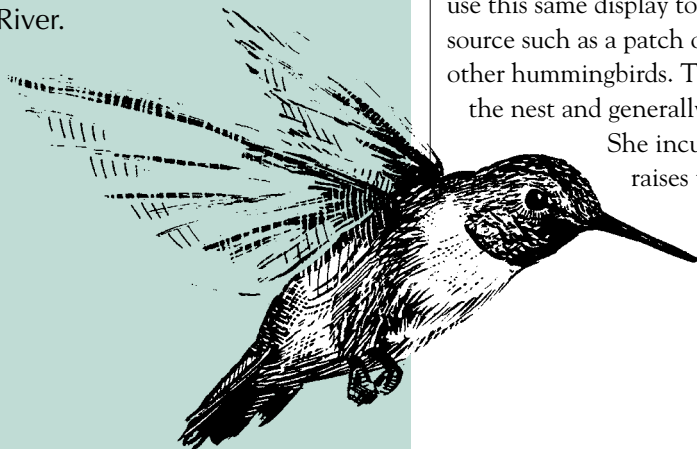




## Attracting Hummingbirds

With the approach of summer, it is time to welcome Pennsylvania's smallest bird, the ruby-throated hummingbird. Named for the humming sound made by their wings in flight, these birds are renowned for their small size, amazing energetic feats, and iridescent beauty.

More than 330 species of hummingbirds live in North and South America. Most live in the tropics. Sixteen hummingbird species occur on a regular basis in the United States, but only the ruby-throated hummingbird is found east of the Mississippi River.



### General Biology

The ruby-throated hummingbird is only 3 to 4 inches long and weighs less than 0.2 ounce. Each fall it migrates from the eastern United States to Mexico and Central America. The birds fly nonstop 600 miles across the Gulf of Mexico during migration. They return in the spring and move northward, following the blooming of early season flowering plants, such as azaleas, rhododendrons, and columbine. They arrive in Alabama by late March; Washington, D.C., by mid-April; Pennsylvania by mid-April to early May; and farther north in New England by May. They stay in the Northeast until September, when they migrate back to Central America.

Hummingbirds are promiscuous: one male mates with more than one female. Males perform a pendulum-like aerial display to attract females. The birds will often use this same display to defend a food source such as a patch of flowers from other hummingbirds. The female builds the nest and generally lays two eggs.

She incubates the eggs and raises the young without assistance from the male.

### Habitat Requirements

During the breeding season, ruby-throated hummingbirds are found in deciduous and mixed deciduous-coniferous forests, woodland clearings and edges, parks, and suburban gardens. They often are found near water. They prefer areas where they can find nectar-bearing flowers, with trees and shrubs nearby for shelter and perching.

### Cover

Hummingbirds build their tiny nests on the small limbs of trees or shrubs, usually 5 to 20 feet above the ground. Most nests are sheltered from above by overhanging leaves and branches. Usually there is no cover below the nest, and nests often are located above water, a trail, or other open area. Females return each year to the same area to nest, sometimes reusing their old nests. New nests may be located in the same tree as in previous years or in a nearby tree. Many tree species are used, but hummingbirds appear to prefer rough-barked trees and those covered with lichens rather than smooth-barked species.



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## Food

Hummingbirds are specially adapted for eating nectar from flowers. They have long beaks and long tongues for consuming the nectar. The tiny birds can maneuver easily around flowers because they fly backward as well as forward and can hover in midair. This hovering ability makes it easy for them to feed from flowers.

Hummingbirds get nectar from plants, and plants get pollinated by hummingbirds. When the birds feed from flowers, they brush against them, and the pollen sticks to their heads and throats. As they go to the next flower to feed, they transfer some of the pollen to that flower. While bees and other insects also pollinate plants in this way, some plants have evolved so that hummingbirds are their main pollinators. Such flowers tend to have petals joined into long tubes and long stamens (the part of the plant that holds the pollen). Stamens are arranged in such a way as to brush against the hummingbird when it feeds on the nectar.

Hummingbirds lack a well-developed sense of smell and are drawn to flowers by their color instead of their scent. Preferred hummingbird flowers are red, orange, and pink, but the birds eat nectar from flowers of most colors. At least 19 species of native plants in the northeastern United States are pollinated primarily by hummingbirds. These include spotted touch-me-not, trumpet vine, cardinal flower, fly honeysuckle, trumpet honeysuckle, fire pink, columbine, and wild bergamot. Hummingbirds also assist in pollinating many other native, introduced, and cultivated species.

Along with nectar from flowers, hummingbirds eat insects (off flowers and those caught in the air), spiders, and occasionally sap from trees, especially from woodpecker drilling holes. Hummingbirds

also consume sugar-water solutions from bird feeders.

## Water

Hummingbirds get most of the water they require from the nectar they eat. They also drink water from leaf surfaces after rains. Hummingbirds use water for bathing and particularly like to bathe by flying through a fine mist. A device that creates a misting fountain within a bird bath can be found at many garden supply stores.

## Management Practices

The factor that most often determines whether hummingbirds are found in a particular area is the availability of food. By planting sources of food and providing bird feeders, you can supplement local food supplies for hummingbirds.

### Plant Sources of Food

Flowering herbs, shrubs, vines, and trees provide additional food for hummingbirds and attract them to specific areas. Your plantings should include a variety of plants that flower from May through early September. This will ensure food is available throughout the time hummingbirds are present. Hummingbirds are attracted to large clusters of flowers, so group the plantings so that they are conspicuous to the birds. Many species of flowering plants attract hummingbirds. Some are listed in the adjacent table. In general, the flowers most attractive to hummingbirds are red, orange, or pink and tubular in shape. When planning your plantings, consider using native plant species rather than species introduced from other parts of the country or world.

### Provide a Hummingbird Feeder

Once you have established your hummingbird garden, a great way to attract the birds to a specific location is to

provide a hummingbird feeder. These are not traditional bird feeders but designed to dispense a sugar-water solution. See the box on page 5 for more information. Place the feeders near large clusters of flowers early in the season, so that hummingbirds are easily drawn to them. Once the birds come to your feeder, you can move the feeder, gradually, to almost any location, such as in sight of a window for better viewing. The hummingbirds will find the feeder once they are attracted to an area.

### Minimize the Use of Pesticides

Hummingbirds eat insects in addition to nectar and sugar water. Pesticides reduce the number of insects available for hummingbirds to eat. Herbicides may kill plants that produce flowers from which hummingbirds feed. Birds may also be susceptible to the chemicals themselves. Therefore, pesticide use should be minimized.

### Protect Hummingbirds from Cats

Cats are a favorite pet in many a home, but if allowed to roam outside they kill many wildlife species—including hummingbirds. It is best to keep your cat indoors at all times to keep it from killing local wildlife. If you do allow your cat outside, place hummingbird feeders in open areas and high enough to be out of cats' reach.

## Sources of Additional Information

Additional information on hummingbirds is available from:

The Hummingbird Society  
800-529-3699  
[www.hummingbirdsociety.org](http://www.hummingbirdsociety.org)

## Some Plants that Attract Hummingbirds

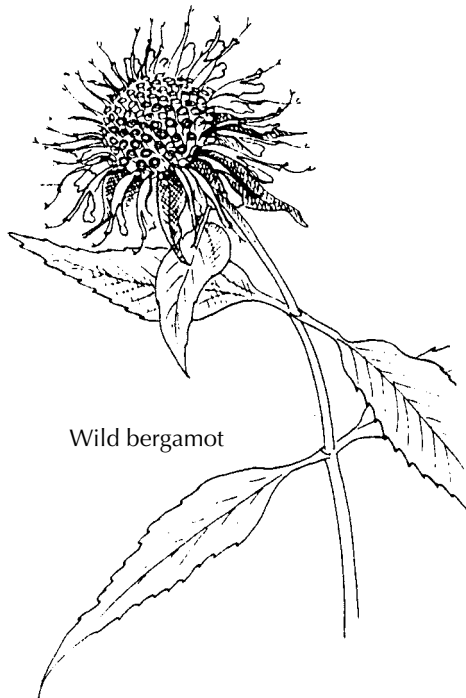
Common Name	Type	Status	Height	Sun	Soil	Blooming
<b>HERBACEOUS PLANTS</b>						
Bergamot, bee balm	P	N C	1–5 ft	FS–PS	moist	early to mid
Blazing star	P	N C	1–4 ft	FS–PS	dry to moist	mid to late
Bleeding heart	P	N C	1–2 ft	S	moist, rich	early to mid
Butterfly weed	P	N C	to 3 ft	FS	dry, sandy	mid to late
Cardinal flower	P	N C	2–5 ft	FS–PS	moist	late
Columbine	P	N C	1–3 ft	FS–PS	rocky, well-drained	early to mid
Coral bells	P V	E C	1 ft	PS	moist, well-drained	mid to late
Dahlia	A P	C	2 ft	FS–PS	rich, well-drained	mid to late
Delphinium	P	C	to 4 ft	FS–PS	rich, well-drained	mid to late
Fire pink	P	N C	1–2 ft	FS–PS	well-drained	early
Fireweed	P	N	4 ft	FS–PS	dry to moist	mid to late
Four-o'clock	A	C	1–3 ft	FS	tolerates dry soil	mid to late
Foxglove	P B	C E	2 ft	FS–PS	rich	mid to late
Fuchsia	A	C	hanging	PS	moist	mid to late
Geranium	A P	C	to 2 ft	FS–PS	dry to moist	mid to late
Gladiolus	A	C	3 ft	FS	fertile	mid to late
Hollyhock	P	C	4–6 ft	FS	dry to moist	mid to late
Hosta	P	C	2 ft	PS	dry to moist	mid to late
Impatiens	A	C	1 ft	FS–PS	moist	mid to late
Jewelweed (touch-me-not)	A	N	1–3 ft	PS–S	moist	mid
Lily	A P	C	to 3 ft	FS–PS	well-drained	mid to late
Nasturtium	A	C	1 ft	FS	tolerates dry, infertile soils	mid to late
Painted cup (Indian paintbrush)	P	N	1–2 ft	FS	moist	mid
Penstemon (beard-tongue)	P	C	1–3 ft	FS–PS	acidic	mid to late
Petunia	A	C	to 1 ft	FS–PS	loamy	mid to late
Phlox	A	N C	1 ft	FS–PS	average to moist	early to mid
Scarlet sage	A	C	to 3 ft	PS	fertile	mid to late
Snapdragon	A	C	1–3 ft	FS–PS	rich, slightly alkaline	mid to late
Spider flower (cleome)	A	C	to 5 ft	FS	dry	mid to late
Sweet William	A B	C	1–2 ft	FS–PS	well-drained	early to mid
Turk's cap lily	P	N C	3–8 ft	FS–PS	wet	mid to late
Verbena	A	C	to 2 ft	FS	dry to moist	mid to late
Virginia bluebell	P	N C	1–2 ft	S	rich, moist	early
Zinnia	A	C	to 3 ft	FS	dry to moist	mid to late
<b>VINES</b>						
Morning glory	A V	C	to 10 ft	FS	dry to moist	mid to late
Scarlet runner bean	A V	C	to 10 ft	FS–PS	dry to moist	mid to late
Trumpet creeper	P V	E C	to 30 ft	FS	rich	mid
Trumpet honeysuckle	P V	N C	to 20 ft	FS–PS	well-drained	mid

Common Name	Type	Status	Height	Sun	Soil	Blooming
<b>SHRUBS</b>						
Azalea	S	N C	to 9 ft	PS	rich, acidic, well-drained	early
Coralberry	S	N	to 3 ft	FS-PS	dry to moist	mid to late
Lilac	S	C	to 15 ft	FS	dry to moist, acidic, well-drained	early to mid
Weigela	S	C	to 9 ft	FS-PS	well-drained	early
<b>TREES</b>						
Apple	T	C	10-20 ft	FS	rich, well-drained	early
Eastern redbud	T S	N	to 35 ft	FS-PS	moist, well-drained	early
Flowering crabapple	T	N C	10-20 ft	FS	rich, well-drained	early
Hawthorn	T S	N C	to 25 ft	FS	tolerant	early
Horse chestnut	T	C	to 75 ft	FS	moist, well-drained	early
Northern catalpa	T	E C	to 75 ft	FS-PS	tolerant	early
Tulip poplar	T	N	to 100 ft	FS-S	well-drained to moist	early

Type: A = annual, B = biennial, P = perennial, V = vine, S = shrub, T = tree

Status: N = native to Pennsylvania, E = escaped from cultivation, C = cultivated

Sun: FS = full sun, PS = partial sun, S = shade



Wild bergamot

Illustration by Rae Chambers



Hawthorn

Illustration by Rae Chambers



Trumpet creeper

Illustration by Jeffery Mathison

## Hummingbird Feeders

You can attract hummingbirds by using feeders that dispense sugar water. Hummingbird feeders generally consist of a plastic or glass storage bottle with red “flowers” encircling the feeding openings. A number of commercial designs are available. Select a feeder that is easy to clean and that will store enough nectar for three to four days. Nectar left in feeders for a longer time will go bad.

Hummingbird “nectar” is made by mixing one part sugar to four parts water. Bring water to a boil and pour over sugar. Stir solution and let cool to room temperature before pouring into the feeder. Extra nectar may be stored in the refrigerator. Weaker sugar solutions will be less attractive to hummingbirds, and stronger solutions may be harmful. Never make the solution from honey, because fermented honey can cause a fatal fungal disease in hummingbirds. It is unnecessary to add red dye to the solution since hummingbirds are attracted to the red coloring of the feeder. If your feeder does not have red on it, you can use red nail polish to paint the color near the openings. Commercial “nectar” mixes are available but are no better than those you make yourself.

### Placement

Place feeders close to plantings of hummingbird flowers and in

a location where you can watch the feeder. Hummingbirds are very aggressive at feeders. If a number of birds are fighting over one feeder, set up an additional feeder away from the first one.

### Timing

Feeders should be placed outside as soon as the first flowers come out in spring, because hummingbirds follow the blooming flowers north in their spring migration. Leave the feeders out until September, when the birds leave Pennsylvania to migrate to Central America for the winter.

A concern that feeders keep hummingbirds from migrating and hold them in northern areas has proved to be unfounded. The primary clue hummingbirds use to migrate is change in day length. Therefore, feeders can be kept up until birds quit using them. Generally, you can take them down when

they have not been used for a week or more.

### Maintenance

Replace the sugar solution every three to five days and clean the feeder before adding a new supply. Wash the feeder thoroughly with soap; you can use a weak bleach solution to sterilize the feeder. Vinegar may be used to clean feeders too. Just be sure to rinse thoroughly with hot water to get rid of the vinegar. Remove the plastic flowers and scrub inside them with a small brush. Make sure to rinse all parts thoroughly before refilling with sugar solution.

Feeders may attract bees, yellow jackets, wasps, hornets, ants, or other unwanted species. Some feeders have “bee guards” on the openings. These allow a hummingbird’s long bill and tongue to reach the sugar solution but prevent bees or other flying insects from reaching it. Bee guards are not foolproof, because hummingbirds often splash sugar water on them, but they do help cut down the bee problem if you clean the feeder regularly. You can also put cooking oil, petroleum jelly, or mineral oil on the outside of the feeder around the feeding holes, and on the wire from which the feeder is suspended. This makes it more difficult for ants, bees, and other insects to land or walk near the feeder openings. Again, this method is not foolproof, but it will reduce insect problems.





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**Illustrations**

Illustrations on pages 1 and 5  
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