



adventures

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Ruby-throated Hummingbird

Hooray for Hummingbirds!

Wings whirring, a hummingbird buzzes up to a flower. It stops short, hovers, then pokes its long bill into the flower and uses its long tongue to sip nectar. Once, twice, three times it backs up, pauses, and dives into the flower again. Then *zzzzzz!* Off it flies to another flower. *Zip, sip, zip*—that's hummingbird style!

No other bird flies quite like a hummingbird. Because of the way their wings are made, hummingbirds can hover in one spot as well as fly backwards, side to side, straight up and down, and even *upside-down!* Hummingbirds also flap amazingly fast—from 20 to almost 100 times per second. The rapidly beating wings make the humming noise that gives hummingbirds their name.

Hummingbirds are tiny flying acrobats, for sure, but that's not all of the story. Just turn the page to find out more about these amazing birds.



Flower-Powered

HUMMINGBIRD HUMDINGERS!

- A hummingbird zips at about 30 miles per hour in normal flight, but can sometimes reach a top speed of **60 miles per hour** in a dive.



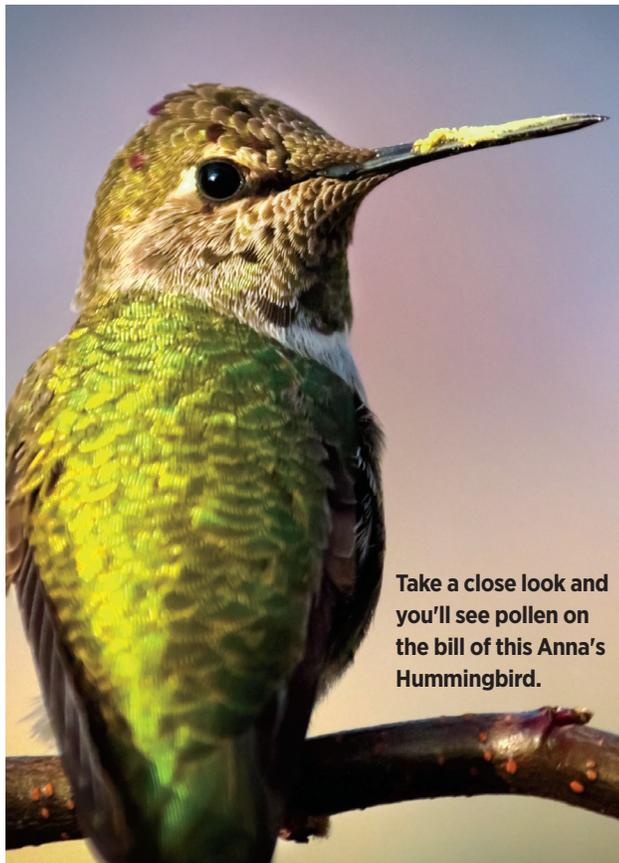
- The Sword-billed Hummingbird (above) of South America has the longest beak of any hummingbird. The bill is **5 inches long** and shaped to probe into extra-deep flowers.



- A female hummingbird usually lays two eggs. Each is about the **size of a pea or a jellybean**.
- Hummingbirds are tiny, but they **aren't afraid of bigger birds**. A female protecting her eggs will even attack a hawk!

Hummingbirds sometimes eat small insects and spiders, but their favorite food by far is plant nectar—the sweet liquid some flowers make. Different kinds of hummingbirds prefer different plants, and they often visit many kinds of flowers while searching for nectar. All this flower-visiting makes a hummingbird an excellent pollinator. Flowers need pollen from other flowers to make seeds, but they can't visit other plants to swap pollen. Instead, some flowers get the job done when their pollen sticks to a feeding hummingbird's feathers and bill. The bird carries this pollen to the next flower it visits.

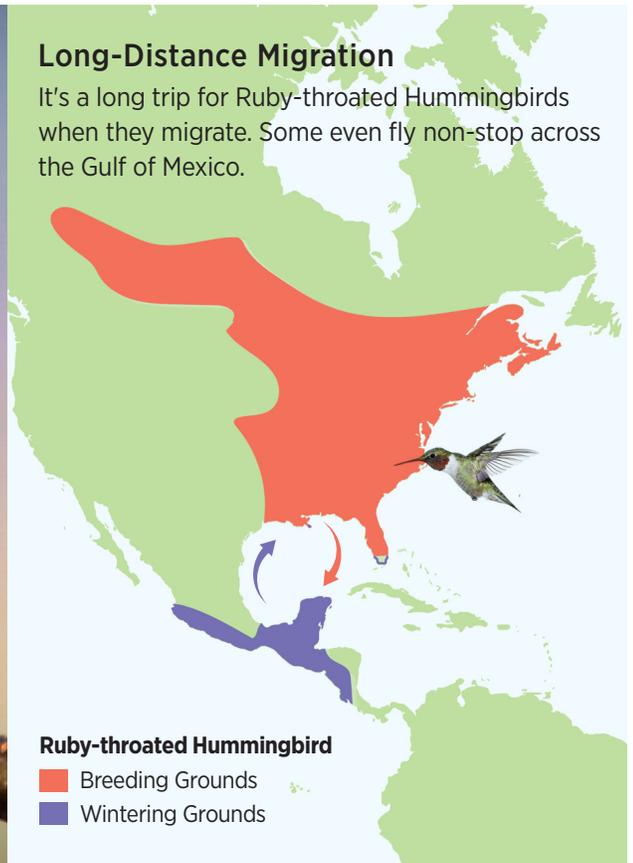
It takes a lot of fuel to power a busy hummingbird on an ordinary day. A hummingbird needs even more energy when it's migrating—traveling between the place where it raises its young and the place where it spends winter. Ruby-throated Hummingbirds, for example, double their weight before leaving their winter home in Central America and migrating north. Some of the other hummingbird species that migrate to the United States and Canada are the Rufous, Rivoli, and Calliope Hummingbirds.



Take a close look and you'll see pollen on the bill of this Anna's Hummingbird.

Long-Distance Migration

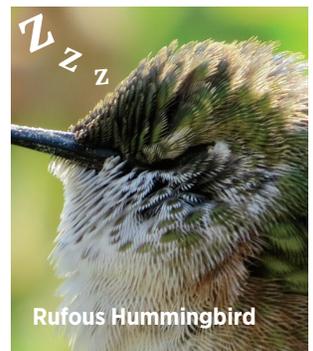
It's a long trip for Ruby-throated Hummingbirds when they migrate. Some even fly non-stop across the Gulf of Mexico.



Zzzzzz....

An active hummingbird's heart may thump more than 1,200 times a minute. (Your own heart rate is probably somewhere between 60 and 100 beats per minute.) A hummingbird's body temperature is about 105°F. It burns energy so fast, it must eat about half its own weight in food each day. How can it possibly survive a cold snap or a chilly night?

One survival strategy is to drop into a sleeplike state called torpor when it gets too cold. In torpor, a hummingbird's body temperature and heart rate drop to save energy. The heart of a hummingbird in torpor can slow to as few as 50 beats per minute. Its temperature may plunge to 60°F or even lower.





These Anna's Hummingbirds have found a feeder in someone's yard!

Follow Those Hummingbirds!

Scientists are studying hummingbirds to find out more about how they live and the migration paths they follow. One thing they're concerned about is climate change. Along hummingbirds' migratory routes, different plants bloom just in time for the hungry travelers to grab a meal. What if warmer spring temperatures cause flowers to bloom earlier than usual? The flowers could finish blooming before the hummingbirds arrive. No flowers would mean no nectar. How would that affect the migration of hummingbirds, and even their survival?

Scientists are not the only ones fascinated by these busy birds! Many people attract hummingbirds to their yards and parks by planting flowers hummingbirds like. Others hang up hummingbird feeders. And they're helping with scientific research, too. Across the Americas, many people keep track of hummingbirds they see and report the results to scientists. You can too! Become a community scientist by taking part in Audubon's "Hummingbirds at Home" project. **Check out this website to find out how you can track, report on, and follow hummingbirds' spring migration:** audubon.org/hummingbirds-home

Math-hum-matics!

Try your math skills using some amazing hummingbird facts. (Check your answers at the bottom of the page.)

1. The Bee Hummingbird is about **2 inches long**, while the Giant Hummingbird is about 8 inches long. How many Bee Hummingbirds need to line up in a row to equal the length of a Giant Hummingbird?
2. The Calliope Hummingbird weighs about **1/10th of an ounce**. How many Calliope Hummingbirds add up to one ounce?



This tiny Calliope Hummingbird weighs 1/10th of an ounce.

3. A meal of nectar travels through a hummingbird's digestive system in **less than 20 minutes**. About how many minutes does it take for a hummingbird to digest three separate meals?
4. If a Ruby-throated Hummingbird flaps its wings **50 times per second**, how many times does it flap its wings in one minute?
5. A hummingbird flicks its tongue up to **13 times a second** to lick up nectar. How many times can a hummingbird flick its tongue in 5 seconds?



A Rufous Hummingbird flicks its long tongue.



SIZE EXTRA-EXTRA SMALL!

How small are hummingbirds? Most are small, about the size of a baseball. And some are **VERY small!**



Most hummingbird species are about **3-1/2 inches long**.



The Bee Hummingbird, found in Cuba, is the world's smallest bird. It measures **2 inches from bill to tail**.





Buzz Online!

Hop on to these sites to learn more about hummingbirds.

- **Find** hummingbird information, a game, and other fun stuff at [audubon adventures.org/Hummingbirds.htm](http://audubonadventures.org/Hummingbirds.htm)
- **Set up a** hummingbird feeder. Find a how-to video here: [audubon adventures.org/Multimedia.htm](http://audubonadventures.org/Multimedia.htm)
- **Learn** how to identify different kinds of hummingbirds: pbs.org/wnet/nature/hummingbirds-magic-in-the-air-infographic-all-about-hummingbirds/8377/
- **Watch** a National Geographic video about hummingbirds: nationalgeographic.com/photography/proof/2017/06/hummingbirds-slow-motion-flight-videos/



They ♥ Hummingbirds

A pollinator garden is a special type of garden that has plants whose flowers produce delicious and nutritious nectar that hummingbirds, butterflies, bees, and other pollinators love. The Rio Salado Audubon Center in Phoenix, Arizona, started a pollinator garden in 2011. About 200 volunteers helped bring a barren patch of ground to life. They planted more than 500 plants! Since then, Anna's, Costa's, and Black-chinned Hummingbirds have all visited the garden. For hummingbirds, the garden is a place to stop, rest, and feed. For human visitors, it's a place to see flowers and birds as well as get ideas for creating their own pollinator gardens.



Part of the pollinator garden at Rio Salado Audubon Center

Meanwhile, in the Southeast, the Strawberry Plains Audubon Center in Holly Springs, Mississippi, welcomes thousands of visitors to its Hummingbird Festival every September to celebrate the migration of Ruby-throated Hummingbirds. Visitors have the chance to see the amazing migrating hummingbirds up close, go on nature walks and wagon rides, and learn about other animals, including snakes, bats, bears, wolves, and spiders.



This Ruby-throated Hummingbird couldn't resist the red, tube-shaped flower of the trumpet vine.

Be a Hummingbird

A hummingbird may **visit 2,000 flowers in one day**. Hummingbirds are curious, so they'll visit all kinds of flowers to find nectar. But some flowers have evolved specially to attract hummingbirds.

Next time you're where flowers are blooming, see if you can find "hummingbird flowers" using these clues:

- A hummingbird flower is typically red—a color hummingbirds can see but insects can't see.
- It is tube-shaped—just right for a hummingbird's long bill.

Try being a hummingbird: Find a flower and tap it once, counting to 10 before heading off to the next one. How many can you visit in 5 minutes?

Want to ID a hummingbird?

Look for it here:

audubon.org/search_results?search=Hummingbirds

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We're correlated! For correlations to Common Core Standards for English Language Arts and Next Generation Science Standards, go to: audubonadventures.org/Teach_Standards.htm
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