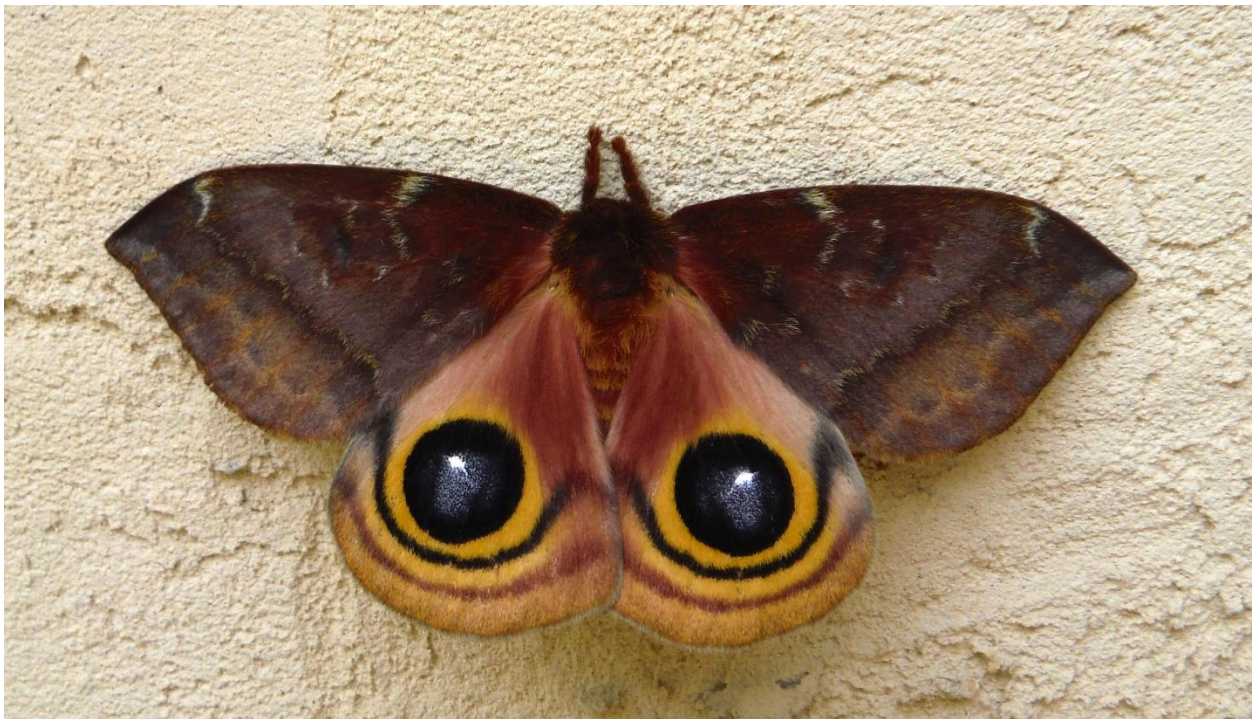


4th Update on the Shenandoah Valley Raptor Study Area 9 June 2022

What's going on in the SVRSA

Since our previous update more than a month ago, we have documented 7 more kestrel occupancies in the SVRSA. Of 82 available boxes, 72 are occupied, making this year's occupancy rate 87.8%; higher than our 14 year average of 82%. And this year's occupancy rate doesn't include 4 renestings in the same boxes after the initial nests failed.



This photo has nothing to do with bird banding, but it was found inside the SVRSA. I made a quick online search and it appears this is a female Io Moth (*Automeris io*). Sorta eye catching!

The long-term average of nest success in the SVRSA is 75%; the flipside is 25% of kestrel nest attempts end in failure (i.e. - not even a single kestrel nestling fledged). Thus far in 2022 we have had only 7 nest failures (9.7%), but this is expected to rise as the season progresses.



Above is an example of failed kestrel nest, initially there were 5 eggs, but the evidence suggests a starling disrupted the nest by removing 3 eggs and breaking open one of the 2 remaining eggs causing kestrels to abandon the nest. If the box had been predated by a snake, it probably would have left no evidence after swallowing all 5 eggs whole. Also, much of the bedding has been removed from the box and we can't think of anyone to blame except starlings. Not entirely sure why starlings didn't finish destroying the kestrel nest and make their own.

Kestrels who fail early in the season do not just give up. A 5-year-old female laid 5 eggs in KBOX74, but the eggs had disappeared by early May. She promptly laid another 5 eggs in the same box and we have recaptured her so we know it is the same female who initially failed this year. She is a SVRSA-bred kestrel who hatched in 2017 and has been using this box since 2020. She successfully fledged 5 kestrels each year (2020 & 2021) - so we are fairly confident she will succeed this year.

There is a nearly identical situation in a set of “experimental” back-to-back kestrel boxes: a wild female kestrel failed in the south facing box and has made her 2nd nest attempt in the north facing

box. Should be much cooler for the nestlings being raised up in mid-summer. So, the same female whose nest fails will often try again in same territory.

This year the adult female who produced oddly dilute plumaged kestrel chicks in the past is breeding in the same box (6th year in a row). As usual, we examined her chicks closely and found that the single female she produced this year had normal plumage. There is a 50-50 chance, according to the genetic mutation rates that we think are behind the dilution of color in her female progeny. If you wish to read our paper on the dilute kestrel: it is on our Research Gate page (in color). In case you forgot what it looks like, the photo below shows the dilute female baby from last year.



A few kestrel boxes are being used by starlings this year. Here is what it looks like using the endoscopic camera.



Picking fresh wild asparagus is one of the many rewards of checking kestrel boxes.



Fluffy young kestrels and a half-eaten garter snake that was still moving (without its head)!



None of the 5 experimental fence mounted kestrel boxes has been occupied by a kestrel to date. We plan on leaving them up through next season before declaring them undesirable to kestrels and moving them onto a pole. Starlings don't seem to mind low boxes though...

As we mentioned before, an Eagle Scout candidate made us 49 bluebird boxes so we have been replacing old boxes and installing new ones next to some of our kestrel boxes. Way back in 2017 we captured a 1 year old eastern bluebird in a box. This year she was recaptured on a full clutch of eggs in a recently installed box on the same road. So, she is 6 years old and still breeding in essentially the same area! So far this season we have banded 47 bluebirds and 13 Tree Swallows – with many more to band.



Female Tree Swallow showing brood patch and band on leg.



Gorgeous birds! The adults both put up fierce defense when we band young tree swallows, flying in from a height while snapping their beaks. Sometimes you can feel a wing brushing by.

Banding highlights from Highland County

John Spahr, with help from his wife and Patti Reum, have banded 153 kestrel chicks in 34 nest boxes in Highland County to date. That is an average of 4.5 per box! In the SVRSA to date, we are averaging 4.375 chicks per box. The kestrel banding is not yet over, as there are some chicks

who won't be old enough to band until mid-July and later. So far, no exchange of birds has occurred between our study area and Highland County.

In addition to monitoring kestrel nest boxes, John also has banded 18 owlets (screechlets?) in 5 of his screech owl boxes.

Barn owl banding

As usual, we have been banding young barn owls that are raised in the bottoms of abandoned silos. So far this year we have banded 38 young barn owls in 7 silos (2 silos are outside of the SVRSA). We banded 2 broods of 4, 3 broods of 5, 1 of 7, and another brood of 8!



Here is Tim taking post-banding photos of four fluffy barn owls inside an old red tile silo. This site has regularly been used by breeding barn owls since we began surveying in 2009. In reality, owls have probably been using this silo for many years, as it is an ideal location: safe, low light, opening at the top for adults to come and go.



Ben Spory captured 8 young barn owls that were hiding in caves in abandoned silage inside a retired silo. The silage becomes very dry and dusty and gets all over the catcher and the owls. Thanks for bringing your mask and dealing with the mess, Ben. And for the good pictures.



Example of a perfect abandoned silo for barn owls to nest on the floor (which, in this case, is below ground level). Landowner is looking on and enjoyed watching us band and learning about his biological mouse control.



Brian Cullen holding a young barn owl so Jill can band it! Thanks to Ben, Tim, and Brian for capturing and holding barn owls. Help is always appreciated.

Bridgewater nest boxes

Last year we and Ben Spory installed 5 kestrel nest boxes south of Bridgewater to see if they would attract any SVRSA or Highland County kestrels. None of them was occupied by kestrels in 2021. This year, however, 3 of 5 boxes are occupied by kestrels and the other 2 boxes got starlings. On May 23rd we drove down and captured 3 breeding female kestrels on eggs. When we returned to see if hatching had occurred, we caught a male kestrel in a box incubating eggs. He had originally been banded within a mile of the box during a winter trapping trip in February 2016! That makes him a minimum of 7 years old. On June 3rd we returned to Bridgewater to band babies but only 2 boxes were ready and so we placed bands on 7 kestrel nestlings. We also recaptured the 7-year-old male incubating 5 eggs again! It appeared one egg was pipping so we will wrap it up in about 18 days when we return to band the chicks.

While banding kestrels we noticed a nearby bluebird box and decided to band bluebirds within. The box had a plastic mesh stapled to the inside front, presumably to aid nestlings in getting out of the box. This is not a good practice, as we have always said it is best to keep the nestlings in the safety of the box as long as possible. One bluebird had prematurely fledged from this poorly designed box and was found dead and partially eaten on the ground under the box.



Last but not least – we cannot recommend sitting down to band kestrels because you risk getting chiggers! As we did here – dang it.

Anyone who is interested in reading any of our papers, go to our Research Gate page: [ResearchGate](https://www.researchgate.net/profile/Lance-Morrow)

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