



United States Department of Agriculture

Maintaining and Improving Habitat for Hummingbirds in Kansas and Nebraska



A Land Manager's Guide



Forest Service National Headquarters

**POLLINATOR
PARTNERSHIP**



Introduction

Hummingbirds play an important role in the food web, pollinating a variety of flowering plants, some of which are specifically adapted to pollination by hummingbirds. Some hummingbirds are at risk, like other pollinators, due to habitat loss, changes in the distribution and abundance of nectar plants (which are affected by climate change), the spread of invasive plants, and pesticide use. This guide is intended to help you provide and improve habitat for hummingbirds, as well as other pollinators, in Kansas and Nebraska. 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 Kansas and Nebraska. (See the *Ecoregions in Kansas and Nebraska* section, below.)



Rufous Hummingbird nest
Courtesy of Martin Hutten

This guide also provides brief descriptions of the species that visit Kansas and Nebraska, 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.



Indian Cave State Park and Missouri River, Nebraska
Courtesy of DickClarkMises, Wikimedia Commons

Hummingbird Basics

The hummingbird species of Kansas and Nebraska, the ruby-throated hummingbird, is migratory, generally wintering in southern Mexico and northern Panama and pushing northward and toward the coast for summer breeding. Some have been documented following the Texas coast on their route north, but most cross the Gulf of Mexico. The flight over

the Gulf covers approximately 500 miles and takes between 18 and 22 hours to complete. The migration reaches its northernmost point in late May when the first males arrive in Canada. For this species to thrive, it needs to find suitable habitat all along its migration routes, as well as in its breeding, nesting, and wintering areas. Even small

habitat patches along its migratory path can be critical to the species by providing places for rest and food to fuel its 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 and insects.



Cardinal Flower - *Lobelia cardinalis*
Courtesy of Linnaeus, Wikimedia Commons

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.



Lake Inman, Kansas
Courtesy of Aldenrw, Wikimedia Commons

Hummingbird Species in Kansas and Nebraska

Following is a brief description of the only hummingbird species commonly found in Kansas and Nebraska.



Ruby-throated Hummingbird (*Archilochus colubris*)



Ruby-throated Hummingbird—male
Courtesy of Hugh Vandervoort

RANGE—Ruby-throated Hummingbirds are the only hummingbirds that breed in eastern North America, including southern Canada from Newfoundland to just west of the Alberta-British Columbia border. They occur regularly in 38 eastern states but only rarely as vagrants in the western U.S. By mid-October nearly all ruby-throats migrate to central Mexico or Central America as far south as western Panama, returning to Gulf Coast states as early as February before dispersing northward. Migration routes are not well-understood; some ruby-throats have been observed in trans-Gulf migration, but

it is likely others migrate overland through Mexico. Ruby-throated Hummingbirds show remarkable site fidelity; banded individuals have been captured in the same nesting areas for as many as nine years, and recent studies have shown similar site fidelity on the species' wintering grounds in Costa Rica and Belize.

Ruby-throated Hummingbirds occur in BCR 19, BCR 20, BCR 21, BCR 22, BCR 24, BCR 25, BCR 36, and BCR 37 in Kansas and Nebraska. (See the Bird Conservation Regions section, below.) Ruby-throated Hummingbirds are common summer breeders in eastern Texas and eastern Oklahoma, becoming less common towards the central parts of each state. They are common migrants through the central parts of each state, becoming less common to the west and absent in the westernmost parts.

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



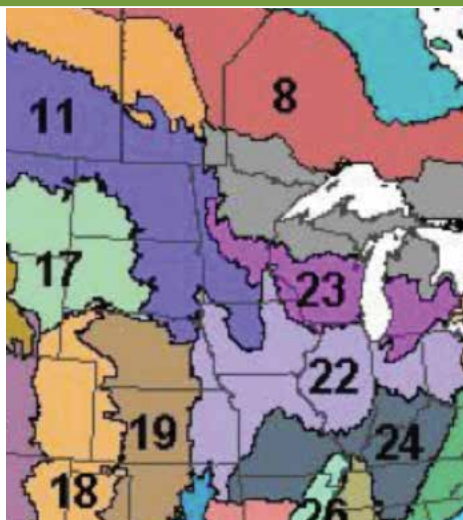
Ruby-throated Hummingbird—female
Courtesy of Hugh Vandervoort

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

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

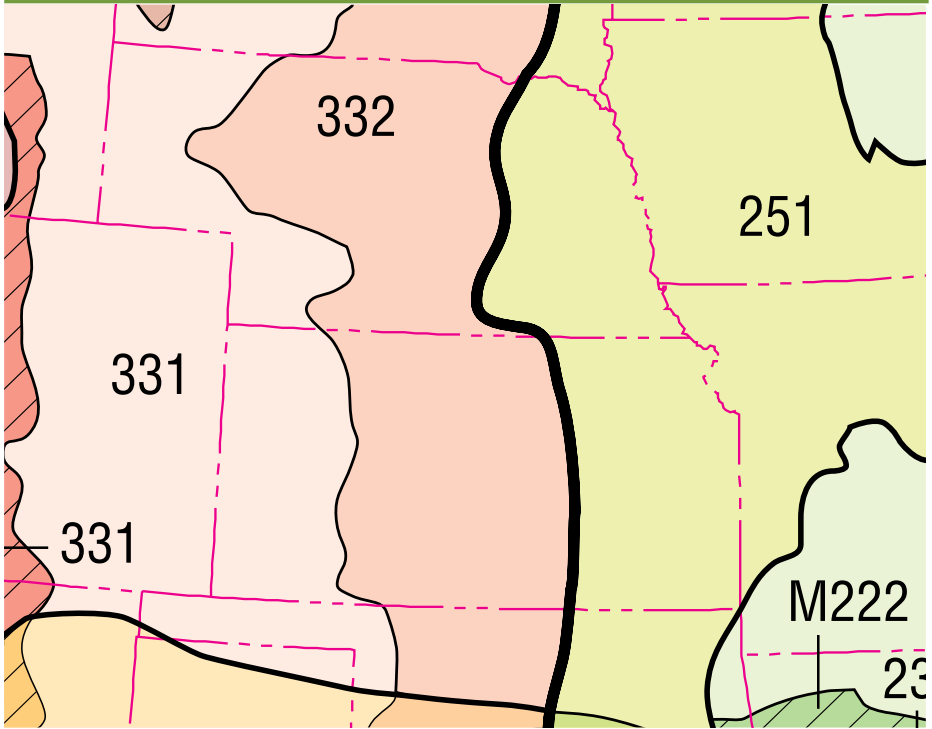
Bird Conservation Regions in Kansas and Nebraska

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 Kansas and Nebraska, Prairie Potholes (BCR 11), Badlands and Prairies (BCR 17), the Shortgrass Prairie (BCR 18), the Central Mixed-grass Prairie (BCR 19), the Eastern Tallgrass Prairie (BCR 22), are shown on the map (above).

Ecoregions in Kansas and Nebraska



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

(251) Prairie Parkland (Temperate) Province – lies within BCR 11, BCR 19, and BCR 22

(331) Great Plains-Palouse Dry Steppe Province – lies within BCR 17, BCR 18, and BCR 19

(332) Great Plains Steppe Province – lies within BCR 11, BCR 17, and BCR 19

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 Kansas and Nebraska

The following table (*Hummingbird Nectar Plants for Ecoregions in Kansas and Nebraska*) lists some plants that are nectar sources for hummingbirds. These plants are native to Kansas and Nebraska, 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 November 2016. 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 Kansas and Nebraska, and select plant materials from your zone. Planting non-natives to attract hummingbirds is against policy and destructive: these plants can become invasive and disrupt ecosystems. For example, yellow toadflax (*Linaria vulgaris*, also called “butter and eggs”) is attractive to hummingbirds but is a noxious weed.



Yellow Toadflax
Courtesy of Colorado State
University Extension—Adams County



Wildflower bloom
Courtesy of Marguerite Meyer

Hummingbird Nectar Plants for Ecoregions in Kansas and Nebraska

Botanical Name	Common Name	Ecoregions ¹		
		251	331	332
Trees and Shrubs				
<i>Berberis</i> spp.	Oregon grape	X	X	X
<i>Ceanothus</i> spp.	Ceanothus	X	X	X
<i>Chilopsis linearis</i>	Desert Willow	X	X	X
<i>Cylindropuntia imbricata</i>	Tree Cholla		X	X
<i>Mahonia repens</i>	Creeping Barberry		X	
<i>Ribes</i> spp.	Currants (various species)	X	X	X
* <i>Ribes aureum</i>	Golden Currant	X	X	X
<i>Ribes cereum</i>	Squaw Currant		X	
<i>Rosa woodsii</i>	Woods' Rose	X	X	X
<i>Salvia</i> spp.	Various salvias	X	X	X
<i>Salvia azurea</i> var. <i>grandiflora</i>	Blue Sage	X	X	X
<i>Symphoricarpos albus</i>	Common Snowberry		X	X
<i>Symphoricarpos occidentalis</i>	Western Snowberry	X	X	X
Perennial Herbs				
<i>Aquilegia canadensis</i>	Wild Columbine	X	X	X
<i>Asclepias incarnata</i>	Swamp Milkweed	X	X	X
<i>Asclepias speciosa</i>	Showy Milkweed	X	X	X
<i>Asclepias tuberosa</i>	Milkweed, butterfly weed	X		X
<i>Astragalus canadensis</i>	Canadian Milkvetch	X	X	X
<i>Campanula rotundifolia</i>	Bluebell Bellflower	X	X	X

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed ² Sources
Mar–May	Part shade to shade	Moist, well drained, acid loams	Relatively dry to moist rocky sites in open coniferous forests, and forested slopes from 400 to 2,100 m.	WNS
Apr–Aug	Sun, part shade, shade	Dry, rocky, well-drained soils	Dry, open flats and slopes, often at higher elevation (3,000 to 9,500 ft.)	GPN, HNO, PL, PN, SS
Apr–Sep	Sun	Dry, well drained	Desert washes	PS
May–June	sun	dry, sandy or gravelly	deserts, mesas	
May–Jul	Partial shade	Dry to moist, well drained	Dry, open woods & hills at high elevations	PS
Jan–May				GPN, PS, WNS
Apr–May	Sun to partial shade	Dry to moist	Moist to drier hillsides & river valleys	PS
Apr–Jul	Sun to partial shade	Dry to moist, rocky to sandy	Pine forests; wood openings; dry slopes & ridges	PS
late spring	Partial sun	Moist	Understory of dry and moist forest communities, sagebrush, chaparral, pinyon-juniper	PS, SS
				BN, PN, SS, VVN
Sep–Nov	sun to part shade	well drained, dry	Dry prairies & openings	BN, GG, HNO, KNP, PL, PS, SS, SSF, VVN
May–Jun	Sun to shade	Wet to moist	Wooded hillsides; rocky, open slopes	GPN, PN
Jun–Aug	Partial shade	Moist, well drained	Dry, rocky hillsides; sand plains; prairies; open woods	GPN
Apr–Jul	Partial shade, shade	Sandy, well drained	Calcareous, shaded woodlands	BN, GG, HNO, KNP, PL, PN, VVN
Jun–Oct	Sun to partial shade	Moist	Grows in prairies, open woods, canyons, and hillsides	BN, GG, HNO, KNP, PL, PN, SS, SSF, VVN, WNS
May–Sep	Sun	Dry to moist	Savannahs, prairies, road-sides, old fields, and meadows	PL, PN, PS, SSF, VVN
May–Jul	Sun to partial shade	Dry	Wet Meadow, Prairie, Field, Riparian, Swamp, Marsh	BN, GG, HNO, KNP, PL, PN, PS, SS, SSF, VVN
May–Jul	Sun to partial shade	Moist to wet	Moist to dry prairies; stream banks; open woods	KNP, PL, SS, SSF
Jun–Sep	Sun to shade	Dry, well drained	Moist, rocky, montane slopes; dry meadows & prairies; open woods; limy cliffs; beaches	BN, PL, PN, WNS

Hummingbird Nectar Plants for Ecoregions in Kansas and Nebraska...continued

Botanical Name	Common Name	Ecoregions ¹		
		251	331	332
<i>*Castilleja</i> spp.	Various Castilleja	X	X	X
<i>Castilleja coccinea</i>		X		
<i>Castilleja purpurea</i> var <i>citrina</i>	Prairie Paintbrush	X		X
<i>Chamerion angustifolium</i>	Fireweed		X	
<i>Cleome serrulata</i>	Rocky Mountain bee plant	X	X	X
<i>*Delphinium nuttallianum</i>	Twolobe Larkspur		X	
<i>Erysimum capitatum</i>	Wallflower	X	X	X
<i>Geranium viscosissimum</i>	Sticky Geranium	X	X	X
<i>Hibiscus lasiocarpus</i>	Rose-Mallow	X	X	X
<i>Iris missouriensis</i>	Western Blue Flag		X	
<i>Lilium michiganense</i>	Michigan Lily	X		
<i>Lilium philadelphicum</i>	Wood Lily		X	X
<i>Lobelia cardinalis</i>	Cardinalflower	X	X	X
<i>Mimulus glabratus</i>	Yellow Monkeyflower	X	X	X
<i>Mimulus guttatus</i>	Seep Monkeyflower	X	X	X
<i>Mimulus ringens</i>	Allegany Monkeyflower	X	X	X
<i>Monarda fistulosa</i>	Wild Bergamot	X	X	X
<i>Oenothera elata</i>	Evening Primrose		X	X
<i>Penstemon</i> spp.	Various Penstemons	X	X	X
<i>Monarda citriodora</i>	Horsemint	X	X	X
<i>Penstemon albidus</i>	White Penstemon	X	X	X
<i>Penstemon angustifolius</i>	Broadleaf Penstemon	X	X	X
<i>Penstemon buckleyi</i>	Buckley's Penstemon		X	X
<i>Penstemon grandiflorus</i>	Large Penstemon	X	X	X
<i>Verbena stricta</i>	Hoary Verbain	X	X	X

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed ² Sources
				PS, WNS
	May-Jul	damp sandy soils	Moist to dry prairies; meadows; roadsides	HNO
May-Jul	sun	Gravelly and sandy calcareous soil	Gravelly and sandy calcareous grasslands	
Jul-Sep	Sun	Moist to dry	Disturbed soil in cool areas, burned areas	PS
Jul-Sep	Sun, part shade	Well-drained, sandy soils	Prairies, open woods, wash areas, disturbed sites	PS, SS, SSF, WNS
Mar-Jul	Sun	Dry, well drained	Dry foothills, valleys & sagebrush deserts	
Mar-Jul	Sun	Dry, well drained	Plains; foothills; high elevation coniferous forests	
May-Sep	Sun to partial shade	Dry, well drained	Foothills, canyons, open woodlands to montane environments	WNS
Apr-Sep	Sun	Wet	Borders of sloughs, ponds & ditches; low, wet woods	
May-Jul	Sun to partial sun	Moist to wet	Marshes; wet meadows	PS
Jul-Aug	Partial shade	Moist	Prairies	
Jul-Aug	Sun to shade	Well-drained, humus-rich soils	Woodland openings, prairies	
Jun-Aug	Shade to sun	Wet to moist	Depressions, Woodlands edge, Opening, Stream banks	BN, GG, HNO, KNP, PN, PS, SS
Jun-Aug	Sun	Wet, rich	Marshes, springs	
Apr-Jul		Moist to wet	Stream banks; wet places to 10,000	PS
Jun-Aug	Sun	Moist	Wet meadows and streambanks	PL, PN, SS
May-Sept	Sun to partial shade	Well drained, moist, sandy, loamy, clay	Dry open woods, fields, wet meadows and ditches	GG, HNO, KNP, PN, PS, SS, SSF, VVN
Jun-Sep	Sun	Moist	Sandy stream banks; low, marshy areas	BN, PL, PS, SS, SSF
Mar-Aug				BN, GG, HNO, KNP, PL, PN, PS, SS, SSF, WNS
May-Jul	sun, part shade	sandy loam to rocky, dry	Prairie, Plains, Meadows, Pastures, Savannahs, Hillsides, Slopes	HNO, SS, SSF
Apr-Jun	sun	sandy well drained soil	Gravelly or sandy grasslands	
May-Jun	sun	Sandy, light loam	Prairies; sand hills	PS, WNS
Apr-May	sun	deep sandy soil	Sand dunes; high plains	
May-Jun	sun	sandy soils	dry praires	BN, KNP, PL, PS, SS, SSF, WNS
Jul-Sep	sun	dry, sandy	Fields; prairies	GG, HNO, KNP, PN, SS, SSF

Hummingbird Nectar Plants for Ecoregions in Kansas and Nebraska...continued

Botanical Name	Common Name	Ecoregions ¹		
		251	331	332
<i>Verbena hastata</i>	Swamp Verbena	X	X	X
<i>Delphinium tricornes</i>	Dwarf Larkspur	X		
<i>Dicentra cucullaria</i>	Dutchman's breeches	X		
<i>lupinus argenteus</i>	Silvery Lupine		X	
<i>Penstemon cobaea</i>	Prairie Penstemon	X	X	X
<i>Phlox</i> spp.	Phlox	X	X	X
Vines				
<i>Campsis radicans</i>	Trumpet Vine or Creeper	X		X
<i>Clematis ligusticifolia</i>	Western Virgin's Bower	X	X	X
<i>Lonicera dioica</i>	Limber Honeysuckle	X		X

*Hummingbird adapted or preferred nectar sources - indicated with purple highlight

¹ Ecoregions:

251 = Prairie Parkland (Temperate) Province

331 = Great Plains-Palouse Dry Steppe Province

332 = Great Plains Steppe Province

Bloom Season	Sunlight	Soils, Water	General habitat/ elevation	Seed ² Sources
Jun-Sep	sun to shade	moist, wet	Moist prairies; damp thickets	HNO, KNP, PN, SS, SSF, VVN
Apr-May	part shade	rich, moist	Moist woods; stream banks; wet thickets	HNO
Apr-May	Sun to shade	humus-rich acid to neutral	Rich or rocky, deciduous woods & ravines	
Jun-Jul	sun to shade	dry, rocky	Stream valleys; dry roadsides; rocky prairies; open pine woods	PS
Apr-May	sun to part shade	dry, sandy rocky, loamy or clay soils	Sandy or rocky, open hillsides; limestone outcrops	HNO, KNP, PL
Mar-Jun	Sun to partial shade	Dry		BN, GG, KNP, PL, PN, SS, SSF, VVN
Jul-Sep	Sun to partial shade	Moist, well drained	Trees of moist woods or along fence rows in old fields	BN
May-Aug	Sun to partial sun	Moist	Woods along streams; moist, brushy coulees	
May-Jun	Sun to shade	Dry to moist	Open woods, woodland edges & thickets	

² Seed Sources:

BN = Bluebird Nursery

GG = Grimm's Gardens

GPN = Great Plains Nursery

HNO = Hamilton Native Outpost

KNP = Kansas Native Plants

PL = Prairie Legacy

PN = Prairie Nursery

PS = Plants of the Southwest

SS = Star Seed

SSF = Stock Seed Farms

VVN = Vinland Valley Nursery

WNS = Western Native Seed

Directory of Seed and Plant Sources

Bluebird Nursery Inc.
519 Bryan Street, Clarkson, NE 68629
(800) 356-9164
sales@bluebirdnursery.com
www.bluebirdnursery.com

Great Plains Nursery
3074 County Road i,
Weston, NE 68070,USA
(402) 540-4801
info@greatplainsnursery.com
www.greatplainsnursery.com

Grimm's Gardens
2991 Goldfinch Rd
Hiawatha, KS 66434
(785) 459-2586|
www.grimmgardens.com

Hamilton Native Outpost
16786 Brown Rd., Elk Creek, MO 65646
417-967-2190
natives@hamiltonnativeoutpost.com
www.hamiltonnativeoutpost.com

Kansas Native Plants
6800 SW Fountaindale Road
Topeka, KS 66614
(785) 806 6917
www.kansasnativeplants.com

Plants of the Southwest
Agua Fria Rt. 6 Box 11-A
Santa Fe, NM 87501
(800) 788-7333
plantsofthesouthwest@gmail.com
www.plantsofthesouthwest.com

Prairie Legacy Inc.
3910 S 32 Place, Lincoln, NE 68502
(402) 310-8167
info@prairielegacyinc.com
www.prairielegacyinc.com

Prairie Nursery Inc.
P.O. Box 306
Westfield, WI 53964
(800) 476-9453
www.prairienursery.com

Star Seeds Inc.
PO Box 228, 101 Industrial Ave.
Osborne, KS 67473
(800) 782-7311
www.gostarseed.com

Stock Seed Farms Inc.
28008 Mill Road
Murdock, NE 68407
(402) 867-3771
www.stockseed.com

Vinland Valley Nursery
1606 N 600th Rd
Baldwin City, KS 66006
(785) 594-2966
www.vinlandvalleynursery.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

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



Rufous Hummingbird
Courtesy of Scott Carpenter

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Editors

Christopher Clark, Ph.D., UC Riverside
Evan Cole, Pollinator Partnership
David Rankin, UC Riverside
Laurie Davies Adams, Pollinator Partnership
Isaac Lisle, Pollinator Partnership

Please send feedback to
info@pollinator.org

Front cover image

Top: William C. Gladish

Back cover images

Top: Sandra Restrepo-Denkens
Bottom: David Inouye

Graphic Design

Erik Ackerson
EarthDesign@weavingroom.com

Marguerite Meyer
www.MargueriteMeyer.com



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