USDA United States Department of Agriculture

Maintaining and Improving Habitat for Hummingbirds in the Eastern United States

Forest Service National Headquarters

POLLINATOR PARTNERSHIP

Introduction

Black-chinned hummingbird nesting
Courtesy of Zion National Park
Wikimedia Commons

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 the Eastern U.S. 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 the Eastern U.S. (See the *Ecoregions in the Eastern U.S.* section, below.)

This guide also provides brief descriptions of the species that visit the Eastern U.S., 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.

Fall in the Ozarks, Northwest Arkansas
Courtesy of Roger Chavers, Wikimedia Commons

Hummingbird Basics

The hummingbird species of the Eastern U.S., 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.

Ruby-throated hummingbird drinking nectar from scarlet beebalm - *Monarda didyma*
Courtesy of Joe Schneid 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.

Candace Lake in the Finger Lakes, New York.
Courtesy of VisitFingerLakes Wikimedia Commons

Hummingbird Species in the Eastern U.S.

Following is a brief description of the only hummingbird species commonly found in the Eastern U.S.

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 the Eastern U.S. (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.

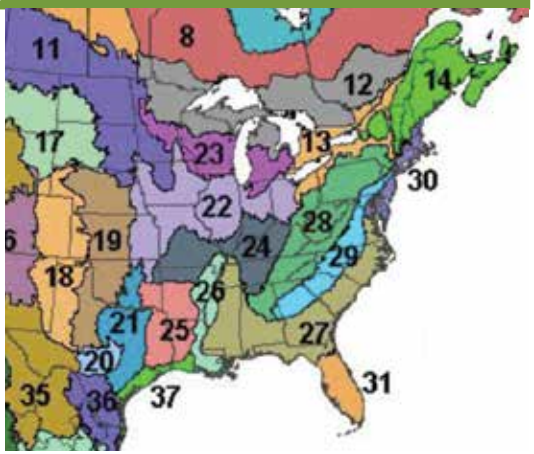
APPEARANCE— The adult male Ruby-throated Hummingbird's bright metallic

Ruby-throated Hummingbird—female
Courtesy of Hugh Vandervoort

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 the Eastern U.S.

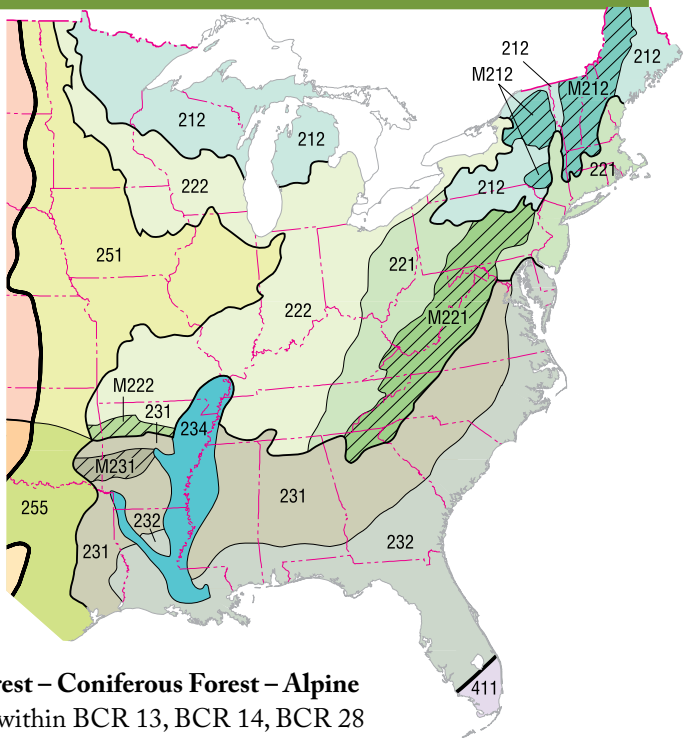


The United States North American Bird Conservation Initiative Committee is a coalition of government agencies, private organizations, and bird initiatives in the United States. The committee is working to ensure the long-term health of North America's native bird populations. Bird conservation initiatives 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 ten BCRs in the Eastern U.S., the Shortgrass Prairie (BCR 18), the Central Mixedgrass Prairie (BCR 19), Edwards Plateau (BCR 20), Oaks and Prairies (BCR 21), the Eastern Tallgrass Prairie (BCR 22), the Central Hardwoods (BCR 24), the West Gulf Coastal Plain/Ouachitas (BCR 25), the Chihuahuan Desert (BCR 35), the Tamaulipan Brushlands (BCR 36), and the Gulf Coastal Prairie (BCR 37), are shown on the map (above).

Ecoregions in the Eastern U.S.

Land within the Eastern U.S. lies within thirteen ecoregions (see below–codes in parentheses), which are shown on the map: *Ecoregions in the Eastern U.S.*. The ecoregion boundaries differ from those of the BCRs and their relationship is as below.



(212) Laurentian Mixed Forest Province – lies within BCR 12, BCR 13, BCR 14, BCR 28

(M212) Adirondack – New England Mixed Forest – Coniferous Forest – Alpine Meadow Province – lies within BCR 13, BCR 14, BCR 28

(221) Eastern Broadleaf Forest (Oceanic) Province – lies within BCR 13, BCR 14, BCR 28, BCR 29, BCR 30

(M221) Central Appalachian Broadleaf Forest – Coniferous Forest – Meadow Province – lies within BCR 28, BCR 29

(222) Eastern Broadleaf Forest (Continental) Province – lies within BCR 11, BCR 13, BCR 22, BCR 23, BCR 24, BCR 27

(M222) Ozark Broadleaf Forest – Meadow Province – lies within BCR 24, BCR 25

(231) Southeastern Mixed Forest Province – lies within BCR 25, BCR 27, BCR 28, BCR 29, BCR 37

(M231) Ouachita Mixed Forest – Meadow Province – lies within BCR 25

(232) Outer Coastal Plain Mixed Forest Province – lies within BCR 25, BCR 27, BCR 30BCR 31, BCR 37

(234) Lower Mississippi Riverine Forest Province – lies within BCR 25, BCR 26

(251) Prairie Parkland (Temperate) Province – lies within BCR 11, BCR 19, BCR 21, BCR 22, BCR 23

(411) Everglades Province – lies within BCR 31

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 the Eastern U. S.

Yellow Toadflax
Courtesy of Colorado State University Extension–Adams County

The following table (*Hummingbird Nectar Plants for Ecoregions in the Eastern U.S.*) lists some plants that are nectar sources for hummingbirds. These plants are native to The Eastern U.S., 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 the Eastern U.S., 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.

Hummingbird Nectar Plants for Ecoregions in the Eastern U.S.

Botanical Name	Common Name	Ecoregions[1]								
		212	M212	221	M221	222	M222	231	M231	232
Trees and Shrubs										
Aesculus pavia	Red Buckeye					X		X		X
Arctostaphylos spp.	Manzanita (various species)	X	X	X	X	X				X
Arctostaphylos uva-ursi	Kinnikinnick	X	X	X	X	X				X
Ceanothus spp.	Ceanothus	X	X	X	X	X	X	X	X	X
Mahonia aquifolium	Oregon Grape	X		X		X				
Mahonia repens	Creeping Barberry	X		X		X				
Ribes spp.	Currants (various species)	X	X	X	X	X		X	X	X
*Ribes aureum	Golden Currant	X	X	X	X	X				
Rosa woodsii	Woods' Rose	X				X				
Rubus parviflorus	Thimbleberry	X		X		X				
Salvia spp.	Various salvias	X	X	X	X	X	X	X	X	X
Sambucus racemosa	Red Elderberry	X	X	X	X	X				
Symphoricarpos albus	Common Snowberry	X	X	X	X	X				
Sesbania drummondii	Rattlebush							X		X
Hamelia patens	Scarletbush									X
Andromeda polifolia	Bog Rosemary	X	X	X		X				
Hibiscus moscheutos	Marshmallow hibiscus			X	X	X	X	X	X	X
Hibiscus laevis	Halberdleaf hibiscus					X	X	X	X	X
Rhododendron calendulaceum	Flame Azalea			X	X			X		

234	251	411	Bloom Season	Sun-light	Soils, Water	General habitat/ elevation	Seed Sources[2]
X			Mar-May	part shade	moist, well drained	woods, along streams, in thickets, and on rocky hills	CF, CN, EC, GBR, MWF, SH, WF, WRN
	X		Dec-May	Sun	Dry		SH
	X		Mar-Jun	Sun to shade	Dry to moist, rocky or sandy, acid soils	Rocky, open woods; dry, sandy hills; mountainous regions	SH
X	X		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.)	EC, ES, GBR, HSN, MM, MWF, OZ, SH
			Mar-May	Partial shade to shade	Moist to dry, well drained acid loam	Deep, conifer forests; open, rocky woods	SH
			May-Jul	Partial shade	Dry to moist, well drained	Dry, open woods & hills at high elevations	SH
	X		Jan-May				EC, OZ, SH
	X		Apr-May	Sun to partial shade	Dry to moist	Moist to drier hillsides & river valleys	SH
	X		late spring	Partial sun	Moist	Understory of dry and moist forest communities, sagebrush, chaparral, pinyon-junpier	SH
			May-Aug	Sun to shade	Rocky	Open, wooded hillsides; stream banks; canyons	
X	X	X					EC, GOV, SH, SLNN, TWF
	X		May-Jun	Sun to partial shade	Moist	Woodland, savannah, wet meadow/prairie/field, riparian	MWF, SH
	X		May-Jun	Sun to shade	Wet to moist	Wooded hillsides; rocky, open slopes	SH
X			Jun-Sep	sun	moist wetland soil	edges of lakes, ponds and streams and wet meadows	
		X	Jan-Dec	sun	fertile to sandy	Hammocks; coastal dunes; shell middens	AL, CF, SLNN
			May-Jun	part shade	Organic peats, sands and mucks	acid bogs	
X		X	Jul-Sep	sun to part shade	moist, slightly acidic	Swampy forests; wet meadows; marshes	CPCN, HSN, OPN, SH
X	X		May-Nov	sun to shade	moist	Marshes	CN, CPCN, TWF
			May-Jun	part shade	well drained, dry to moist	Dry, rocky, mountain woods; heath balds	GBR, SH

Botanical Name	Common Name	Ecoregions[1]								
		212	M212	221	M221	222	M222	231	M231	232
Rhododendron canescens	Southern pinxterflower			X		X		X		X
Rhododendron catawbiense	Catawba rosebay			X	X			X		
Rhododendron periclymenoides	Pink Azalea	X		X	X	X		X		X
Kalmia polifolia	Bog laurel	X	X	X		X				
Kalmia angustifolia	Sheep Laurel	X	X	X						
Kalmia latifolia	Mountain Laurel	X	X	X	X	X		X	X	
Lonicera flava	Yellow Honeysuckle				X	X	X	X		
Lonicera hirsuta	Hairy Honeysuckle	X	X	X						
Lonicera reticulata	Grape Honeysuckle					X				
Lonicera canadensis	American Fly Honeysuckle	X	X	X	X	X				
Symphoricarpos occidentalis	Western Snowberry	X		X	X	X				
Perennial Herbs										
Aquilegia canadensis	Wild Columbine	X	X	X	X	X	X	X		X
Asclepias incarnata	Swamp Milkweed	X	X	X	X	X		X		X
Asclepias speciosa	Showy Milkweed	X				X				
Asclepias tuberosa	Milkweed, butterfly weed	X	X	X	X	X	X	X	X	X
Astragalus canadensis	Canadian Milkvetch	X	X	X	X	X	X	X	X	X

234	251	411	Bloom Season	Sun-light	Soils, Water	General habitat/ elevation	Seed Sources[2]
			Mar-May	part shade	moist to dry, well drained, acidic	Acid bogs	CF, GBR, GOV, SH, WF
			Apr-Jun	shade	acidic	Mountain woods; rocky slopes	EC, GBR, SH
			May-May	part shade	wet, well drained, acidic	Moist to dry woods; bogs	CN, GBR, SH
			Jun-Jul	part shade	Wet/organic to dry/ sterile soils	Wet or dry pastures & thickets; swamp & bog borders; wooded stream banks	SH
			Jul-Jul	part shade	Cool, moist rocky or sandy soils	Wet to dry woods & pastures; cool meadows & slopes	CN, GBR, SH, WF
			May-Jun	sun, part shade	dry to moist	Savanna and Woodland	
			May-Jun	sun, part shade	dry to moist, sandy	Woodland,Forest Edge,Swamp/ Marsh,Lakeshores	
	X		May-Jun	sun, part shade	mseic, loamy or sandy	rocky upland woodlands, thinly woody bluffs, wooded slopes, riverbanks, savannahs	
			May-Jun	sun to shade	moist	Woodland,Swamp/ Marsh,Bog/Fen	
	X		Jun-Aug	Partial shade	Moist, well drained	Dry, rocky hillsides; sand plains; prairies; open woods	SH
X	X		Apr-Jul	Partial shade, shade	Sandy, well drained	Calcareous, shaded woodlands	ASC, CF, CN, EC, GBR, HSN, MM, MWF, OZ, RSR, SFG, SMNN, WF
X	X	X	Jun-Oct	Sun to partial shade	Moist	Grows in prairies, open woods, canyons, and hillsides	ASC, CPCN, EC, ES, GBR, HSN, MM, MWF, OPN, OZ, SH, SMNN, TWF, WF
	X		May-Sep	Sun	Dry to moist	Savannahs, prairies, road-sides, old fields, and meadows	
X	X	X	May-Jul	Sun to partial shade	Dry	Wet Meadow, Prairie, Field, Riparian, Swamp, Marsh	ASC, CF, CN, EC, ES, GBR, HSN, MM, MWF, OPN, OZ, RSR, SFG, SH, SMNN, TWF, WF, WRN
X	X		May-Jul	Sun to partial shade	Moist to wet	Moist to dry prairies; stream banks; open woods	ASC, OPN

Hummingbird Nectar Plants for Ecoregions in the Eastern U.S....continued

Botanical Name	Common Name	Ecoregions[1]								
		212	M212	221	M221	222	M222	231	M231	232
Campanula rotundifolia	Bluebell Bellflower	X	X	X	X	X				
**Castilleja* spp.	Various Castilleja	X	X	X	X	X	X	X		X
Castilleja purpurea	Prairie Paintbrush					X		X		
Castilleja coccinea	scarlet paintbrush	X		X		X		X		
Chamerion angustifolium	Fireweed	X	X	X	X	X				
Cleome serrulata	Rocky Mountain bee plant	X		X		X				
Erythrina herbacea	Coralbean							X		X
Erysimum capitatum	Wallflower	X			X	X		X		
Hibiscus lasiocarpos	Rose-Mallow			X	X	X	X	X	X	X
Iris missouriensis	Western Blue Flag					X				
Lilium michiganense	Michigan Lily	X		X		X		X	X	
Lilium canadense	Canada Lily	X	X	X	X	X		X		
Lobelia cardinalis	Cardinalflower	X	X	X	X	X	X	X	X	X
Lobelia kalmii	Kalm's Lobelia	X	X	X	X	X				
Mertensia paniculata	Tall Bluebells	X		X		X				
Mertensia virginica	Virginia bluebells	X	X	X	X	X	X	X	X	X
Mimulus glabratus	Yellow Monkeyflower	X				X				
Mimulus guttatus	Seep Monkeyflower	X	X	X						
Mimulus ringens	Allegany Monkeyflower	X	X	X	X	X		X		X
Monarda citriodora	Horsemint					X		X		X

234	251	411	Bloom Season	Sun-light	Soils, Water	General habitat/ elevation	Seed Sources[2]
	X		Jun-Sep	Sun to shade	Dry, well drained	Moist, rocky, montane slopes; dry meadows & prairies; open woods; limey cliffs; beaches	GBR, HSN, MM, MWF
X	X						
			May-Jul	sun	Gravelly and sandy calcareous soil	Gravelly and sandy calcareous grasslands	
X			May-Jul	damp sandy soils	Moist to dry prairies; meadows; roadsides		MWF
	X		Jul-Sep	Sun	Moist to dry	Disturbed soil in cool areas, burned areas	
	X		Jul–Sep	Sun, part shade	Well-drained, sandy soils	Prairies, open woods, wash areas, disturbed sites	
X		X	Mar-Oct	sun, part shade	dry, sandy	Open, sandy woods & clearings of the coastal plains	CF
	X		Mar-Jul	Sun	Dry, well drained	Plains; foothills; high elevation coniferous forests	
X	X	X	Apr-Sep	Sun	Wet	Borders of sloughs, ponds & ditches; low, wet woods	MWF, OZ
			May-Jul	Sun to partial sun	Moist to wet	Marshes; wet meadows	
X	X		Jul-Aug	Partial shade	Moist	Prairies	ASC, HSN, MWF
			Jun-Jul	sun	moist to wet	cool moist, organic	
X	X		Jun-Aug	Shade to sun	Wet to moist	Depressions, Woodlands edge, Opening, Stream banks	ASC, CN, CPCN, EC, ES, GBR, HSN, MM, MWF, OPN, OZ, RSR, SFG, SH, SMNN, TWF, WF, WRN
	X		Jul-Oct	Shade	Wet areas	Streams and lake shores	
	X		May-Sep	Shade	Moist	Moist wooded or meadow areas	
	X		Mar-Jun	shade to part shade	moist, rich sometimes rocky	Moist woods & clearings; river bottoms	EC, MWF, OPN, OZ, SFG
	X		Jun-Aug	Sun	Wet, rich	Marshes, springs	
			Apr-Jul		Moist to wet	Stream banks; wet places to 10,000	SH
X	X		Jun-Aug	Sun	Moist	Wet meadows and streambanks	ASC, ES, GBR, HSN, MM, MWF, OPN, SH, SMNN, TWF
X			May-Jul	sun, part shade	sandy loam to rocky, dry	Prairie, Plains, Meadows, Pastures, Savannahs, Hillsides, Slopes	OPN

Hummingbird Nectar Plants for Ecoregions in the Eastern U.S....continued

Botanical Name	Common Name	Ecoregions[1]								
		212	M212	221	M221	222	M222	231	M231	232
Monarda didyma	Scarlet Beebalm	X	X	X	X	X				
Monarda fistulosa	Wild Bergamot	X	X	X	X	X	X	X	X	X
Penstemon spp.	Various Penstemons	X	X	X	X	X	X	X	X	X
**Penstemon barbatus*	Beardlip Penstemon			X						
Penstemon australis	Slender Penstemon							X		X
Penstemon laxiflorus	Nodding Penstemon							x	X	X
Penstemon hirsutus	Hairy Penstemon	X	X	X	X	X	X			
Penstemon pallidus	Pale Penstemon	X		X	X	X	X	X		X
Penstemon laevigatus	Eastern Smooth Penstemon			X	X	X		X		X
Verbena stricta	Hoary Verbain	X				X				
Verbena hastata	Swamp Verbena	X	X	X	X	X		X		X
Delphinium tricorne	Dwarf Larkspur			X	X	X	X	X	X	
Salvia coccinea	Scarlet Sage									X
Salvia azurea	Blue Sage							X		X
Dicentra canadensis	Squirrle Corn	X		X	X	X		X	X	
Dicentra eximia	Turkey Corn				X					
Dicentra cucullaria	Dutchman's breeches	X	X	X	X	X	X	X	X	X
Lupinus perennis	Sundial Lupine	X	X	X	X	X				X
Pedicularis canadensis	Wood Betony	X	X	X	X	X	X	X	X	X
Hibiscus coccineus	Scarlet Rosemallow									X

234	251	411	Bloom Season	Sun-light	Soils, Water	General habitat/ elevation	Seed Sources[2]
			May-Oct	sun to part shade	Rich moist acidic soils	Moist, open woods; meadows; stream banks; mountains to 6500 feet	CN, EC, GBR, MM, WRN
X	X		May-Sept	Sun to partial shade	Well drained, moist, sandy, loamy, clay	Dry open woods, fields, wet meadows and ditches	ASC, CN, ES, GBR, HSN, MM, MWF, OPN, OZ, RSR, SH, SMNN, TWF, WF
X	X	X	Mar-Aug				ASC, CN, ES, GBR, MM, MWF, OPN, OZ, RSR, SFG, SH, SMNN, TWF, WRN
			May-Jul	Full sun to partial shade	Well drained, mineral	Semi-desert, foothills. Woodlands, openings	
			Apr-Jul	part shade	dry, sandy thin soils	Dry pinelands; thin, upland woods; sand hills; dry, fallow fields	
X			Mar-Jun	part shade	dry acidic soils	sandy open woods and prairies	
			Jun-Jul	sun to shade	thin, well drained	Dry woods; rocky fields; bluffs	ES
			Apr-Jun	sun	clay, loamy, sandy, rocky	rocky woodlands, hill prairies, savannahs, rocky cliffs	ASC, MM, MWF, TWF
			May-Jul	sun to part shade	rich organic	rich woods and fields	
	X		Jul-Sep	sun	dry, sandy	Fields; prairies	ASC, ES, GBR, HSN, MM, SMNN
	X		Jun-Sep	sun to shade	moist, wet	Moist prairies; damp thickets	ASC, ES, GBR, HSN, MM, MWF, OPN, SH, TWF
	X		Apr-May	part shade	rich, mosit	Moist woods; stream banks; wet thickets	GBR, SFG
		X	Feb-Oct	Sun to shade	dry to moist	Thickets, chaparral, in open woods and edges	ALPF, SH, SLNN
X		X	Sep-Nov	sun to part shade	well drained, dry	Dry prairies & openings	MWF, OZ
	X		Apr-May	part shade	rich, moist	Open, deciduous woods	EC, SFG
			Mar-Oct	shade, part shade	Moist, humus-rich, acid, rocky soils	moist rich woodlands	SFG, SH
	X		Apr-May	Sun to shade	humus-rich acid to neutral	Rich or rocky, deciduous woods & ravines	CN, GBR, MM, OZ, SFG
	X		Apr-Jul	sun to part shade	sandy, well drained	Sand hills & clearings; open woods	ASC, ES, GBR, HSN, MM, OPN, SH
	X		Apr-May	shade	medium water use	Woods and clearings	ASC, HSN
		X	Jul-Sep	sun	wet	Swamp, marshes & ditches of the coastal plain	AL, CF, CN, WF

Hummingbird Nectar Plants for Ecoregions in the Eastern U.S....continued

Botanical Name	Common Name	Ecoregions[1]								
		212	M212	221	M221	222	M222	231	M231	232
Physostegia virginiana	Fall Obedient Plant	X	X	X	X	X	X	X	X	X
Silene virginica	Fire Pink			X	X	X	X	X	X	X
Silene regia	Royal Catchfly					X				
Heuchera richardsoni	Prairie Alumroot	X		X						
Heuchera americana	American Alumroot			X	X	X		X		X
Agastache scrophulariifolia	Purple giant hyssop	X	X		X	X				
Ipomopsis rubra	Standing Cypress							X		X
Phlox spp.	Phlox	X	X	X	X	X	X	X	X	X
Vines										
Campsis radicans	Trumpet Vine or Creeper	X	X	X	X	X	X	X	X	X
Clematis ligusticifolia	Western Virgin's Bower			X						
Lonicera dioica	Limber Honeysuckle	X	X	X	X	X	X	X	X	
**Lonicera involucrata*	Twinberry Honeysuckle	X								
Bignonia capreolata	Cross Vine			X		X	X	X	X	X
Lonicera sempervirens	Coral Honeysuckle	X	X	X	X	X	X	X	X	X

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

[1] Ecoregions:

212 = Laurentian Mixed Forest Province
M212 = Adirondack – New England Mixed Forest – Coniferous Forest – Alpine Meadow Province
221 = Eastern Broadleaf Forest (Oceanic) Province
M221 = Central Appalachian Broadleaf Forest – Coniferous Forest – Meadow Province
222 = Eastern Broadleaf Forest (Continental) Province
M222 = Ozark Broadleaf Forest – Meadow Province
231 = Southeastern Mixed Forest Province
M231 = Ouachita Mixed Forest – Meadow Province
232 = Outer Coastal Plain Mixed Forest Province
234 = Lower Mississippi Riverine Forest Province
251 = Prairie Parkland (Temperate) Province
411 = Everglades Province

234	251	411	Bloom Season	Sun-light	Soils, Water	General habitat/ elevation	Seed Sources[2]
X	X		Aug-Nov	Sun to shade	moist, humus rich	River banks; wet thickets; prairies	ASC, EC, ES, MM, OPN, RSR, TWF
	X		Apr-Aug	part shade	well drained, rocky, poor soils	Open, moist or dry woods; rocky slopes	GBR, MM, MWF, OZ, SFG
	X		May-Sep	part shade	dry, rocky	Rocky prairies; open woods; rocky glades	MM, MWF, OPN, OZ, SMNN
	X		Apr-Jun	sun to part shade	dry, sandy or gravelly	Dry, rocky woods; prairies; hillsides; clearings	ASC, MM, MWF
	X		Mar-Aug	part shade to shade	well drained, humus-rich, acidic	Rich woods; rock outcrops	CN, GBR
	X		Jul-Sep	sun to shade	rich, moist	Rich woods & thickets	SMNN, TWF
			May-Jul	sun, part shade	sandy or rocky, well drained	Dry, sandy or rocky fields; open woods	
X	X	X	Mar-Jun	Sun to partial shade	Dry		ASC, CF, CN, ES, EC, GBR, GOV, HSN, MM, MWF, RSR, SFG, SH, SMNN, WF, WRN
X	X		Jul-Sep	Sun to partial shade	Moist, well drained	Trees of moist woods or along fence rows in old fields	CF, SH, TWF, WRN
			May-Aug	Sun to partial sun	Moist	Woods along streams; moist, brushy coulees	SH
	X		May-Jun	Sun to shade	Dry to moist	Open woods, woodland edges & thickets	
			Mar–Aug	Sun to shade	Generally moist soils	Moist or wet, open woods from 0 to 10,000 ft.	
X			Mar-May	sun, part shade	Moist, well-drained, acidic or calcareous soils	Forested floodplains and uplands, hammocks, fencerows, limestone escarpments	GOV
X	X	X	Mar-Jun	sun, part shade	well drained, rich	woodlands	AL, CF, CN, EC, GBR, GOV, OZ, SFG, WRN

[2] Seed Sources:

AL = Alexander Landscaping & Plant Farm
ASC = Allendan Seed Company
CF = Chiappini Farm Native Nursery
CN = Cure Nursery
CPCN = Coastal Plain Conservation Nursery
EC = E.C. Browns' Nursery, Inc.
ES = Earthsource, Inc.
GBR – Gardens of the Blue Ridge
GOV – Gardens Oy Vey
HSN = Hidden Savanna Nursery
MM = M&M Greenhouse and Gifts
MWN = Missouri Wildflower Nursery
OPN = Ohio Prairie Nursery
OZ = Ozark Native Plants
RSR = Rock Spring Restorations
SFG = Sunshine Farm and Gardens
SH = Sheffield's Seed Co., Inc.
SLNN = Silent Native Nursery
SMNN = Simply Native Nursery
TWF = Toadshade Wildflower Farm
WF = Willis Farm
WRN = White River Nursery

(212) Laurentian Mixed Forest Province

M&M Greenhouse and Gifts
55915 Little Island Rd., Barnes, WI 54873
(715)795-2100, alston@cheqnet.net
http://mmgreenhouse.com/

Sheffield's Seed Co., Inc.
269 State Route 34, Locke, NY 13092
(315)497-1058, seed@sheffields.com
https://www.sheffields.com

(M212) Adirondack – New England Mixed Forest – Coniferous Forest – Alpine Meadow Province

E.C. Browns' Nursery, Inc.
3782 Route 113, Thetford Center, VT 05075
(802)785-2167, info@ecbrownsnursery.com
http://www.ecbrownsnursery.biz/

(221) Eastern Broadleaf Forest (Oceanic) Province

Ohio Prairie Nursery
PO Box 174, Hiram, OH 44234
(866)569-3380
http://www.ohioprairienursery.com/

Toadshade Wildflower Farm
53 Everittstown Rd., Frenchtown, NJ 08825
(908)996-7500, toadshade@toadshade.com
http://www.toadshade.com/

(M221) Central Appalachian Broadleaf Forest – Coniferous Forest – Meadow Province

Gardens of the Blue Ridge
PO Box 10, Pineola, NC 28662
(828)733-2417
contact@gardensoftheblueridge.com
http://www.gardensoftheblueridge.com/

Sunshine Farm and Gardens
696 Glicks Rd., Renick, WV 24966
(304)497-2208, barry@sunfarm.com
http://www.sunfarm.com/

(222) Eastern Broadleaf Forest (Continental) Province

Earthsource, Inc.
14921 Hand Rd., Ft. Wayne, IN 46818
(260)489-8511, http://www.earthsourceinc.net/

Hidden Savannah Nursery
18 N Van Kal St., Kalamazoo, MI 49009
(269)352-3876, info@hiddensavanna.com
http://www.hiddensavanna.com/

Missouri Wildflowers Nursery
9814 Pleasant Hill Rd., Jefferson City, MO 65109
(573)496-3492, http://mowildflowers.net/

(M222) Ozark Broadleaf Forest – Meadow Province

Ozark Native Plants
PO Box 201, St. Paul, AR 72760
jean@ozarknativeplants.com
http://www.ozarknativeplants.com/

White River Nursery
5635 East Huntsville Rd.
Fayetteville, AR 72701, (479)442-2061
info@whiterivernursery.com
http://www.whiterivernursery.com/

(231) Southeastern Mixed Forest Province

Cure Nursery
880 Buteo Ridge, Pittsboro, NC 27312
(919)542-6186, curenursery@mindspring.com
http://www.curenursery.com/

Rock Spring Restorations
12 Paces West Drive, NW
Atlanta, GA 30327, (404)626-8020
http://rockspringrestorations.com/

(232) Outer Coastal Plain Mixed Forest Province

Chiappini Farm Native Nursery
150 Chiappini Farm Rd.
Hawthorne, FL 32640, (800)293-5413
dchiapin@atlantic.net

Coastal Plain Conservation Nursery
812 Drummonds Point Rd.
Edenton, NC 27932
(252)482-4987, team@wetlandplantsinc.com
http://www.coastalplainnursery.com/

(234) Lower Mississippi Riverine Forest Province

Gardens Oy Vey
4655 Chester Rd., Arlington, TN 38002
wolfgang@gardensoyvey.com
http://www.gardensoyvey.com/

Willis Farm
3100 Herren Rd., Doyline, LA 71023
(318)210-4507, willisfarmnursery@gmail.com
http://www.willisfarm.net/

(251) Prairie Parkland (Temperate) Province

Allendan Seed Company
1966 175th Ln., Winterset, IA 50273
(515)462-4084, allendan@allendanseed.com
http://www.allendanseed.com/

Simply Native Nursery
681 St. Hwy 135, Alexis, IL 61412
(309)371-9598
http://www.simplynativenursery.com/

(411) Everglades Province

Alexander Landscaping & Plant Farm
830 South Flamingo Rd., Davie, FL 33325
(954)472-5039, alexfarm@comcast.net
http://www.alexfarm.com/

Silent Native Nursery
16265 SW 210 Terrace, Miami, FL 33187
(305)975-9081, silentnative@gmail.com
http://silentnativenursery.com/

The list of seed sources on page 18 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

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, www.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. www.fs.fed.us/rm/ecoregions/images/maps/ecoregions-united-states-sample.jpg

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