

FALL 2024 DIURNAL RAPTOR BANDING SUMMARY

Our diurnal station ran from Sep 9 - Dec 2 with 70 operational days and 374.5 operational hours.

We banded almost every day from Sep 9 - Oct 31, then banded only during days that were favorable for migration between Nov 1 - Dec 2.

We banded 154 diurnal raptors, which is an average capture rate for our station. Here is our species breakdown:

- 122 Red-tailed Hawks (RTHA) (making up 79.2% of our captures)
- 17 Sharp-shinned Hawks (SSHA)
- 13 Cooper's Hawks (COHA)
- 1 Red-shouldered Hawk (RSHA)
- 1 Broad-winged Hawk (BWHA)

Trends and Observations



A sharp-shinned Hawk banded on Nov 5. Photo: Kellie Hayden.

Of note this year, we did not capture any falcons. We had 1 Peregrine Falcon, 1 Prairie Falcon, 3 Merlin, and a handful of American Kestrel capture opportunities, but these birds evaded our traps. Falcons are especially difficult to capture compared to other raptor species we typically band due to their great eyesight and agility, but I (Kellie) intend to examine some of the factors that may have contributed to these opportunities not leading to captures. For example, data needs to be analyzed but I suspect that unfavorable winds may have played a role in small falcons evading our traps; unfavorable winds can affect our traps' efficacy, and we had many days of unfavorable winds.

We had many days of strong south winds, which are not always conducive to migration (birds may still move during these days, but their flight paths and height while traveling along the hills are altered). We also had to shut down several days due to heat; while this is a trend that I personally noticed starting last year, this year's out of the ordinary weather was more pronounced than in 2023. This year I implemented guidelines for banding in hot conditions that dictates when to shut down operations, both for the safety of people and birds. We historically have not needed these guidelines, but I strongly suspect frequent autumn heatwaves that are hot enough to cause heat illness will be our new normal. A full SOP outlining modified protocols during heatwaves will be complete in time for 2025 operations.

Also of note, we had a period of hot weather that correlated with dip in capture activity in October for about two weeks, when we would typically expect peak Red-tailed Hawk captures. During the last week of October when temperatures began to drop again, our Redtail captures picked up again. As a result, our RTHA capture peak was pushed more than 2 weeks later into the season. This

reinforces what some banders who study Red-tailed Hawks have observed: RTHAs appear especially prone to “short-stopping,” meaning they are especially uninclined to migrate South until temperatures drop.

One final observation that bucks our typical trends: our peak for Sharp-shinned Hawk captures were far later than expected. We did not begin to have serious opportunities to capture sharpies until October, with Sandy banding our first SSHA of the season on Oct 4. We typically expect to capture this species in early September through mid-October! This year, we set a record for the latest SSHA capture on record for our station, with Jerry banding our last sharpie on Nov 14. While it was an unsuccessful capture, I did have one final opportunity to capture a SSHA on Nov 24, which further pronounces how late our SSHA season was. At this time, I have not compared our banding data against our HawkWatch data to determine whether A) sharpies in general migrated especially late, or B) the tower’s peak SSHA observations do not line up with our peak capture time this year.

Notable Days and Captures



Left: A hatch-year Krider's subspecies Red-tailed Hawk banded on Nov 20. Photo: Kellie Hayden.



Right: A male Cooper's Hawk banded on Oct 10. Photo: Kellie Hayden.

Our busiest day was Sep 22 with 16 captures (13 RTHA and 3 COHA). This day had moderate northwest winds, a ~15 degree F drop in temperature, and an especially deep front that reached up into Canada—some of the best conditions possible for raptor banding at our location!



An adult Red-shouldered Hawk captured, banded, and released on Sep 24. Photos: Jerry Toll.

This year was especially exciting in one respect: we had two Red-shouldered Hawk capture opportunities, with one of those opportunities being successful! Anecdotes from birders in the past few years claim RSHA are expanding their range into our region. Our HawkWatch tower and banding station are well-positioned to determine whether the data in future years will back up these anecdotes.



An adult Red-tailed Hawk captured, banded, and released on Oct 25. This RTHA weighed 1550 grams—roughly 200 grams heavier than our typical large RTHAs. Photo: Kellie Hayden.

When our “October slump” ended, we had a decent day on Oct 25 with 9 captures (3 SSHA and 6 RTHA). Two of these RTHA were especially large and took size 8 bands; it’s not unheard of for large RTHA to need this band size, but we usually only band 1 or 2 birds a year that require a size 8.

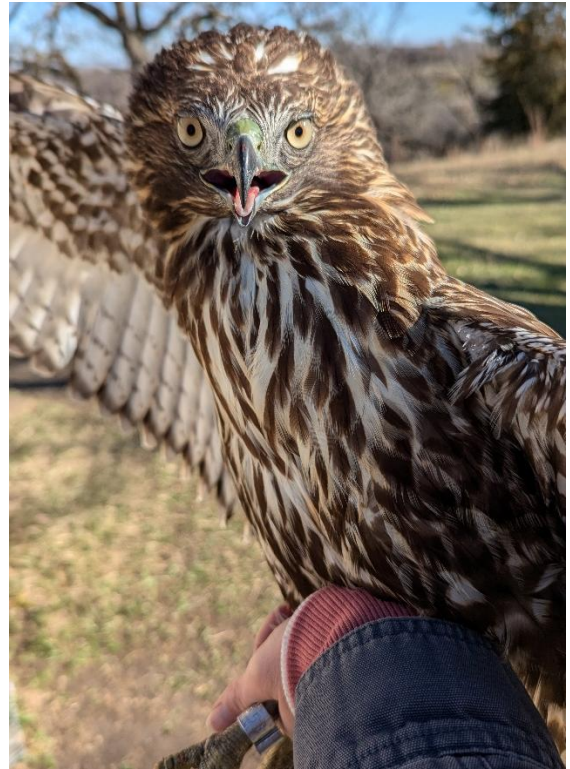


Top and Bottom Left: A second-year dark morph Harlan's subspecies Red-tailed Hawk banded on Nov 10.

Top Right: A hatch-year dark morph Harlan's subspecies Red-tailed Hawk banded on Nov 20.

Bottom Right: A hatch-year intermediate morph Harlan's subspecies Red-tailed Hawk banded on Nov 19.

Photos: Kellie Hayden.



We had a handful of gorgeous Harlan's subspecies RTHA captures this year. We banded 3 hatch-year dark morphs, 1 hatch-year intermediate morph, and 1 adult dark morph. This subspecies typically breeds in western Alaska or the Yukon.

Outreach

- We hosted two banding station tours with 41 guests from UNO. They were especially interested in learning about some of the observations we've collected on raptor migration over the years.
- An additional 14 guests visited the banding blind during non-demonstration days.
- We had one fully trained bander and long-time volunteer (Abbe!) travel from the East coast for a week of banding to brush up on her skills. We also began training one hopeful apprentice (Danny!), focusing on protocol and ethics. 4 additional volunteers joined us throughout the season and contributed hours when they could.
- **Volunteers contributed about 472 hours to banding blind operations!**



An adult Broad-winged Hawk captured, banded, and released on Sep 23. Photo: Kellie Hayden.

Other News

We have one peer-reviewed article sent to press! A Red-tailed Hawk that we banded in late November 2023 exhibited a deformity that has seemingly never been documented in a wild RTHA. The publication is slated for Journal of Raptor Research's March 2025 volume.

FALL 2024 NORTHERN SAW-WHET OWL BANDING SUMMARY

For our annual contribution to Project OwlNet, we targeted Northern Saw-whet Owls (NSWO) during banding operations on 24 nights from Oct 12 - Dec 2. We banded for 72.5 operational hours, banding 2-6 hours after sunset each night.

- We banded 30 NSWO this year. Our station typically ranges from about 18 to 100 banded NSWO in a season.
- Ages were the following: 15 HY (hatch-years), 5 SY (second-years), 5 ASY (after-second-years), 5 AHY (after-hatch-years).
- Sexes of banded NSWO: 2 male, 6 unknown, and 22 females

Trends and Observations



A Northern Saw-whet Owl scrutinizing one of the banders prior to release. Photo: Kellie Hayden.

This season was another odd one, similar to our 2023 owl season. We had expected an irruptive year due to early reports of lots of Northern Saw-whet Owls from more northerly stations, but our numbers do not reflect an irruption of migrants in our region. This may in part be due to overall unfavorable weather conditions in our region.

During the beginning half of the season, we had many nights of unfavorable high south winds like our weather in Fall 2023. In the latter half of the 2024 season we got more consistent north winds, but this also resulted in high humidity through either active precipitation or extremely thick fog. These conditions could have presented safety issues for both the owls and our volunteers, which lead us to shut down operations early, or cancel operations entirely, for several nights. On some nights, sustained northern wind speeds were recorded above 15 mph, which is not often conducive to mist netting at our owl station. A consistent theme throughout the entire season was warmer than normal temperatures.



Six NSWOW captured, banded, and released on Nov 17. Photos: Kellie Hayden and Kris Hammond.

This year we also had higher levels of Barred Owl (BDOW) activity on the ridge where our net array sits compared to previous seasons. We usually never have BDOW problems, but we were still conscientious of this change in our lineup of potential NSWOW predators. On one night in particular BDOW were very vocal. While they were not near the array we were especially careful to watch the nets, but that night we had no NSWOW captures. Thinking the increase in BDOW activity may have been due to a new owl moving in and establishing territory, we attempted to lure BDOW into the net array on a night we were not luring for NSWOW. This was our attempt to show the BDOW that flying along this ridge may result in being captured. Interestingly, 4 BDOW came in close to the nets (2 to the north of the nets, and 2 to the south) and responded to the audio lure. Based on what we could see and hear, however, none of them flew over or through the net array's path. Maybe they already know the array is there every Fall and avoid it, or maybe the ridge we chose for our nets is also a territory boundary. After the night of lots of BDOW vocalizing and no NSWOW captures, BDOW vocalization frequency dropped to expected levels and we started catching NSWOW again. I'm hoping to hear from other Project OwlNet stations if they've had similar observations insofar as distant BDOW vocalizations correlating with drops in NSWOW captures.

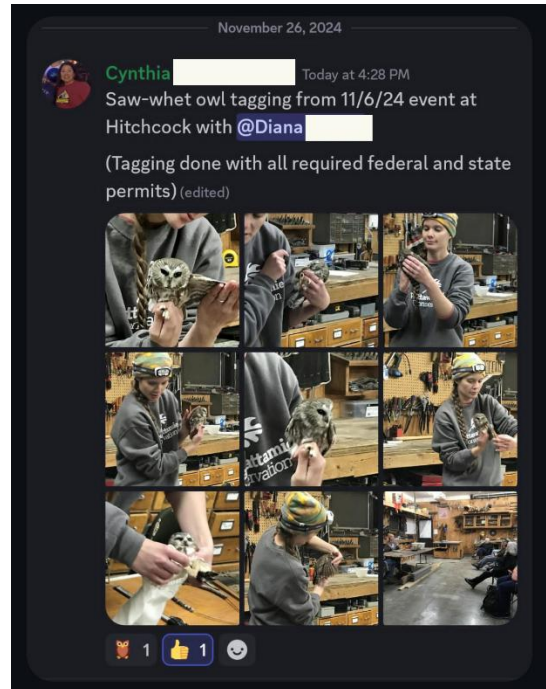
Notable Nights and Captures

Each year, our peak capture time for NSWOW is typically Oct 28 - Nov 9. This year, our highest capture nights were Oct 24 and Nov 17, with 4 and 6 new owls respectively. The number of previously unbanded owls captured on Nov 17 was a surprise, but it does line up with what we have seen at our diurnal raptor station this year with our Red-tailed Hawk and Sharp-shinned Hawk capture peaks occurring later than previous years.

We had one foreign recapture this year, which turned out to be an owl that our own station banded in Fall 2022 as a second-year bird!

Outreach

- We hosted one public banding demonstration with 8 guests. They asked a ton of great questions, and of course, fell in love with these tiny owls. One attendee took photos (right) to share with friends who belong to an astronomy club, and one of Kellie's friends apparently belongs to that same social circle. Small world!
- An additional 8 non-volunteer guests visited the station during non-demonstration nights.
- We helped 5 individuals begin their bird banding training journey, focusing on protocol and ethics of bird banding and mist-netting.
- **Volunteers contributed about 239 hours to owl banding operations!**



Thank you so much to our volunteers for helping make another banding season happen, and thank you so much to Pottawattamie Conservation for providing so much support to keep the station running! Jerry and I are looking forward to diving into our years of data this winter and spring to learn more about how raptor migration has changed over time in the Loess Hills, and hope to share what we find out with you all soon.

Raptor Banders Jerry Toll, Sandy Reinken, and Kellie Hayden

Owl Banders Jerry Toll, Kellie Hayden, and Kris Hammond