K-STATE
Research and Extension
Johnson County

Hummingbirds

Description

Hummingbirds are the world's smallest bird. There are over 300 species worldwide, but only one species, the Ruby-throated Hummingbird is found in eastern Kansas. They are approximately 3–4" long, and weigh about three grams (1/10th of an oz.). The male has a radiant red gorget under its chin, a metallic green back and head with black cheeks and a tiny white spot behind each eye. Its belly is whitish-gray and has a distinctly forked brownish-black tail. The female has a green back and head, but has a dull white throat and a white-tipped rounded tail.

Hummingbird bones are light and porous, and their wing and leg bones are hollow. A keel-shaped sternum allows greater surface area for the attachment of huge flight muscles. Extremely long "hand bones" support the large primary feathers and enable rapid wing strokes while preventing the wings from bending. In a sense, hummingbirds fly with their hands. Because of their unique wing strength and structure, a hummingbird is the only bird that can fly forward, backward, sideways, up and down or in a hover. They have been known to fly upside down! Since their flying ability allows them so much maneuverability, they rarely have to walk. Their legs are very weak and are used primarily for perching.

Because they have no down feathers to keep them warm, hummingbirds have another method of conserving energy called torpidity. The birds fluff out their feathers to allow excess heat to escape, which rapidly lowers body temperature and metabolic rate. Torpid birds appear dead and frozen to the perch, obviously exposing themselves to the dangers of predators. Since torpidity is a defenseless state, they cannot fly, cry out or function normally, and breathing can actually stop for short periods. It can take over an hour for some birds to awaken from the torpid state, with their temperature rising about a degree a minute. In regions where nighttime temperatures go below freezing, the birds seek some kind of shelter to conserve every bit of heat. This hypothermic, torpid state is a last resort to stay alive during cold nights.

Raising offspring

The courtship of hummingbirds usually begins in spring. After the female has her nest started, she goes out to look for a mate. The male attracts the female by his enticing courtship displays and the amount of food he has to offer in his territory. After mating, the male is finished with his contribution to the family, and the female raises the brood by herself.

The hummingbird's nest is cup or oval shaped up to 2" across. They are often found on the forks of tree branches, hanging from ledges, clinging to rocks or suspended from foliage. The exterior is most often decorated with bits of lichen or bark, with down feathers, moss, lichen, leaves and soft plant materials lining the inside. Spider webs glue the nest together, which also secures the nest to its base. Some birds build new nests every year; others reuse the old or even stack them.

Natural food

Hummingbirds have an incredibly high energy output, consuming from five to eight times their weight in sugar and water daily. Their long bills are especially adapted for extracting the nectar found at the base of the corollas of flowers. They assimilate almost 100 percent of the sugar, feeding several times per hour, gaining weight as the day goes on in preparation for the cooler night. Hummingbirds do not live on nectar alone. They devour insects as well. They may nibble them from flowers, around plants and trees, nab them in midair, or even steal them from spider webs.

Hummingbirds are important as pollinators of many plant species. While feeding, they collect pollen on their heads and, upon visiting other flowers, cross-pollinate them. Hummingbird flowers are usually shades of red, but the birds will visit other colors because sugar concentration is more critical than color. Their favorite flowers are generally tubular, odorless, held horizontally or hanging down, and open during the day.

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Feeding hummingbirds

Feeders should be in place by early spring—usually mid April, and left up into October, or at least two weeks after your last sighting. Hummingbirds have an innate sense of migration, and the easy availability of food will not prevent them from flying south. The mature male is the first to start migrating, followed by the female, with the immature or fledglings last. Small but powerful, they store up enough fat to successfully make a non-stop, 500 mile migration across the Gulf of Mexico. The migration range of the Ruby-throated hummingbird is from Canada to Mexico, where they overwinter.

Prepare hummingbird nectar using one part sugar dissolved in four parts boiling water. Allow the mixture to cool before filling the feeder. Refrigerate the remaining mixture for future use. It is not necessary to add red food coloring. Hummingbirds are attracted to the color red, but most feeders have red on them. If not, attach a red ribbon or silk flower. **Never use honey or artificial sweeteners!** These can be lethal to hummingbirds. Feeders should be cleaned at least twice a week in a solution of bleach and hot, soapy water. Rinse thoroughly. Hummers will not feed on stale food, or at feeders used by ants or wasps. Use an application of mentholated petroleum jelly on the hanger to repel ants.

Plants that Attract Hummingbirds

Annuals
Alcea (Hollyhock)
Digitalis (Foxglove)
Fuchsia
Impatiens
Ipomoea (Morning Glory)
Larkspur
Lobelia (Scarlet)
Nasturtium
Petunia
Salvia
Zinnia

Vines
Campsis (Trumpet Vine)
Lonicera (Honeysuckle)

Perennials
Aquilegia (Columbine)
Asclepius (Butterfly Weed)
Coreopsis (Tickseed)
Delphinium (Larkspur)
Heuchera (Coral Bells)
Monarda (Bee Balm)
Pholx
Salvia

Bulbs
Canna
Gladiola
Lillium (Tiger Lily)

Shrubs
Abelia
Althea (Rose of Sharon)
Azalea
Buddleia (Butterfly Bush)
Syringa (Lilac)
Weigelia

Trees
Crataegus (Flowering Hawthorn)
Malus (Flowering Crabapple)
Silktree (Mimosa)

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