

# First Record of Broad-tailed Hummingbird (*Selasphorus platycercus*) in South Carolina

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On the morning of 20 September 2021 we deployed several 2 m x 12 m x 30 mm mist nets as part of our general bird banding program at Hilton Pond Center for Piedmont Natural History (York, South Carolina). During the 9 a.m. check we noticed a hummingbird in a top net shelf near several sugar water feeders. When we extracted the hummingbird, we saw it was slightly larger than a typical female Ruby-throated Hummingbird (RTHU), the breeding species we typically band at the Center. We also immediately noticed the wing was rather long, and the #10 (outermost) primary feather was straight and with a thin vane on the leading edge. This was quite different from the configuration of a Ruby-throated female's wider, slightly curved #10.

Still thinking this was a female hummingbird of some sort, we looked at the gorget and were surprised to see three metallic feathers, one red, one green, and one red-and-green. In RTHU only males have iridescent red feathers, so our suspicion was growing.

Our attention then went to the bird's tail feathers (rectrices), which had rufous bases. This absolutely ruled out Ruby-throated Hummingbird and led us to suspect one of the western vagrant *Selasphorus* hummingbirds that, with increasing regularity over the past three decades or so, have been showing up during non-breeding season in the Eastern United States. These include Rufous Hummingbird (*S. rufus*, which now occurs every winter somewhere in the Carolinas); Allen's Hummingbird (*S. sasin*, which strongly resembles *S. rufus* but is much less common in the Carolinas); Calliope Hummingbird (*S. calliope*, a smaller species that appears rarely in the East); and Broad-tailed Hummingbird (*S. platycercus*). We banded two vagrant Rufous Hummingbirds at Hilton Pond Center in November 2001 and September 2002, but the new capture's long wings, narrow outer primary feathers, and fully rounded rectrices suggested a different *Selasphorus* species.

When encountering a *Selasphorus* hummingbird, one definitive way to determine species is through measurements. We took several, using criteria described in Pyle's *Identification Guide to North American Birds* (1997). The bird's weight was 3.50 grams, about the same as a typical female RTHU, so this measure was not diagnostic. However, compared to all four *Selasphorus* species, our hummingbird's measurements of a 51.1 mm wing chord, 31.0 mm tail length, and 20.1 mm culmen (top ridge of exposed bill length) each indicated the bird in hand must be a Broad-tailed Hummingbird (BTHU), a species that breeds in the Rocky Mountains and had never been reported from South Carolina.

To verify the bird's gender we needed to age it, using a hand lens to examine its upper mandible. In young hummingbirds, the bill shows many tiny corrugations or

etchings that fill in and smooth out as the bird ages. Our bird had a smooth bill with very few corrugations near the base, indicating it was an adult that had to have hatched out before the 2021 calendar year. Thus, as an adult bird, it had to be female, despite its three metallic gorget feathers; adult male Broad-tailed Hummingbirds resemble adult male Ruby-throated Hummingbirds, complete with full red gorgets (Immature male RTHU may have one or more metallic red throat feathers).

Despite its superficial similarity to an adult male RTHU, an adult male Broad-tailed Hummingbird has a gorget that's a bit rosier than ruby, has long wings, is somewhat larger, and has rufous in the rectrices. In addition, an adult male Ruby-throat has a forked tail, while the Broad-tailed's name is derived from a tail configuration that is rounded in all age and sex classes. (Female and immature male RTHU have rounded tails.) The #10 primary in an adult male BTHU has a flipped-up tip, an in-hand characteristic that also differentiates it from an adult male RTHU.

In dorsal view our adult female Broad-tailed Hummingbird looked very much like an adult female Ruby-throat, except the long wings again stood out. There was no brown edging to the bird's back feathers, another sign that would have indicated an immature hatch-year individual.

Ventrally the BTHU looked even less RTHU-like, with rusty flanks, rufous in the tail, and those metallic gorget feathers. As in female and immature Ruby-throats, female and immature male Broad-tailed Hummingbirds have white tips on the outer three rectrices.

After banding the new capture and taking photos needed to document a new state species, we inserted the bird's bill into one of our sugar water feeders and watched as she drank her fill. We have not observed her since banding and release.

There is one photographic account for Broad-tailed Hummingbird in December 2001 from North Carolina (Campbell 2003) and several records from Georgia. eBird shows the species has been encountered numerous times along the central Gulf Coast outside of breeding season.

## References

- Campbell, Susan. 2003. First Broad-tailed Hummingbird (*Selasphorus platycercus*) Record for North Carolina.
- Pyle, Peter. 1997. Identification Guide to North American Birds. Part I. Bolinas, CA. Slate Creek Press.



Gorget of adult female Broad-tailed Hummingbird, showing three metallic feathers.



Right wing of adult female Broad-tailed Hummingbird, showing long, straight outermost primary feather (#10) with narrow leading vane.



Lateral view of adult female Broad-tailed hummingbird showing wings extending nearly to tip of the tail.





Dorsal view of adult female Broad-tailed Hummingbird, showing no buffy feather edges that (in September) would suggest an immature individual.





Ventral view of adult female Broad-tailed Hummingbird.



Bill of adult female Broad-tailed Hummingbird, showing smoothness along its length. Immature birds have some degree of etchings or corrugations that smooth out over several months.

All photos by Bill Hilton, Jr.