



Habitats

A Fact Sheet Series on Managing Lands for Wildlife

Understanding Ruby-Throated Hummingbirds and Enhancing Their Habitat in Maine

Bulletin #7152

Introduction

Many people enjoy seeing ruby-throated hummingbirds and want to learn how to attract them to their yards. This fact sheet offers information on how rubythroats live and behave as well as what they need in their habitat to survive and thrive. You will gain a deeper understanding of the hummingbird behaviors you see, along with a greater enjoyment of sharing your habitat with hummingbirds. Suggestions are provided on managing your backyard habitat to benefit hummingbirds, including landscaping tips and a list of nectar food plants.

Hummingbirds in the World

All hummingbirds, about three hundred and twenty species, live in the Western Hemisphere. Most species live their entire lives in South America, while others live exclusively in Central America or the Caribbean.

A few species, about sixteen, regularly migrate to North America. With a few exceptions, these species come only to breed. One of these, the ruby-throated hummingbird (*Archilochus colubris*) migrates to breeding habitats primarily east of the Rocky Mountains, from the Gulf of Mexico to southern Canada. It is the only species

that nests east of the Mississippi River and is the only hummingbird that is regularly seen in Maine. There are records of rufous hummingbirds in Maine but these are unusual.

What Do Rubythroats Look Like?

Ruby-throated hummingbirds are the smallest birds in northeastern North America. They are about three and a half inches in length and weigh about one tenth of an ounce—less than a penny weighs. Their long needle-like bill and buzzing flight make them easy to identify.



These tiny birds are a metallic green above and grayish or brownish white below. The color of the rubythroats' feathers is due, not to pigment, but to crystalline structures that refract sunlight. Adult males have a bright red throat and a forked tail. Immature males do not have ruby throats. Females have blunt tails with white tips on the outer tail feathers. Females and juvenile males look very similar.

Biology

When you see a rubythroat in flight, the wings are usually a blur of movement. During regular flight, female rubythroats beat their wings about 53 times per second and males beat their wings about 70 times per second. Compare this to 4.3 for the European starling and 4.9 for the American goldfinch.

Rubythroats can fly in any direction: they are the only birds that can fly backwards! The number of wing beats varies depending on the maneuver: forward, backward, up, down or hover. During some display behaviors, rubythroats may beat their wings up to 200 times per second. Their wings can move in any direction because a hummingbird's

wing has no movable joints except the one at the shoulder. Other birds have several movable joints in their wings.

At their normal metabolic rate, rubythroats would starve to death in a few hours without food. When food sources are scarce, as well as during cool spells, hummingbirds can enter a state of torpor to conserve energy.

Rubythroats can achieve a speed of more than 50 miles per hour, and even more when flying with the wind. Typical speeds for house sparrows and barn swallows are 17 and 20 miles per hour, respectively. All birds generally fly faster when migrating, and of course, when fleeing predators.

Flight is an essential part of rubythroats' foraging behavior because they hover in front of flowers as they drink nectar and pick off insects. They require lots of energy to keep their wings going and have a very high metabolic rate. Compared to other birds, proportionately, hummingbirds have the largest heart, about 2.4 percent of their body weight.

To support their energy requirements, rubythroats must feed almost constantly during the day, at least every ten minutes. Each feeding lasts about 30 to 60 seconds. They feed at nectar sources not by sucking, but by licking three times each second. The rubythroat's tongue is grooved and forked. The nectar moves up the tongue by capillary action (the same action by which water rises within plant roots) and is then swallowed.

Did You Know?

- Rubythroats' pectoral (breast) muscles make up 25% of their body weight. In humans' it is just 5%.
- Rubythroats' hearts beat more than 600 times per minute, and during great exertion may beat 1200 times per minute. The average for birds is 200 and for humans is 72.
- Rubythroats at rest take about 250 breaths per minute. Wild turkeys take about 7 and humans take about 12.



At their normal metabolic rate, rubythroats would starve to death in a few hours without food. When food sources are scarce, as well as during cool spells, hummingbirds can enter a state of torpor to conserve energy. In torpor, their metabolism slows and uses less energy. Their body temperature drops, and their heart rate slows to about 50 beats per minute. Even their breathing becomes irregular and there are short intervals when they stop breathing. Rubythroats can be in a state of torpor for as much as eight to 14 hours. When they emerge from torpor, an hour may pass before their heartbeat and breathing are back to normal. Their body temperature must rise back to at least 86 degrees F before they can fly. Torpor allows hummingbirds to survive food shortages and severe weather. However, incubating females usually do not go into torpor because they need to keep their eggs warm.

Rubythroats have a voice, although they do not sing. Squeaks, twitters and grating notes are used in a variety of situations, such as when a hummingbird discovers an intruder in its territory. They also make sounds with their wings or tails, and often it is unclear whether sounds are vocal or not. Once you identify a sound as a rubythroat sound, it will alert you to their presence in your yard.

The Annual Cycle

Spring

Sometime between late February and early April, ruby-throated hummingbirds leave their winter range in Mexico and Central America and begin traveling north. They move during daylight. Males and females migrate separately, and usually each individual flies alone. Males arrive in Maine in early May. Females arrive a week or two later. The usual first arrival date in Maine is May 1, but this varies from year to year.



A yellow-bellied sapsucker

Few plants are blooming when rubythroats first appear here, so nectar, their primary food, is scarce. During this period, they feed on tree sap oozing from rows of small holes – known as sap wells – drilled into trees by yellow-bellied sapsuckers, who tap fruit trees, white birches, and other trees for food. The sap from these wells also feeds small mammals and insects. Chemically similar to floral nectar, the sap contains sucrose and amino acids and provides food for hummingbirds until flowers they can use begin blooming. Small insects attracted to the sap are also an important food source for rubythroats.

Sapsuckers and rubythroats have a commensal feeding relationship, in which one species benefits and neither species suffers. Some experts consider the possibility that rubythroats' northerly range depends on the sapsuckers' range, rather than the distribution of nectar flowers.



Summer

Many bird species form a pair bond at least for the breeding season, and a few species mate for life. This is not so with ruby-throated hummingbirds. Males and females associate only during courtship. A male may mate with several females. Each female makes her nest and raises her young alone.

Hummingbirds are extremely territorial about food sources and nest sites. Human observers often have difficulty distinguishing aggressive behaviors from courtship displays. Similar behaviors may serve either purpose, depending on the situation. When we create good hummingbird habitat, we can observe many of these behaviors in our yards.

Males aggressively protect a territory of about

a quarter acre that contains nectar sources and a perch or two. They chase out other rubythroats, and sometimes large insects such as bumblebees, wasps and sphinx moths. As the season progresses, they shift their territory to an area with new nectar.

Sometimes female hummingbirds are territorial about food sources, and like males, chase intruders away. Because of their behavior in protecting food sources, it is fairly unusual to see two hummingbirds spending time together unless it is during courtship, a mother and her young, or perhaps two fledglings that have just ended their dependence on their mother.

Each female protects a territory immediately around her nest, which is usually outside the male's

Aggression or Courtship?

The most commonly observed courtship display involves a female sitting still, sometimes on a low branch or on the ground, while a male flies in a pendulum arc pattern in front of her (figure 1). A buzzing sound may come from the male's wings and tail and he may also make squeaking sounds. The center of the arc is the lowest point near the ground, and the two sides may rise anywhere from three to 40 feet. Males also perform this display with other males as an aggressive behavior.

Another display consists of the vertical flight, up and down, of two hummingbirds, male or female, facing each other, accompanied by twittering sounds (figure 2). Sometimes one bird is at the highest point while the other is at the lowest point. When one of the birds is male and the other female, it may be a courtship behavior. Both male and female rubythroats also perform a short back-and-forth horizontal flight; this may be courtship or aggression, depending on the circumstance (figure 3).

Either sex may spread its tail while making a buzzing or a twittering sound (figure 4). This sometimes is incorporated into the vertical or horizontal flight displays. Again, the situation determines whether it is aggression or courtship.

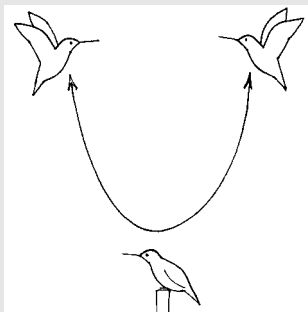


Figure 1

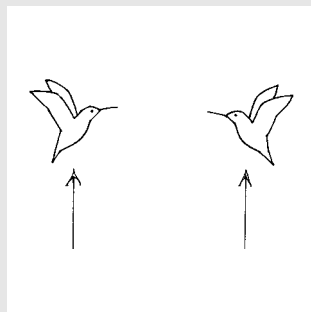


Figure 2

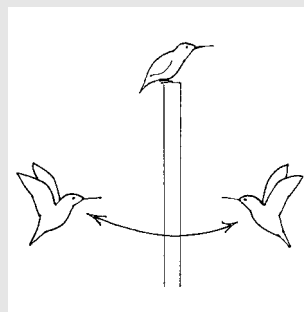


Figure 3



Figure 4



territory. She may chase any species or size of bird in defense of the nest and her young. She takes from one to ten days to build a nest. Sometimes a new nest is built on top of the remains of an old nest; or an old nest is refurbished and reused. Nests may be located in trees such as maple, beech, birch, hornbeam or hemlock. Shrubs, such as sumac, witch hazel, northern arrowwood viburnum, and winterberry are also likely nest sites. Rubythroats appear to prefer nest sites in trees or shrubs with rough bark that is covered with lichen. Nests are usually located at heights of 16 to 23 feet, but can be found between two and 50 feet.

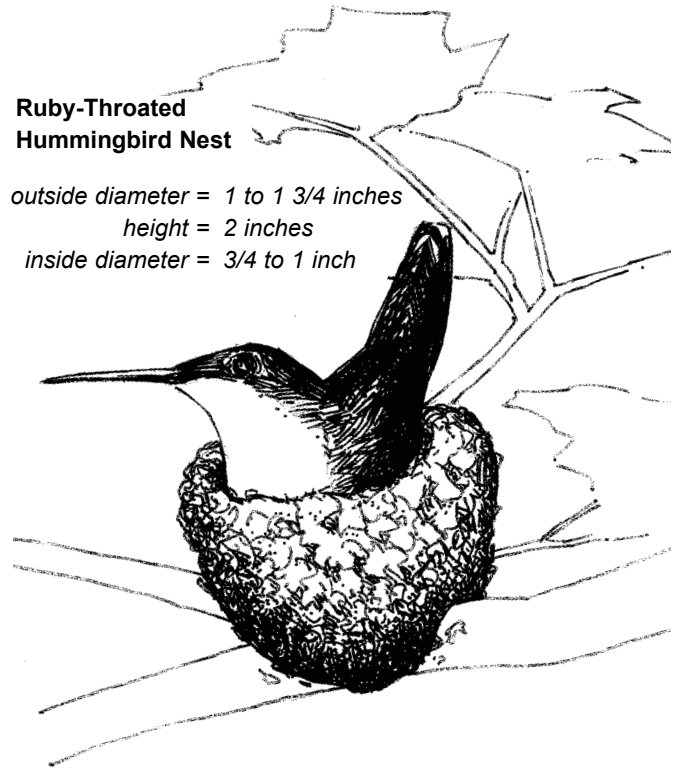
The nest sits like a saddle on a small downward-sloping branch of a shrub or a tree, protected from above by branches and leaves. Often the nest is over or near water, or near a woodland trail or clearing. Scales that protect tree buds in winter form the foundation of the nest. The female gathers these and secures them to the branch with spider silk she has collected. She applies pieces of lichen to the outside of the nest, and lines the inside of the cup with plant down, such as the fluff from willow catkins or the fuzzy material on the underside of young sycamore leaves. The spider silk provides elasticity to accommodate the growth of the nestlings, and the nest is fairly moisture-proof.

While completing the nest, the female moves around the inside, tucking in material and shaping the nest. She may continue to add lining materials during the egg-laying and incubation phases. The nest looks like a lichen-covered knot on the branch.

At one-day intervals, the female lays a total of two—or very rarely three—white eggs, sometimes before completing her nest. Each pea-sized egg is laid in the morning. After all the eggs are laid, they are incubated for 14 to 17 days. The female

Ruby-Throated Hummingbird Nest

outside diameter = 1 to 1 3/4 inches
height = 2 inches
inside diameter = 3/4 to 1 inch



spends 60 to 80 percent of her time on the eggs, depending on the weather. If the temperature is cold, she sits close on the eggs. During very warm weather she shades the eggs by standing over them. To change her position on the nest, she flies straight up, hovers, turns in the air and lowers herself back onto the nest.

The nestlings stay in the nest for 14 to 31 days. When the weather is mild and there is plenty of food, nestlings will grow and leave the nest more quickly than when the food supply and weather are less favorable. The newly hatched nestlings are tiny creatures with short yellow bills and only a few down feathers. About 12 days after hatching, they can maintain their own body temperature. Until then, they depend on the mother for warmth. The female feeds the nestlings regurgitated nectar and insects, up to three times each hour.



Housekeeping, Hummingbird Style

With two nestlings eating and growing in the nest, how does the mother keep the nest clean? What happens to the fecal droppings of the nestlings?

At one nest that was observed, the mother had lined up the nestlings' fecal sacs in a row on a branch just above the nest. But generally, the mother either eats the feces, or she removes them and drops them at a distance from the nest to avoid attracting predators to the nest area. When the nestlings are mature enough, they back up to the nest's edge and expel their feces over the side. Most species of perching birds manage nest sanitation in a similar fashion.

Needing exercise to strengthen their muscles, a few days before fledging the nestlings flutter their wings while standing on the edge of the nest. Nestlings leave the nest in the morning. Once they fledge, they stay quite near the nest for as long as a month, or until it is time to migrate. They investigate many flowers to learn which have rich nectar. Their mother continues to feed her fledglings until they are independent. She often takes them to nectar food sources, an activity that is easy to observe in the home garden. It is especially striking because it is a departure from the rubythroat's usual aggression toward other hummingbirds and indeed, toward other birds in general.

With Maine's cooler temperatures and short summers, nestlings may grow more slowly and females may not have time to produce a second brood. While it is generally thought that rubythroats have two broods only in warmer climates, such as Alabama, observational records in Maine indicate that rubythroats may attempt and can successfully raise a second brood here. Observations have been made of a female starting a second nest while still caring for the young in her first nest.

Fall

As migration approaches, rubythroats, like other migrating birds, feed heavily to prepare for the energy demands of the flight south. By late September, the breeding season has ended and many have doubled their weight to one fifth of an ounce. Fat deposits are stored under their skin, as in most bird species. Rubythroats generally begin leaving Maine around September 30, depending on conditions.

The males leave first, each going alone and in the daytime. About two weeks or more later, the females and juveniles leave. They often fly quite low over the landscape. Even during migration, when they stop to feed they defend their food source very aggressively.

Migrating rubythroats seek out the late-blooming wildflower, spotted jewelweed (*Impatiens capensis*), which sustains them during their flight south. In turn, this species of jewelweed depends for the most part on hummingbirds for pollination, and its late blooming time may be an adaptation to ensure its own survival.

Although a few may end their migration in Texas, Louisiana and southern Florida, most

Successful Migration Requires Food Sources

During migration, all birds, including rubythroats, first use sugars from the blood and liver. This energy source is quickly depleted and fat stores supply the energy to continue. When fat deposits have been used up, the bird usually stops its journey to feed before moving on. If the energy has to come from muscle protein, the bird's ability to fly and to survive is compromised. As with other migratory birds, bad weather and failure to find appropriate food sources on the way affect a hummingbird's success in reaching its winter range.



ruby-throated hummingbirds fly nonstop across the Gulf of Mexico, almost 600 miles, to their winter habitat in southern Mexico or Central America. The energy required for this sustained effort comes from fat deposits built up by heavy feeding before migration, as well as nectar and insects eaten during stops on the migration route.

Winter

Open woodlands and edge thickets form the habitat in the winter range of these hummingbirds. Flowers are plentiful, and rubythroats feed on floral nectar, exhibiting the same territoriality as when they are breeding. Of course, small insects and spiders constitute a significant part of their diet. Their annual molt—in which they lose and replace feathers—begins during the migration and is completed during the winter. With their first molt, juvenile males develop their red throats.

Breeding Habitat for Rubythroats

Ruby-throated hummingbirds migrate north to mate, nest and raise their young. They breed throughout Maine's landscape. Typical habitats include mixed coniferous and deciduous woodlands, orchards, and residential landscapes with shade trees. Males and females occupy somewhat different habitats during the breeding season. Males prefer hedgerows, orchards, flower gardens and the edges of woodlands. Females that have mated usually nest in dense woodland cover near a stream, wooded swamp or woodland clearing.

Tubular flowers must be plentiful in any habitat they use. Hummingbirds drink floral nectar, and as a source of protein and fat they eat spiders and small insects such as flies, ants, bees and beetles. Hummingbirds usually hover in front of flowers to drink nectar or pick insects off vegetation, or they hawk for flying insects.

Perches, such as twigs on shrubs and trees,

Breeding Habitat for Rubythroats

Food — tubular flowers that provide nectar and attract small insects and spiders; trees that yellow-bellied sapsuckers can drill for sap.

Water — for drinking and bathing: very shallow depths such as stream edges; mist or waterfalls; water droplets on vegetation.

Cover — woodland edges and clearings; orchards; residential areas with gardens. Special features include plants with flowers that provide nectar and attract insects; trees and shrubs for nest sites; and perches.

Space — males defend about a quarter acre where plants provide nectar and insects. Females protect the immediate vicinity around the nest and, sometimes, nectar sources.

are necessary features of their habitat. They seem to have favorite perches, using the same one or two whenever in the vicinity—often dead branches or flower stalks. They perch frequently to clean and groom their feathers as well as rest and oversee their territory, while watching for intruders. They chase other hummingbirds and large insects trying to feed at the flowers they have staked out.

It is thought that most of rubythroats' water intake comes from nectar. They bathe at least once each day. Bathing is critical for maintenance of feathers for insulation and flight. It also helps to control insect pests. For bathing and drinking, rubythroats seek out shallow stream edges and waterfalls. They will even fly through leaves covered with water droplets for a good shower. They will use hose mist or very shallow birdbaths if you provide them. Perches help hummingbirds to use nearby water sources: after bathing they retire to a favorite perch to dry their feathers and preen.



Mortality

Bird banding, with the capture, recapture and resighting of banded individuals, is the best way to determine longevity. One rubythroat in the Northeast lived for five years. Another frequented a garden in Arizona for 14 years. While they may live as long as 12 years, their typical life span is three to five years.

Hummingbirds have few natural predators. Predation by free-ranging domestic cats, however, is a cause of mortality. Occasionally, a hummingbird gets caught in a spider web. Rarely, a leaping leopard frog or a large dragonfly catches one. Infrequently, an American kestrel or merlin takes one.

It is the long migration, twice a year, that claims most lives. Because rubythroats are generally a short-lived species, each year's breeding success is absolutely critical to the continuation of their species.

How Hummingbirds and Flowers Have Coevolved

Some flowers are ornithophilous, which means they are adapted for pollination by birds rather than by insects, wind or water. Pollen gets on the hummingbird's beak as it probes the flower to drink the nectar. As the hummingbird forages, it carries pollen from one flower to another. The structure and colors of these flowers have coevolved with hummingbirds. The structure of ornithophilous flowers makes it difficult for insects to access nectar, yet easy for hummingbirds to do so. Of more than 30 native species of flowering plants used by rubythroats in their breeding range, at least 19 are ornithophilous. Rubythroats also find nectar in many garden flowers.

It is believed that all species of hummingbirds locate their food using their eyesight rather than their sense of smell. Flowers with fragrance have adapted to attract insect pollinators, and while hummingbirds do use them, there is competition from the insects for the nectar.

In fact, the biggest threat to hummingbirds is development, resulting in the loss of habitat and nectar-rich wetland plants. The loss of winter habitat in Mexico and Central America may reduce survival rates across hummingbirds' entire range. Diminishing populations over the last 30 years in Connecticut and Massachusetts are attributed to destruction of habitat due to urbanization of the landscape. By providing appropriate nectar sources and breeding habitat in your yard and garden, you can help make up for the loss of hummingbird habitat, and increase their chances of survival.

About Artificial Nectar Feeders

In the very early and very late periods of the breeding season when flowering plants are scarce, nectar feeders may be helpful, but only if kept scrupulously clean and filled with fresh nectar.

Improper maintenance can kill birds.

Good reasons to avoid artificial nectar feeders:

- Artificial nectar ferments quickly, in one to two days. Fermented nectar ingested by hummingbirds enlarges their livers. This is also true for northern orioles that drink feeder nectar.
- Mold and bacteria grow quickly in artificial nectar and can harm the birds.
- Artificial nectar does not provide the nutrients that are in floral nectar. Natural food sources are far superior to artificial nectar and provide a balanced diet.
- Because hummingbirds are very aggressively territorial, experts suspect that competition at feeders may be extreme and very stressful.





If you decide to offer artificial nectar, consider doing so only during May, September and early October, when natural nectar sources are scarcer. The risk to the birds will be less, and the work of keeping the feeders clean is limited to just a few months.

Maintenance and sanitation of nectar feeders:

- Make artificial nectar by mixing one part table sugar in four parts boiling water. Stir to dissolve the sugar. Cool before filling feeders. Refrigerate any remaining nectar; dispose of unused nectar after one week.
- Do not add red food coloring: it may cause hummingbird health problems.
- Do not use honey or artificial sweeteners, as these may also cause health problems.
- Use feeders that come apart so that all surfaces can be scrubbed.
- Place feeders in the shade in areas safe from cats.
- Clean and sanitize nectar feeders every two or three days, and more often in hot weather.

a) Instructions for using a dishwasher:

- Cleaning nectar feeders in the dishwasher at the regular setting, with a water

temperature of of 130 degrees F, will wash and sanitize the feeders.

- If your feeder is a narrow-neck globe design, place the globe on the bottom shelf of the dishwasher with the **open side down**. Rising steam will fill the globe and kill any bacteria and mold. Other parts of the feeder with small openings should also be loaded, open side down, on the bottom shelf of the dishwasher. The upward spray of water is stronger on the bottom shelf of the dishwasher than on the top shelf. If your feeder design allows easy access to all surfaces, any location in the dishwasher is okay.

- **Do not** open the dishwasher until it has completely finished the cycles. The final hot air cycle is when the sanitizing takes place.
- Be sure your nectar feeders are dishwasher-safe. If they are not, plastic feeders may melt or become misshapen; glass globes may break.

b) Instructions for washing by hand and bleaching:

- Scrub all feeder parts with a drop or two of dish detergent and **rinse well**. When feeder is cool, immerse it in a 10% bleach solution (one cup of household bleach to nine cups of water) for at least three minutes. **Rinse well and air dry** before filling with fresh nectar. If you have two nectar feeders, you can fill and hang one while the other is being cleaned and air-dried.

Bleach will kill bacteria and mold: vinegar is not an adequate substitute for bleach. Be sure to rinse off all bleach and soap thoroughly and allow the feeder to air dry. Soap or bleach residue in the feeder will harm hummingbirds.

You can reuse the bleach solution for up to three weeks by keeping it in a large plastic storage container with a tight-fitting lid. This way, after washing the feeder you can immerse it in the



container to sanitize it. Fecal matter and other organic materials, as well as air, heat and light, can spoil the bleach solution. Washing the feeder before bleaching it will assure that organic material does not enter the solution. After three weeks, dispose of the bleach solution by flushing it down the toilet.

Enhancing Rubythroat Habitat in Maine Yards and Gardens

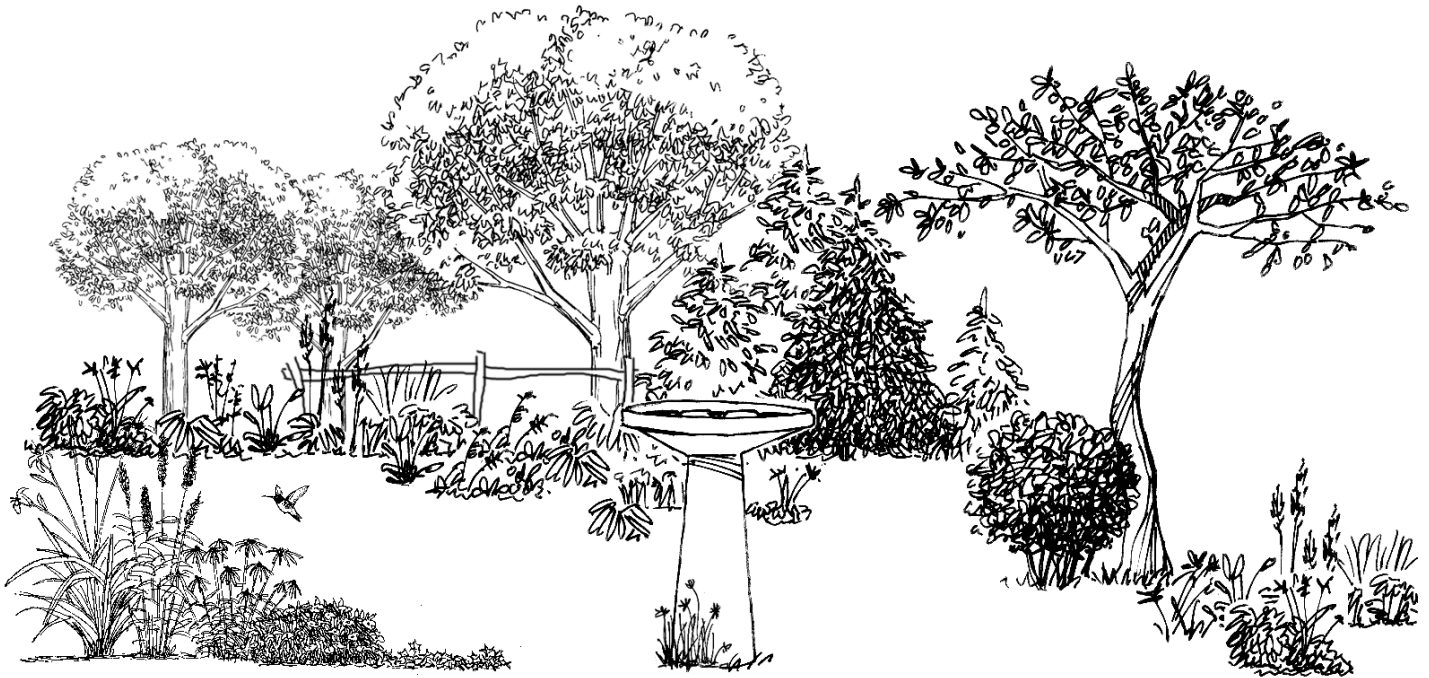
You can attract hummingbirds to your landscape by following these simple guidelines:

- When selecting plants for hummingbirds, choose flowers that are tubular, odorless, nodding and brightly colored. While some flower clusters are upright, the individual flowers within the cluster may be nodding, as with foxglove. While rubythroats have learned that red often indicates a good supply

of nectar, they will use any color flower that has nectar they can access.

- Ensure a continuous supply of floral nectar by selecting plants with a succession of flowering times. Use annuals, biennials and perennials, as well as trees, shrubs and vines with staggered blooming times to accomplish this. Refer to the list of nectar plants in this fact sheet. Plentiful natural sources of nectar will reduce the need to use artificial nectar feeders to attract rubythroats.
- Always select single blossoms: double blossoms make it difficult for hummingbirds—as well as butterflies, moths, bees and other insects—to reach the nectar inside the flower.
- Plant large clumps and drifts of flowers, which are very attractive to hummingbirds. Space individual plants far enough apart that the hummingbirds can easily maneuver to feed on





the flowers. Place shorter plants in the front of the garden, medium height plants behind them, and the tallest plants at the back of the garden, to provide space for the hummingbirds around the flowers. Add hanging baskets and other containers of flowers that attract hummingbirds. This can increase the species of hummingbird flowers in your landscape, extend the availability of flowers at both ends of the season, and attract hummingbirds to places close to your house where you can easily observe them.

- Encourage hummingbird wildflowers where you find them in your yard. Cut back competing vegetation to give them more light. Water them. Another benefit of this approach is that you will be nurturing our native wildflowers.
- Create vertical structure in the hummingbird's habitat to provide nest sites, perches and cover. Shrubs, small trees and canopy trees planted in a yard with flower gardens and a water source create an inviting habitat.

- Shrubs and small trees also provide perches. These small bare branches and twigs are essential for rubythroats' use of a habitat. Watch for favorite perches so you don't prune them.
- Avoid insecticides. They may poison insects eaten by hummingbirds and become an indirect cause of hummingbird mortality.
- Provide water for drinking and bathing. Use a timer to turn on a sprinkler or hose mist at the same time each day and the rubythroats will learn to come at the right time. Another arrangement is dripping water and/or a small and very shallow rough-surfaced container, such as a clay saucer.*
- If you are lucky enough to discover a hummingbird nest, observe it through binoculars only. Any disturbance of the female on or around her nest could jeopardize the success of the nesting effort.

* Please see UMCE bulletin #7145, *Keeping Your Yard Safe for Birds*, for recommendations on responsible sanitation and maintenance of birdbaths.



- Keep cats away from hummingbird habitats. Free-ranging cats kill hummingbirds. Bells and declawing are ineffective preventive techniques. If you use artificial nectar feeders, place them at least 15 feet from low vegetation where cats might hide. Cats can hide beneath nectar plants and jump up to catch rubythroats as they are foraging.**

** Please refer to UMCE bulletin #7148, *Facts on Cats and Wildlife: A Conservation Dilemma*.

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Developed by Nancy Coverstone, Extension educator, Lois Berg Stack, Extension ornamental horticulture specialist, and Jack Witham, associate scientist, University of Maine Holt Research Forest. Special thanks to Mahmoud El-Begearmi, Extension professor, nutrition and food safety, for his assistance on maintenance and sanitation of nectar feeders.

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HABITATS:

A FACT SHEET SERIES ON MANAGING LANDS FOR WILDLIFE RUBY-THROATED HUMMINGBIRDS IN THE MAINE LANDSCAPE BULLETIN #7152

Hummingbird Nectar Plants for Maine

This list is not exhaustive. You may see ruby-throated hummingbirds feed on flower nectar from many flowering plants not listed here—add to the list based on your own observations. Some of these plants are available at nurseries and garden centers; some may be available only as seed. Some of them may already be growing in your yard!

Northern orioles will also use nectar from many of these flowers, as will butterflies, moths, bees and other pollinators. Many of these plants develop fruits or seeds that are eaten by other birds.

In general, select **single flowers** rather than doubles, so that hummingbirds will be able to access the nectar.

Key

Light:	F=full sunlight P=partial shade S=shade
Moisture:	H=hydric; wet, periodically or often inundated by water M=mesic; moist, adequate soil moisture retention all year S=sub-xeric; moist to dry, seasonally moist, periodically dry X=xeric; dry, and drought-resistant, little moisture retention, excessively drained

Common Name	Scientific Name	Flowering Time	Light	Moisture	Mature Height	Comments	Hardiness Zone
Hummingbird Nectar Plants—Best							
Annuals							
Fuchsia	<i>Fuchsia x hybrida</i>	May–Sept	P,S	M	pendulous		n/a
Spotted jewelweed	<i>Impatiens capensis*</i>	July–Sept	P,S	M	3'	May be weedy; requires moist sites.	n/a
Blue thimble flower	<i>Gilia capitata</i>	June–Sept	P,F	M	1'		n/a
Flowering tobacco	<i>Nicotiana glauca</i>	June–July	F	M	1–4'		n/a
Petunia cultivars w/ single blossoms	<i>Petunia x hybrida</i>	June–July	F	M	4"–1'		n/a
Scarlet runner bean	<i>Phaseolus coccineus</i>	June–Aug	F	M	Vine	Needs support.	n/a
Scarlet sage	<i>Salvia splendens</i>	June–Sept	F	M	1–3'		n/a
Biennials and Perennials							
Hollyhock	<i>Alcea rosea</i>	June–Aug	F	M	3–8'		3
Wild or Canada columbine	<i>Aquilegia canadensis*</i>	June	P	M	2'		4
European columbine	<i>Aquilegia vulgaris</i>	June	P	M	1–2'		4
Delphinium	<i>Delphinium x elatum</i>	July–Aug	P,F	M	3–8'	Tall types need staking.	4
Foxglove	<i>Digitalis purpurea</i>	June–Aug	P,F	M	2–5'	Can be weedy.	3
Fireweed	<i>Epilobium angustifolium*</i>	June	F	M,X	3'		3
Dwarf blue gentian	<i>Gentiana septemfida var. lagodechiana</i>	July	F	M	1'		5
Gladiolus (red colors)	<i>Gladiolus x hortulanus</i>	July–Sept	F	M	1–4'	A tender perennial.	n/a
Daylily	<i>Hemerocallis cultivars</i>	June–July	P,S	M	1–5'		3
Coral bells	<i>Heuchera sanguinea</i>	June	P,S	M	1–3'		4
Hosta	<i>Hosta cultivars</i>	July–Aug	P,S	M	1–4'		3
Blazing Star	<i>Liatris species</i>	Aug–Sept	F	M,X	2–4'		3
Turk's cap lily	<i>Lilium michiganense</i>	July	P	M	2–3'		3
Wood lily	<i>Lilium philadelphicum*</i>	Aug	F,P	M	2–3'		4
Cardinal flower	<i>Lobelia cardinalis*</i>	Sept	P,S	H	2'		5
Bee balm, Oswego tea	<i>Monarda didyma</i>	July–Aug	F	M	2–3'	Can be weedy.	4
Wild bergamot	<i>Monarda fistulosa*</i>	July–Aug	F	M	2'		4
Penstemon	<i>Penstemon barbatus</i>	July	F	M	2–3'		4
Moss Pink	<i>Phlox subulata</i>	May	F	M	6"		3
Wild Blue Phlox	<i>Phlox divaricata</i>	May–June	P,S	M	1'		3
Phlox	<i>Phlox paniculata</i>	July	S	M	2–4'		4



Common Name	Scientific Name	Flowering Time	Light	Moisture	Mature Height	Comments	Hardiness Zone
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Hummingbird Nectar Plants—Best

Trees, shrubs and vines

Scarlet trumpet vine	<i>Campsis radicans</i>	June–July	F	M	Vine	Needs support.	5
Northern catalpa	<i>Catalpa speciosa</i>	June	F	M	75'		3
Brown's honeysuckle	<i>Lonicera x brownii</i> 'Dropmore Scarlet'	July–Aug	F	M	Vine		3
Fly honeysuckle	<i>Lonicera canadensis*</i>	May	P	M	4'	A native understory shrub.	4
Coralberry	<i>Symphoricarpos orbiculatus</i>	June–July	F	M	3'		3
Old-fashioned weigela (Bristol Red, Red Prince)	<i>Weigela florida</i>	June	F	M	5–6'		4

Other Nectar Food Plants Used By Rubythroats

Annuals

Geranium	<i>Pelargonium x hortorum</i>	June–Sept	F	M	2'		n/a
Pincushion flower	<i>Scabiosa atropurpurea</i>	June–Sept	F	M	3'		n/a
French marigold, singles	<i>Tagetes patula</i>	June–Sept	F	M	1 1/2'		n/a
Mexican sunflower	<i>Tithonia rotundifolia</i>	June–Sept	F	M,X	2–5'		n/a
Nasturtium	<i>Tropaeolum majus</i>	June–Sept	F	M	10"		n/a
Flame flower	<i>Tropaeolum speciosum</i>	June–Sept	F	M	10'	Vine.	n/a
Common portulaca	<i>Portulaca grandiflora</i>	June–Sept	F	M,X	8"	Light sandy soil.	n/a
Zinnia	<i>Zinnia elegans</i>	June–Sept	F	M	6"–4'		n/a

Biennials and Perennials

Butterflyweed	<i>Asclepias tuberosa*</i>	July	F	M,X	3'		3
Iris	<i>Iris species</i>	June	F,P	M	1–4'		4
Bluebells	<i>Mertensia virginica</i>	May	P	M	1'		5
Showy evening primrose	<i>Oenothera speciosa</i>	July	F	M,X	4'		3
Virginia creeper	<i>Parthenocissus quinquefolia*</i>	May	F,P,S	M	30'	Vine.	3
Cup plant	<i>Silphium perfoliatum</i>	July	F	M,X	6'		4
Bugleweed	<i>Ajuga reptans</i>	May–June	F,P,S	M	4–12"	Ground cover. Can be weedy.	4
Globe thistle	<i>Echinops ritro</i>	July–Aug	F	M,X	4'		4
Tulip	<i>Tulipa species</i>	May	F,P	M	2'		4
Maltese cross	<i>Lychnis chalcedonica</i>	June–July	F	M	2–3'	A short-lived perennial.	4
Japanese bleeding heart	<i>Dicentra spectabilis</i>	May–June	F,P	M	2–4'		3

Trees, Shrubs, and Vines

New Jersey tea	<i>Ceanothus americanus*</i>	May	F	X	3'		4
Cockspur hawthorn	<i>Crataegus crus-galli*</i>	June	F	M	35'		4
Washington hawthorn	<i>Crataegus phaenopyrum</i>	June	F	M	20'		4
Apples and crabapples	<i>Malus, species & cultivars</i>	May–June	F	M	10–40'		4
Rhododendrons and azaleas	<i>Rhododendron species & cultivars</i>	May–July	P	M	2–15'		4–5
Shadbush	<i>Amelanchier species*</i>	May–June	P,F	M	10–30'		4
Flowering cherry trees	<i>Prunus species</i>	May	F	M	20–40'	Many are disease-prone.	4–5
Virginbower	<i>Clematis virginiana*</i>	Aug–Sept	P	M	18'	Vine. Mulch soil to keep cool, avoid hot afternoon sun. Best in alkaline soil.	4
Tuliptree	<i>Liriodendron tulipifera</i>	June	F	M	75'		4
Flowering quince	<i>Chaenomeles japonica</i>	June	F	M	3–5'		4
Horse chestnut	<i>Aesculus hippocastanum</i>	June	F	M	75'		4
Hybrid clematis	<i>Clematis x jackmanni</i>	June	P	M	8–10'	Vine. East exposure. Mulch soil to keep cool, avoid hot afternoon sun.	4
Butterfly bush	<i>Buddleia davidii</i>	July–Aug	F	M	3'	Tender perennial that survives in some sites in southern Maine.	6
Rose of Sharon	<i>Hibiscus syriacus</i>	July	F	M	6–8'		5
Lilacs	<i>Syringa species</i>	May–June	F	M	10–20'		3

* Plant species native to Maine. No plant considered an invasive exotic species in Maine is included in the list.

