

PUT A RING ON IT— Banding in the Hummingbird Capital of the United States with the Hummingbird Monitoring Network

MY HANDS ARE SHAKING. MY HEART IS RACING.

This is how it feels holding a hummingbird in my hands for the first time. The tiny bird is calm, although her heart is beating around 1,000 times per minute. That is not a cause for alarm, it's a normal heartbeat for hummingbirds. I was volunteering with the Hummingbird Monitoring Network (HMN) in the Huachuca and Chiricahua mountains. My head was spinning from everything I learned about banding hummingbirds.

The HMN is a unique organization dedicated to studying and conserving hummingbird diversity and abundance throughout the Americas. It was founded 20 years ago by Susan Wethington, Barbara Carlson, and George West to address the lack of hummingbird population trend data. The HMN monitors hummingbirds at five locations in Arizona, and various sites in British Columbia, Colorado, Idaho, Montana, Utah, and Wyoming. It also collaborates on research projects and partners with state and federal agencies, other nonprofits, universities, and citizen scientists in the Hummingbird Conservation Networks. There are multiple opportunities for volunteers.

Hummingbirds are captured for banding at feeders. A fine mesh fabric is pulled over a metal frame around the feeders and raised up. The nylon fishing line holds the device up and travels 25 feet to the trapper who releases it when hummers are inside the trap. Captured birds are placed in mesh bags, which are taken to a laundry carousel on the banding table to wait their turn to be measured and banded. Black-chinned Hummingbirds, the most abundant species in the area, are very vocal in protesting their brief loss of freedom.

Banders collect a wide range of data including the general health and age of the birds, and September–October is the busiest time during the fall migration. The HMN sends the data to the Bird Banding Laboratory which permits people to band birds. “We get data on pollen and beak length,” explains bander Birgit “Birdy” Johnson. “Some of that helps to identify what flowers hummers are visiting. We track when they are putting on fat, and how much they are eating before migration.”

The most important measurement is tarsus size aka ankle circumference. One of the inventions of Lee Rogers, who was developing and making hummingbird banding tools for the past 15 years, is the Tarsus Gauge, a ruler with a letter corresponding to the size of the ankle. “When female hummingbirds are gravid and nesting, their ankles swell like those of pregnant women,” reveals entomologist Michele Lanan, who bands at the George Walker House in Paradise. “So, they need a larger band size.”

Both Lanan and Johnson have received training from master bander Susan Wethington who is serving as the organization's Executive Director. The HMN has almost 200,000 bird captures in its data set. Lanan is analyzing it with Wethington to find clues on how climate change affects hummingbirds. “With some of the non-migratory species, I see a strong climate trend relating to when they start laying their first egg. In one of the species, the female is laying the first egg 1½ days earlier every year over 20 years. It is almost a month earlier than before,” says Lanan.

Banding data may also reveal range expansions. “It seems like more birds have been overwintering here in Paradise,” Lanan reflects. “Also, which bird shows up at which site has changed. Here we got more Blue-throated Mountain-gems than ever before. Trends like that might end up being climate-related, due to changing vegetation or resources.”

Observations from the spring 2022 banding season:

- Delayed molt of wing and tail feathers of Broad-tailed Hummingbirds was observed, which can be a response to poor conditions at their wintering grounds.
- This spring has been similar to last year in terms of species, with Fort Huachuca being the most diverse.
- Birds arrived a little earlier than last year and the breeding season started earlier as well. At two sites, 50% of females were pregnant in early May.
- An 8-year-old (I) pregnant Broad-billed Hummingbird was captured.
- Spring migration seemed to be over in Arizona by May 5–11. Hummingbird numbers dropped at the feeders as flower resources became abundant.

The HMN's Hummingbird Banding Training Workshop is taking place August 31–September 10, 2022, at the Southwestern Research Station in Portal. Contact: GABY@SAVEHUMMINGBIRDS.ORG to participate!



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Banding table in Paradise, Arizona (Juntunen)



Hummingbirds are banded when they are in a holding bag. (Juntunen)



Hummingbird hushes when weighing hummers they are weighed if a brand of Huggies wetting. (Juntunen)



Bander Birdy Johnson measures the length of the tail feathers of the hummingbird at Ft. Huachuca. (Juntunen)



Carmen Rodriguez was not in a suit to band after the banding process like the first Arizona hummingbird. (Juntunen)



Michele Lanan bands, Jackie Lewis writes down data, and Victoria Arriaga-Pagan feeds a bird in Paradise. (Steven Goldstein)

TUCSON AUDUBON IS EXCITED TO START WORKING WITH DR. KATY PRUDIC'S LAB at the University of Arizona to study pollinators and plants in the desert southwest. As part of this work, Erin Zylstra (Tucson Audubon Quantitative Ecologist) will be helping to analyze data on western hummingbird populations with the HMN. Stay tuned for updates on this collaborative project that will help inform conservation of hummingbirds in the Sky Island region!