Rufous Hummingbird,
aka The Red Menace

The Red Menace:
Rufous Hummingbirds and their Epic Journey

by Carolee Colter,
Shade Coffee Volunteer

"Distance wouldn't seem to be their strong point. You'd think they'd burn themselves out." That was my partner's reaction when I described the migration route of the Rufous Hummingbird. The Rufous Hummingbird has the longest migration route of any hummingbird, and in terms of its body-length, the longest of any bird species. How can anything so diminutive pull off this feat? They do it on a few grams of fat, replenished at refueling stops along the way. Small size is great for living on nectar, but it limits the amount of fat a hummer can accumulate, and thus the length of each stage of its journey. As a result, hummingbirds spend a larger percentage of their lives in migration than most other bird species.

As do all migrating hummingbirds, the Rufous follows the flowers. Here in the Puget Sound region, we may first sight the iridescent males working a stand of flowering currant. By midsummer, they are feasting on columbine and Indian paintbrush in alpine meadows. On their journey, Rufous move first through the unfriendly territory of resident Anna's Hummingbirds, then breeding Calliope, Black-chinned, and Broad-tailed Hummers. The notorious aggression of the Rufous as an invader has earned it the nickname "the red menace" among ornithologists.

Working their way up the coast in spring, the males come first, followed by the females about a week later. As they start southward along the mountain chains, the males again go first, the females lag behind by one to two weeks, and the juveniles by another week to a month. Thus, the young make the first great journey of their lives without benefit of parental guidance. Hummingbird researcher Bill Calder writes of being "in awe of a naïve, month-old bird with less than 1/10,000th of our brain volume, bravely setting forth and successfully navigating to Mexico for the winter, returning north by an entirely different route and then following the same loop the next year."

How does Calder know that this bird, having outgrown its naiveté, will follow the same loop again? Only a handful of banded hummingbirds have been recovered, but those few give us a glimpse into an amazing degree of site fidelity. An individual Rufous may very well return not only to where it was born and where it wintered the first year, but to the same stopover points along the way. In fact, banders have recaptured banded hummers on the very same day of the following year.

How do young birds find the ancestral wintering grounds and travel the northbound route when they have never been there before? How do they retrace the exact routes north and south for the rest of their lives? No one knows; but evidence points to inherited knowledge. As anti-social as they come, hummingbirds form no pair bonds and certainly do not migrate in flocks. In their essay in the *Sibley Guide to Bird Behavior,* Robert and Martha Sargent write, "When migrating, they are aggressive and unfriendly, yet they share a single migration strategy."

Due to gradual declines in population over parts of its breeding range, the Rufous Hummingbird is on the Partners in Flight WatchList. But scientists are not sure why their numbers are dwindling. At first glance, it seems that neither breeding nor wintering habitat is under immediate threat. Rufous wintering grounds in the mountains of Jalisco are at an elevation high enough to avoid the pesticide-drenched agricultural regions.

This hummingbird's favorite flowers thrive in edges, openings, and brushy secondary growth. Thus, it would seem that

Not by Nectar Alone. . .

Hummers don't live on flower nectar alone. They grab gnats out of the air, pluck aphids from crevices, and rob spider webs. They'll take any arthropod small enough to swallow. They even drink sap from wells drilled by sapsuckers. But whatever they feed on, they are bound by the laws of fuel dynamics. If they put on too much fat, it takes too much energy to fly. Therefore, migrating hummingbirds have to stop for frequent, short feeding bouts throughout the day's journey. At dusk they will tank up with one-third their weight in nectar before finding a safe perch for the night. Under cold conditions, they go into a state of torpor, lowering their body temperature, and slowing their heartbeat and breathing to a fraction of the normal rates, to conserve fuel.

as long as cut-over forests are allowed to regenerate—that is, not converted to residential or business development—there should be plenty of breeding habitat. I haven't found any research on whether herbicides on replanted stands of commercial trees pose a problem.

It seems most likely that it is their 2000-mile migration that poses the greatest peril to Rufous. A drought in Mexico and Southern California can wither the flowers or keep them from blooming. A mid-summer thunderstorm can devastate mountain meadows, wiping out nectar for hungry travelers.

Yet, over the millennia of neotropical migration, birds have faced hazardous weather, and the species survived even if the individual didn't. Permanent loss of habitat is another problem entirely. Most of the US population lives within fifty miles of a coast. Coastal development puts more hazards in the path of northbound Rufous migrants, particularly glass windows, domestic and feral cats, and pesticides.

Then there's global warming. If drought at certain times and places becomes more common, the flowers may not bloom, even in pristine habitat.

The conventional wisdom is that rapid climate change will favor resident species over migrants. Residents will have milder winters to cope with, presumably will survive in higher numbers to compete with returning migrants, and will have a head start in claiming prime nest sites and food sources. Also, long-distance migrants are assumed to be more specialized than residents, and thus less flexible in terms of adaptation.

But I speculate that migrants may be more resourceful than residents. Their epic journeys take them through a great variety of habitats. Certain resident tropical species are so used to the dim light beneath the canopy that they will not cross a road cut through the rainforest and are confined to narrower and narrower territories. Neotropical migrants, on the other hand, travel through light and dark, across large bodies of water, across deserts, over high mountain ranges. They may change their diet greatly between breeding and wintering grounds. In other words, migrant species have adapted to a greater variety of conditions than many resident species.

Migrants have been known to expand their ranges opportunistically, and Rufous Hummingbirds are a prime example. In the short space of 15 years, they have begun to over-winter by the hundreds in the southeastern US. Perhaps a few storm-driven hummers found themselves in a paradise of blooming exotics and human-provided feeders along the Gulf of Mexico in Texas or Florida. Somehow, they stored knowledge of the way back there, as they took off for their breeding grounds in spring. Perhaps they successfully raised young that inherited genetic coding of the route. If natural selection favors the southeastern winterers, Rufous Hummingbirds may come to establish a new migration pattern that will in some way enable them to survive climate change and hold their own against resident species.

Some say the meek shall inherit the earth, but in nature, the ferocity of the "red menace" may be its key to survival.

Listen to a Rufous Hummingbird—on BirdNote, the Web Site!

To hear the sound of a hummingbird's wings, check out the BirdNote™ web site. The radio show is aired on KPLU-FM, 88.5, every weekday morning at 8:58AM. Past episodes are archived on-site. Check out www.birdnote.org/birdnote.cfm?id=44, =59, and =99.

To learn more about this thirsty bird, visit www.BirdWeb.org. For more about hummingbird feeders and how to attract these lively birds to your yard, visit the Seattle Audubon Nature Shop.