northern Arizona
Courtesy of Brady Smith

Thanks to all the people, in various disciplines, whose dedication and efforts created this document:
Brian Dykstra—Forest Service, Southwestern Region, wildlife program leader
Amanda Rael, Anne Casey, Erin Considine—Forest Service, Southwestern Region, wildlife biologists
Barb Bresson—Forest Service, Pacific Northwest Region, avian conservation program manager
Erik Ackerson—Graphic design, EarthDesign@weavingroom.com