General Field Notes

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Calliope Hummingbird in South Carolina

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On 4 December 1999, Judy Webb was planting flowers in her yard in Greer, SC, when she was startled to hear the whir and 'chittering' of a hummingbird as it passed over her head. She had only learned the day before (from an article by Jennifer Greer in *Southern Living* magazine) of western hummingbirds that wintered in the South. She quickly located the tiny emerald beauty feeding on Sasanqua blooms. After watching briefly, she ran inside to get her husband, Charles, and his camera. They were able to locate the bird and take some quick documentary photos as the bird perched on a low branch of a leafless maple tree (*Acer sp.*). Darkness was falling, and the bird soon disappeared into the night. The Webbs retrieved their hummingbird feeders (which had been packed away since the end of October) and filled them with fresh mixture of sugar water. By noon the next day, the bird was a regular visitor at the feeders.

Mrs. Webb relocated the *Southern Living* magazine and found its reference to Bob Sargent. She called Sargent on 6 December and described a small hummingbird with a few rose-colored feathers in the gorget area. She insisted that the color of the reddish feathers in the throat was not the same as that of a Ruby-throated Hummingbird, *Archilochus colubris*. She provided a detailed description of a small hummingbird with a short bill and tail. She noted that the bird displayed a "yellowish wash" just in front of the wrist section of the wing. Her description seemed to Sargent to fit that of a young male Calliope Hummingbird. Mrs. Webb forwarded to Mr. and Mrs. Sargent a series of photographs that confirmed all parts of her description except for that of the rose-colored feathers in the throat.

The Sargents arrived at the Webbs' yard at about 11 AM EST on 10 December. The Sargents recognized the bird as an immature male Calliope Hummingbird, *Stellula calliope*. It was hawking insects and feeding some 10 m distant on one of several varieties of *Camellia japonicas*. The Sargents promptly

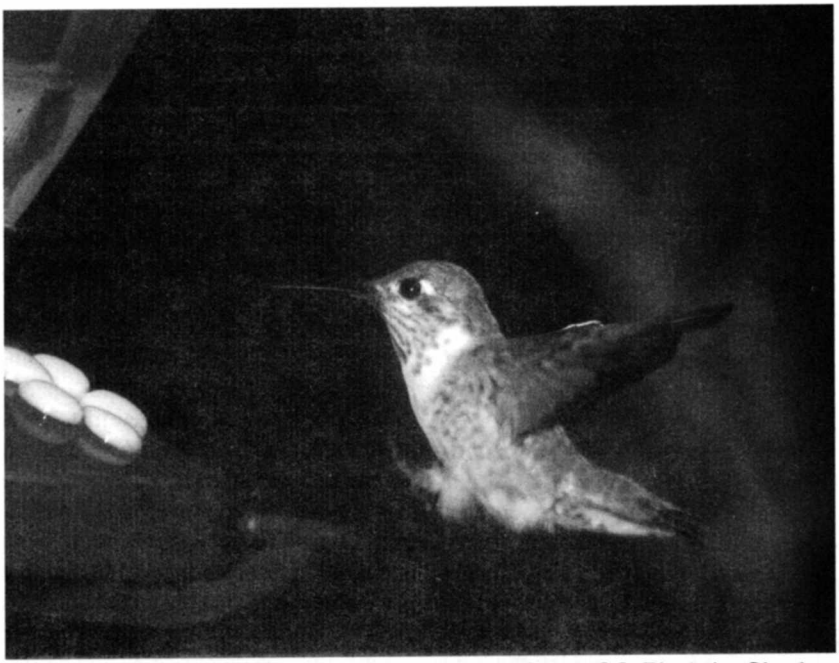

Fig. 1. Immature male Calliope Hummingbird in Greer, SC. Photo by Charles Webb, MD.

erected their cage-wire trap, baited it with the hummingbird feeder, and captured the bird.

Mr. Sargent's initial impression was that the bird was robust and remarkably healthy. Sargent found the rose/carmine feathers in the throat to be dazzling as the bird was secured in a mesh holding bag prior to banding. Sargent banded the bird at 11:36 AM EST with band # 3000Y69014. The following measurements were taken with a Starrett digital caliper: Wing- 40.07mm, tail-21.1mm, and exposed culmen-15.07mm. His weight on an Ohaus digital scale was 3.13 grams. About 40% of the upper mandible was grooved when examined for striations with an 16x jeweler's loupe. The grooves were shallow and would have been difficult for Sargent to have detected without the loupe. These grooves confirmed that it was a hatching year individual. The incomplete gorget and the white tips of the outer rectricies confirmed that this individual was an immature Calliope Hummingbird. The many rose-red gorget feathers confirmed the sex as male.

The bird had a layer of fat that Sargent graded as one on a scale of zero to three. The only molt was a few pinfeathers on the belly. The rectrices were short and wide with blunt tips. The outer rectrices were hourglass shaped and bordered with a reddish/rufous trim along the restricted sides of the feathers. Sargent recognized this feature as diagnostic in Calliope Hummingbirds. Sargent took a few old and worn feathers for immediate documentation purposes. The Sargents hope the feathers will be used later for DNA studies similar to those that are now ongoing in other species. Several in-hand macro photos were taken and submitted to the South Carolina Bird Records Committee.

For several years the Webbs had been trying to restore a couple of acres around their home to become a bird habitat. Now, the first Calliope Hummingbird reported from South Carolina had been trapped, banded, and released at their home.

Early the next morning after the Sargents left, birders from across the Carolinas began arriving at the Webbs' home to see the juvenile male Calliope. In all, over 150 people from seven states and three from England would watch the bird from the comfort of a heated sunroom and share the wonder of such a tiny creature braving the elements.

Within days of the Sargents' departure, freezing weather killed the last of the nectar-producing flowers. The Calliope's visits to the feeders became longer and more frequent. Keeping the sugar water from freezing at 26° F became a concern. The Webbs mounted an outdoor heat lamp under a protective cover just above and to the side of what became the primary feeder. They began using it before they felt it was necessary in order to help the bird adjust to it before it became critical. The Webbs also mounted a small grower's thermometer to the feeder. Adjacent to the feeder is a 5 m juniper (*Juniperus sp.*) strung with white Christmas lights year-round. The Calliope spent chilly mornings in the juniper, perching near a light, seemingly to seek its warmth, and making frequent trips to the feeder. The Webbs added another string of lights, clumping them in the area he most often used, and left the lights burning until the day warmed and he flew off to seek insects.

On a rainy day in mid-December, the Webbs observed that the bird was finding shelter by perching on the top and bottom brackets of a planter attached to the brick wall under the eaves of their house. The Webbs' house forms a U shape around a deck that varies from 2- 3 m above the ground. The feeder (with heat lamp) was just outside a sunroom on the deck. Beyond the feeder, at the far end of the deck, opposite and directly visible from the sunroom, was the wall planter. A nearby outdoor electrical outlet allowed the Webbs to provide one more spot of warmth for the bird. The planter contained an ornamental cabbage that had grown toward the light and created a protected area behind it. Mrs. Webb placed a heating pad in a black plastic garbage bag, folding the bag to be flat around the pad. She put the pad behind the cabbage, folded into an L shape with half on the bottom of the planter, and half against the brick wall. She then covered the plastic with sphagnum moss, firmly placed some sticks for perches between the two sides of the heating pad, and plugged in the pad. She left the pad on its lowest setting, hoping the bird would detect the source of warmth before it was really needed. Later, the Webbs added a hummingbird feeder under the eave in the corner of the house near the planter.

On 22 and 23 January, 2000, 3" of snow and ice fell and completely coated all of the trees in the yard. Another ice storm hit on 29 - 30 January. The Webbs' house is on a small mountain, where temperatures are lower and ice coatings last days longer than at lower elevations. For three weeks, temperatures never rose

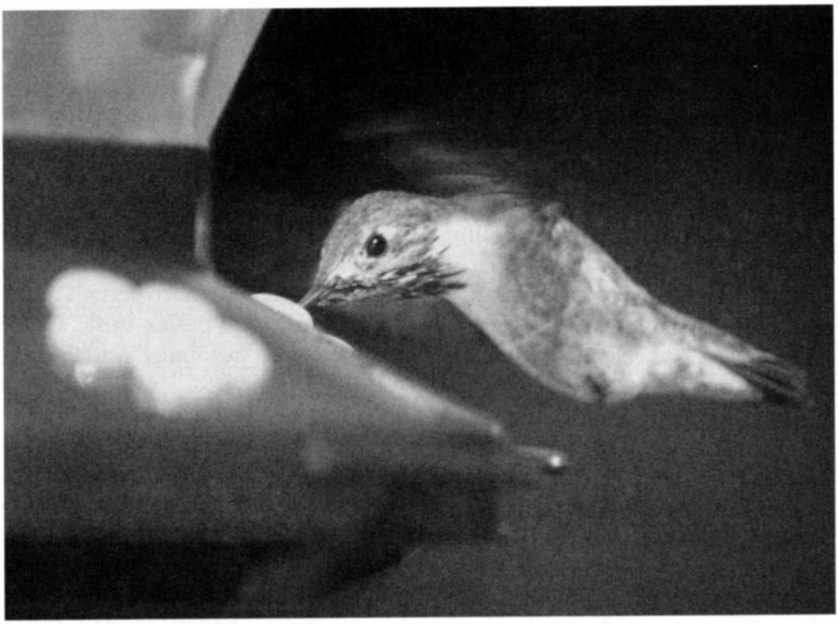

Fig. 2. Immature male Calliope Hummingbird on April 11, 2000, two weeks before its departure. Photo by Charles Webb, MD.

above freezing, and for ten days tree branches were coated with ice. Night temperatures fell to 12° -15° F. The Webbs arose before daylight to warm the sugar water to indoor temperature, then waited in the sunroom for the bird's tiny form to appear in the light of the heat lamp. The Calliope would often perch with his back toward the lamp, appearing to bask in the warmth. For much of this period, he spent all day between the juniper and the primary feeder. For his final feeding of the day, he would frequently move to the corner feeder under the eave, enjoy an extended feeding period, then dive down, disappearing into the heated wall planter.

The Webbs became concerned that the bird was not getting adequate protein. They collected droppings under the feeder on waxed paper, and Dr. Webb checked the samples microscopically. The large number of insect parts reassured the Webbs that the bird was able to glean insects within the juniper, so they never added any supplements to the sugar water. The Webbs offered the bird a sugar:water ratio of 1:4 for most of the winter. On some of the coldest days, they briefly, increased the concentration slightly, but never as much as 1:3.

On 8 February, the last of the snow and ice disappeared from the yard and deck. Days were warmer, and there were extended periods midday when the Calliope did not appear at the feeder. He was always dependable, however, in the mornings and afternoons. His timing adjusted to the extending daylight hours, and he began to show signs of molting. The weather in Greer was erratic, with heavy rains, thunderstorms, hail, and high winds over the next two months. The bird began roosting away from the house on clear nights, and the Webbs were unable to discover where he roosted when he flew away after his final feeding. He consistently spent stormy, rainy, or windy nights, however, in the wall planter.

As his molting accelerated, the bird spent more nights in the planter. By the end of February, he had lost so many feathers that the Webbs could not imagine how he could fly at all. By the end of March, his back was brilliant, with bluish-emerald new feathers and new wing feathers that did not yet reach the tip of the tail. He showed little gorget development, however.

By early April, daytime temperatures ranged from the 70's to 80's, nights in the 40's and 50's. Now the Calliope only rarely roosted away from the wall planter, regardless of the weather. The Webbs speculate that he was preserving body fat for his upcoming migration. He was absent for extended periods during the day, but he always returned within an hour or two before dusk. Gorget development accelerated suddenly, with the white becoming astonishingly brilliant and rose streaking through the white.

On 10 April, at 7:25 PM, the Calliope was perched and feeding when a rocketing Ruby-throated Hummingbird knocked him off his previously uncontested perch on one of the feeders. The Ruby-throat appeared to have the upper hand for a time and began using at the feeder in the corner. The Calliope made a level attack to the Ruby-throat's back, and the new arrival fled. The Calliope then fed with his back to the protected corner (a new position for him) and dropped into the heated planter for the night. Over the next few days other Ruby-throats arrived. The Webbs put more feeders out, and although there were some battles, feeding was mostly done in alternating sessions. The weather was particularly unsettled. Finally, on 15 April, a front was moving out late in the day. The Calliope arrived at 8 PM for his final feeding for the day, then went to the planter. On Sunday morning, he apparently left before the Webbs got up. Fog was burning off to a clear day, and a large region of high pressure covered the South. The night was moonlit. The Calliope and the Ruby-throats all apparently took advantage of the good traveling weather, and for the first time in 19 weeks, no hummingbirds were at the feeders.

The Sargents feel that there is a slight chance that the Calliope will return for the winter of 2000-2001. The Sargents also feel that the sources of warmth were not significantly important and that the bird could have survived merely with an unfrozen source of sugar water, and perhaps even without that. The Webbs noted, however, that during the three weeks of icy weather many other birds had availed themselves of the warmth of the heat lamp.

The Webbs are not avid birders, only people who avidly feed birds. They found their experience with the Sargents to have been memorable and their intimate contact with what they describe as a "fragile jewel of life" to have been humbling. This year, like many others throughout the Carolinas are beginning to do, they will leave their hummingbird feeders up even after the end of October.

If accepted by the South Carolina Bird Records Committee, this will be the first record of Calliope Hummingbird for South Carolina. Chairman Lex Glover does not expect much debate regarding this bird, but the Committee's backlog will prevent a decision for an indefinite time.