



# Costa Rica Outdoors

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## Ruby-Throated **HUMMINGBIRDS** On the Wing in Guanacaste

**PLUS: Exploring the Osa Peninsula  
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Bill Hilton Jr./Hilton Pond Center



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Clockwise, from left: A male ruby-throated hummingbird visits a blooming aloe plant; An adult male with characteristic red throat feathers; Wing feathers being inspected by a volunteer.

# Say "Aloe" to Visiting Hummers

Text and photos by Vicky Longland

An inquiring mind is part of our genetic makeup; just reading these pages shows curiosity for unusual places and experiences in the natural world. Some people, however, take things much further. One such person is Bill Hilton, Jr., whom I met in northeast Guanacaste halfway up the Rincón de la Vieja Volcano at the Buena Vista Lodge Adventure Center, a working 2,000-acre cattle ranch and forest reserve specializing in eco-tourism. Hilton is passionate about quite a few things: education, research, communicating, his Hilton Pond Center for Piedmont Natural History in South Carolina (which he directs) and a particular species of hummingbird. Put these together and it becomes clearer why a group including a waste-water manager,

his teenage son, a retired polymer physicist and five other diverse-habitat North Americans and two Costa Rican educators followed Hilton to this corner of Costa Rica to study a bird they can find in their own backyards.

The bird in question is the ruby-throated hummingbird (*Archilochus colubris*), a common enough summer visitor to eastern U.S. and southern Canada. What makes it special is that it's the only hummingbird in Costa Rica to migrate — some of the birds fly over 2,000 miles to reach their destinations. The tiny three-and-a-half inch creature embarks on a perilous journey from its breeding grounds up north to winter as far south as Panama from September to late February. A remarkable



The Buena Vista Lodge Adventure Center hosted Operation Ruby Throat.



Measuring a tiny hummingbird's wing length is a delicate job.

undertaking, especially when you consider its average body weight is five to seven grams — and that's after bulking up for the marathon flight.

As one of only 150 "master banders" in the United States (certified by the U.S. Bird Banding Laboratory, part of the U.S. Geological Survey), Hilton has banded over 47,000 birds of 125 species — including 3,250 ruby-throats at his nature center — since 1982. He lectures intensively, has a long string of publications to his name and maintains two comprehensive websites about his work. One wonders when he finds time to sleep...

Hilton founded Operation Ruby Throat: The Hummingbird Project in 1999 to encourage educators, students and the general public to become "citizen scientists" and help study the behavior and distribution of the species. You don't have to be a Ph.D. to get involved — anyone with an interest is welcome, and the army of observers is becoming impressive. The project is also linked closely to the GLOBE program (Global Learning and Observations to Benefit the Environment), an international school-based science initiative that involves teachers and students in real hands-on science projects.

That is where the two Costa Rican members of our group come in. Teacher María Portuquez and Sandra Pérez, a naturalist from nearby Liberia, each received full scholarships from Hilton Pond Center to participate in the project. In turn, they will collaborate with GLOBE to involve Costa Rican students in practical science, submitting valuable field data to scientists for research use.

Although widespread and common, little is known about the ruby-throats' wintering months or their migration patterns — do they all fly the treacherous 525-mile stretch directly over the Gulf of Mexico from Florida? That's 20 hours nonstop, with no margin for error. Or do they take the land route further west? How about the migration back north? Do they return to the same site each year? Hilton decided to investigate further. After an initial visit to Costa Rica, he returned in late 2004 with a pioneer group of enthusiasts to trap and band ruby-throats in the hope of closing the information gap on this valiant little migrant. Operation Ruby Throat had gone international.

The challenge was where to study the species in Costa Rica. Although common here, the hummingbirds are widely distributed, and finding concentrations suitable for effective field study threatened to be difficult. Fortunately for the project, its chosen travel agency connected Hilton with a young Tico field ornithologist, Ernesto Carman — about the only person to have studied ruby-throats in Costa Rica. He had deduced that they congregated in the Guanacaste province and had a preference for aloe vera plantations.

As is the way in nature, things didn't go strictly according to plan.

Those first two field trips (just after Christmas 2004, although convenient for the holiday season) netted and banded only 15 ruby-throats overall. The aloe vera fields were not in flower, and it was sheer luck that a single *jocote* (mombin) tree near the aloes yielded enough birds to justify the trip as a moderate success. Nonetheless, the figures were still better than the total banded nationwide of 14 between 1978–1988.

Meanwhile, back at the Buena Vista Lodge, some nervous tension was in the air as Hilton's 2006 group of enthusiasts — the "Oh-Sixers" — and Carman assembled after dinner to discuss the plan of action. This trip was timed later in the season, but since the hummingbirds started heading north by the end of February, the window for field work was narrow. The aloe vera fields would be revisited, and I tagged along to watch the fun.

Early the next morning, we dropped from our 2,800-foot hotel elevation to around 200 feet, and, after inspecting a roadside field of pretty purple vervain that had six ruby-throats flitting about, we arrived at the first aloe vera field. Barely a bloom in sight! Nary a bird.

Stoic acceptance of fate seemed appropriate. Why was the field not flowering? Was there a climate glitch? Had calculations gone awry? Was the project doomed? With somewhat forced cheeriness we drove to a second field. A ramshackle wooden bridge stopped our bus from progressing any further. We walked the last half mile along a hot dusty lane, around a bend and finally reached the field. Carman whooped! It had aloes, the aloes had blooms, the blooms had hummingbirds. The better irrigated plantation was well up to snuff and the trip was back on track.

Laden with poles, nets and the paraphernalia necessary to net, bag, band, weigh, measure and generally scrutinize the ruby-throats, we were ready to lay an early siege on the field the next day at 7 a.m. Apart from Hilton and Carman and a returning member from last year's group, we had to learn how to rig the delicate mist nets along the aloe plant rows, painstakingly avoiding their soft prickles to prevent tearing.

No sooner had the first 12-meter net been erected than a double whammy of ruby-throats zoomed straight into it. They were carefully removed, and placed in soft mesh bags for protection before being processed. The "Oh-Sixers" got going on the other two nets along a flower-laden row further down.

Anyone assuming that mist-netting birds is a leisurely affair is wrong! It's nerve-racking! The next three-and-a-half hours were a frenzy of, "Hey, Ernesto, hummer on net 2, shelf 3!" "Ernesto, quick, two just hit net 1, shelves 1 and 4." "Ernesto .... help!"

Carman rushed from net to net, while Hilton was tied to his station coping with the deluge of birds. With agonizing satisfaction, he had



A volunteer scribe records the details for each bird.



Ruby-throated hummingbird caught in a mist net.

to close down the nets at one point to catch up with the backlog, not wanting to keep our little prisoners a moment longer than necessary.

So what do you do with a captive ruby-throated hummingbird? Plenty!

A scribe is appointed to enter the details. Details for each bird included the date, time and location of catch, and band number. Sex and age were determined: adult males were starting to grow their characteristic red gorget (throat feathers), but females and some juvenile males both have white throats and white-tipped fan-shaped tail feathers.

We caught no mature males with a full red gorget — had they already flown north earlier than the females and juveniles? (The 2007 Operation Ruby-Throat trip will be slightly earlier in 2007 to explore this possibility.)

The captive was then weighed by being popped rather unceremoniously into a pre-weighed tube to reduce stress and stop it escaping. Then wing tips and culmen (base of bill to its tip) were measured, tail feathers inspected, signs of wear noted, number of red feathers on throat counted, fat estimated and amount of molt calculated.

Finally, Hilton attached a minute band to the hair-thin leg (females get a right-leg band; males, the left), clamping it delicately while we caught our breath in wonder at this micro-surgical procedure. As an


ultimate insult to the bird (allowing for easy identification of any recaptured birds), the throat of each was colored with a temporary, non-toxic blue ink.

We all took turns and were rewarded at the end of each individual session by holding the tiny, rather indignant, captive in our palms before it suddenly whirred off to freedom.

That morning, 18 ruby-throats were caught and banded, three more than during the entire two-week trips in 2004–2005. We noted that most of our captures were in mid-molt, still sporting very scruffy old flight feathers, proof of their buffeting, exhausting trip south.

I sadly had to leave the “Ob-Sixers” and their cutting-edge field work that afternoon, but a gleeful message from Hilton a week later revealed that a further 33 ruby-throats were banded, making a grand total of 51.

The group, too, returned home — each, I’m sure, with an unstated but avid desire to possibly be the first ruby-throated hummingbird observer to record one of “their” Costa Rican birds in its northern breeding grounds. Enough to make any citizen scientist proud.

For more information about the Hilton Pond Center, visit [www.hiltonpond.org](http://www.hiltonpond.org); information about Operation Ruby-Throat and how you can participate in their February, 2007, trip may be found at [www.rubysthroat.org](http://www.rubysthroat.org). 

Operation Ruby-Throat’s trip to Costa Rica was comfortably based at the Buena Vista Lodge Adventure Center. The family-run mountain resort, located 19 miles northeast of Liberia, lies on a rambling old 2,000-acre estate, part cattle-ranch, part pristine forest. Ninety wood and stone cabins climb a landscaped hillside, with three restaurants to cater to the mostly international platoon of guests.

Winding trails, a plethora of recreation choices and clever layout avoid any sense of being “part of the crowd.” In fact, I was surprised when told the Lodge was running at capacity. I rode one of the 300 sturdy farm ponies, accompanied by my guide, Edwin, up the mountainside to an extensive spa set deep in the forest where

rustic stone pools receive Rincon de la Vieja’s hot spring waters for a relaxing soak. (Visitors of a less equestrian nature are transported in the Lodge’s open-sided tractor trailers.) Naturally steam-heated sauna, volcano-mud facials and full cocktail bar all add to the pampering.

We rode over to the 50-meter Borinquen Waterfall, noticing several zip lines stretching high above the river gorge. Edwin explained the resort’s policy to employ and train mainly local residents in the many different positions needed for jobs that range from bilingual spa attendants, canopy tour guides, cooks, stable boys and a masseuse — certainly, there was an unaffected, straightforward courtesy among all the staff I dealt with.

Perhaps the oddest attraction among the aerial bridges, zip lines, hiking trails and serpentarium is the 425-meter-long waterslide powered by a nearby stream that barrels people down through steep forest rather like a tropical toboggan course. The curves and bumps ensure a most exhilarating, if undignified, arrival at the bottom pool. After all the action, the only option remaining is to toast the sunset from the Lodge’s truly spectacular cliff-top bar, taking in the unobstructed vistas of the Guanacaste hills and plains toward the Pacific Ocean nearly 25 miles away.

