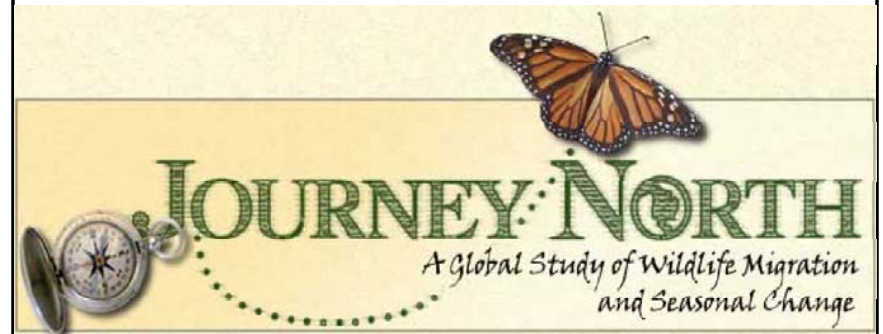




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Fueling Migration: How Hummers Keep Their Engines Running

by Eve Pranis

That humming you hear when you are close to a hummingbird is its wings as they beat up to 200 times a second. It takes a lot of energy to dart between flowers, hover in mid-air, fly backwards, and impress a mate! Hummingbirds burn food energy so fast that they need to eat 1 1/2 to 3 times their weight in food each day. If they didn't, they'd starve!



How much food would you have to eat today if you burned energy as fast as this hummingbird does?

You may have learned that hummingbirds find fast fuel in flower nectar. Their forked, grooved tongues are nearly twice the length of their beaks! As a hummingbird licks nectar, the sweet fluid flows up the grooves into its mouth.



Flower nectar can be even sweeter than Coca Cola!

They also find food in feeders that humans put out. Good thing, too, because they may need to "gas up" every 15 minutes throughout the day! Nectar and sugar water give these speedy acrobats a source of quick energy. But sweets only go so far! Could *you* live on sugar alone?



Hummingbirds eat both plant *and* animal material. Insects and small spiders have lots of protein. That helps hummers grow and stay healthy. A hummer picks these creatures off plants and other surfaces (called **gleaning**). OR, it sits on a branch, eyes peeled. When it sees lunch, it zooms off with its mouth open wide and catches an insect in mid-air! This behavior is called **hawking**. (Can you guess why?)



Is this female Rubythroat looking for a spider to eat or gathering nest materials?

But it's not always easy finding food! Scientists think that migrating rufous hummingbirds follow a "nectar trail" of native flowers as they bloom. But Rubythroats don't do that. When longer days signal that it's time to move north, they go! Flowers in cool northern areas may still be weeks from blooming. With no nectar in sight, and few insects hatched, how do they get the energy they need to get by?



Like the rest of us, hummers get by with a little help from their friends! They feed on sweet tree sap oozing from rows of small holes drilled into trees by yellow-bellied sapsuckers. (These birds head north earlier than Rubythroats do.) Ruby-throated Hummingbirds have actually been seen following these woodpeckers as they visit their sap trees!



Once a hummer is full, it can't eat any more until its **crop** (food storage pouch) is half empty. It takes about four minutes to drain half the nectar into the intestines and stomach. While it's digesting, the bird might sit on a branch or wire. It may look like it's resting, but its eyes are busy studying the world in search of predators or its next meal!



Photo © Jackie Allison

But at night — and when the weather is too cold or rainy to find food — couldn't a hummer starve? Yes. BUT they have a cool adaptation to conserve energy! They go into a sleep-like state called **torpor**. A bird's body temperature can drop almost 50 degrees. The heart rate and breathing slow way down. Next time you notice a hummer that appears lifeless, keep watching!



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Sleep or torpor? To come out of torpor, a hummer begins to vibrate its wings. This produces heat. It can take an hour to come back to "life"!