2nd Update on the
Shenandoah Valley Raptor Study Area
May 1, 2024

A Reminder to Live Life to the Fullest

On April 7th our friend and fellow falconer, Leah Martin, came out to help us with kestrels. It was a gorgeous spring day and we got lots of boxes checked while thoroughly enjoying ourselves. Over dinner Leah made plans to come back when there were lots of kestrel nestlings to band. Below is a photo of Leah holding an adult female kestrel (Falco sparverius) that she helped us capture inside a nestbox. Unbelievably, as a falconer, this was her first time handling a kestrel. She liked it! This kestrel had been banded by us 4 years earlier as a nestling on the other side of the study area. She's been using the same box to raise babies since she turned one year old. To date, she's produced 12 kestrels of her own, one who is already back as a breeding female in the study area.

Unfortunately, just a week later, Leah passed away very suddenly. This newsletter is dedicated to her memory.

SVRSA kestrel progress to date

This year we have 88 kestrel nest boxes, of which 3 are positioned on the same pole so are considered not available for kestrels. Likewise, boxes that are occupied by squirrels are removed from the number of boxes available for kestrel nesting. Thus, there are 82 available nest boxes; to date, 58 are occupied by kestrels (there is at least 1 kestrel egg inside) which works out to 71% occupancy. It will undoubtedly go up as the season progresses. There are 235 kestrel eggs documented so far. We have captured 41 of 58 breeding adult females and just 3 males.

Photo taken with the new endoscope showing Jill's hand capturing a female inside a box.

The first clutch initiated in the SVRSA was the earliest ever, March 2nd, beating the earlier record by 5 days! Those nestlings were just banded and are the first of many more to follow this next month and the first half of June.

Three newly hatched kestrels and 2 eggs that will, hopefully, hatch soon. Eggshells are either eaten by the female (to recoup calcium) or removed from the nestbox. This is what we live for!

So far, just 1 (possibly/probably) failed nest attempt has occurred in a nestbox that Zig gave us. We found 4 cold kestrel eggs in a scrape covered by a couple pieces of grass. (It is likely the female stopped incubation and a starling is fixing on moving in). The average kestrel failure rate in our study area is around 15% but it isn't calculatable until the end of the season.

Kestrels are laying more 6-egg clutches than usual this year. There may be a correlation between increased clutch size and mild winter weather that preceded this spring's laying season. In 2024 so far, there are five 6-egg clutches when the norm is more like 2 of these larger clutches. The hatchability of large piles of eggs is poorer than for a normal/optimal 5-egg clutch, probably because the physical limitations of the females' brood patch size. Poorly incubated eggs fail to hatch. In the event that all 6 eggs hatch, there are more mouths to feed for a month before they can fledge, putting pressure on parents to provide more sustenance. However, we have banded many kestrel broods of 6 over the years. We shall see how these fare this year.

A 6-egg clutch of kestrel eggs.

The average size clutch of 5 kestrel eggs.

Kestrels are breeding in the same nestbox for multiple years

Over the past few years we have noticed that, instead of randomly using different nestboxes in the SVRSA, some females are choosing to nest in the same box year after year. It may be that suitable nest cavities in the study area are limited, and

kestrels may prefer a nestbox to a cramped hole in a tree. Consider the tenant who has a rent-controlled apartment in NYC, so kestrels continuously defend their chosen nest box rather than risk letting it go and then not being able to find another. When there is more time, we will try to quantify the "fidelity" of female kestrels to nestboxes over time.

What's going on in KBOX207 at Flatrock Cemetery?

Earlier this spring (April 7th) we were checking kestrel nestboxes for occupancy with our new endoscope and saw some kestrel feathers in KBOX207. Upon seeing this mess on the monitor, we put up the ladder to open the box and pulled out many kestrel feathers and bones. The box contained half-grown feathers from at least 1 male and 1 female kestrel. All were from nestlings whose wing feathers had not fully developed (half of the feather was still in the sheath which covers growing feathers). We reasoned that the nestlings from last year had died in the box so we proceeded to dig through the mound of skeletal remains to find our bird bands so we could report those unfortunates as DEAD.

However, none of us could find any banded leg bones. Our new hypothesis was that these dead nestlings were the result of a second nest attempt in the box that we missed. The records from 2023 showed that 5 nestling kestrels were banded in that box in late May. We recheck select kestrel boxes for 2nd nest attempts. The earliest clutch initiation dates allow for 2 nest attempts, but KBOX207 wasn't particularly early in 2023 (that's our excuse for missing its 2nd clutch). Oh well, you live and learn…

Fun with Barn Owls

During winter we checked some of the sites where Barn Owls (Tyto alba) usually nested and found none, which alarmed us greatly. However, our fears were unfounded, as the owls returned to nest this spring. One wonderful barn owl site that is almost always active is an abandoned metal silo that is adjacent to a huge dairy. On April 21st we sent John Hagan, a flexible and agile teenager, up into that silo to see if there were any barn owlets. He shared photos and we decided that the nestlings were too young to band at that time.

We returned on April 26th with banding subpermittee Ben Spory, who instructed our newly minted subpermittee Tim Rocke, how to band barn owls in a silo atop old, crumbling silage. This is a multi-person undertaking. One person (Lance) held the ladder for the two banders to climb into the silo's chute. The silage was abandoned in place, and it fills about 1/3 of the silo's height so banders have to climb up the chute past the level of silage so they can open a door and get inside with the owls. You need two people inside to catch and band the owlets because it is safer and sometimes the owlets clump up after banding so a single bander would have to dig through the pile (see photo above) each time to find the unbanded ones. This time, the team of Tim and Ben banded 5 of the 6 owlets because the youngest was too small to safely band. The 4th person (Jill) watches for barn owls flushing out of the silo, verifies their gender, and takes notes.

Here’s Ben in a different silo filled with old silage caves, a rat trap, and a cat!

Years ago, when Lance was younger, he and John Spahr went into this silo to band barn owls. John crawled deep into silage caves to retrieve owls for banding, and he came out sweaty and covered head to toe with bits of silage. John had to shower off before heading home but he considered the effort worth it because he documented and wrote a scientific paper on polygyny published in The Raven:

[(14) (PDF) Communal Nesting and Probable Polygyny of Barn Owls (Tyto alba) in Virginia's Shenandoah Valley (researchgate.net)](#).

We have had screech owl boxes in the SVRSA for 18 years

Last year and this winter we stepped up our numbers and now have 18 nestboxes installed specifically for Eastern Screech Owls (Megascops asio). Only one box, so far, has succeeded in hatching young.

The adult female gray screech owl is trying to hide in the bottom corner. You can see the white downy nestling and 2 unhatched eggs. Also, this box was stuffed with groceries: mice, sparrows and other goodies stashed in corners.

Lance holding the female screech owl from the nestbox mounted on a tree in background.

Another box we installed for screech owls was taken over by starlings probably the same day we installed it. The 16 other owl nestboxes are vacant so far.

Bluebird nest box news…

In addition to the 88 kestrel & 18 owl nestboxes, we have over 60 bluebird nestboxes. To date, 12 are occupied by Eastern Bluebirds (Sialia sialis), 5 by House Sparrows (Passer domesticus), 4 by Tree Swallows (Tachycineta bicolor), and one by a Carolina Chickadee (Poecile carolinensis). The photo above shows 3 bluebird eggs and 1 from nest parasite Brown-headed Cowbird (Molothrus ater). Cowbirds lay their eggs in other birds' nests, obliging the other species to raise cowbird nestlings.

Here are the 7 Carolina Chickadee eggs – so precious!

Trying to fly a Screech Owl for falconry

Lance has been dying to try raising a screech owl for falconry. He had a rescued pair about 50 years ago and wanted to have another. We finally managed to get a nestbox with the right age babies this year. The right age for imprinting an owl is “as young as possible” and we reckon this owlet was 2 or 3 days old when we got it. The eyes were still sealed shut and there was an egg tooth!

A week later it looked like a giant dust bunny and, even though he could open his eyes, he kept them closed most of the time. Maybe it was too bright for him?

The transformation into a flying bird occurred during the next week. You can see below that the facial disc around the eyes has grown in, and you can see precursors of ear tufts.

Today he is hopping and flying all over the den (with supervision). At other times, he is content in his own giant hood. Based on the weight of our owl, we are fairly sure “Toad” is a male since he is flying and he’s still under 5 oz. Females average 7 oz. and males average 5 oz. - so we got a small male! Maybe he can handle a starling, maybe not. We have no idea until we try!

Toad on May 1st, showing that his tail has not grown in yet!

In a recent memo to all bird banders in North America, USGS wrote:

"If you discuss or share your banding projects to any public platform or social media, please indicate all banding, marking, and sampling is being conducted under a federally authorized Bird Banding Permit issued by the U.S. Geological Survey."

As always, you can go to our Research Gate page to read any of our published papers: ResearchGate

Feel free to forward to friends and let them know we will add them to our email list if they contact us: Lance & Jill Morrow saltlick2003@gmail.com

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