First Update on the Shenandoah Valley Raptor Study Area March 13, 2022

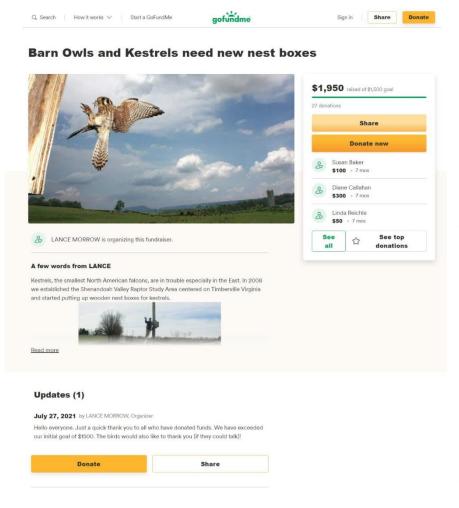
Hello raptor, kestrel & bluebird fans! This is the 15th year of our kestrel nest box program in the Shenandoah Valley Raptor Study Area (SVRSA). Some of our nest boxes have been in use for up to 11 years and they are literally falling apart. Below is a very old nest box that we finally replaced this year.



Notice the warped sides and many layers of debris inside. We initially began this research with the idea we had to remove all old debris from all nest boxes and replace with fresh bedding each year in February/March. However, we switched tactics in 2018 and we began leaving in the old debris because we thought it might deter starlings from removing bedding and usurping nest boxes. Apparently, starlings have a good sense of smell and, we reasoned, they may be reluctant to remove old smelly nesting material in order to take over kestrel nest boxes. We still need to analyze this data to

determine if our lack of cleaning worked or not. We still provide fresh bedding, shredded cypress mulch, if the old debris is too thin or too hard for kestrels to make good scrapes (a scrape is the shallow depression in which kestrels and other falcons lay their eggs). We will diligently comb through debris in all the boxes we took down and look for bird bands, either kestrels who did not fledge or birds that were prey items for the nestlings.

During the "off season" last fall, we created a Go Fund Me page to raise funds to purchase materials for replacement kestrel, barn owl and bluebird boxes – and, thanks to your generosity, it was a huge success! If anyone is still interested in contributing, here is the link: (https://gofund.me/0cff1815)



The page raised \$1950 from 27 donors. Tim Rocke volunteered to be a project manager for construction of 50 kestrel boxes and a dozen bluebird boxes from the scraps. Tim contacted his friend, Ron Vickers, shop teacher at Sherando High School in Stephens City who, along with Tim Rocke and his Luray Ruritans, cut and assembled the boxes.



As a gesture of appreciation, we took a live kestrel to the high school shop class. Tim was head narrator for a slide show (with Ben Spory and us chiming in) geared to educate the kids about kestrel biology and how their boxes would be put to use in the SVRSA.



Sherando HS shop students all wearing masks (remember Covid 19???). The shop teacher, Ron, is seated on the left holding our nest box plug. To the right of Ron is Jill holding her female kestrel, Ben Spory is holding a box on his shoulder, and Tim (the mastermind) Rocke is standing in the middle with a blue shirt bearing the Ruritan logo. Many thanks to the students, Ron, Tim and everyone who donated time and/or money to make these boxes for the SVRSA. Kudos.



Always one to go "above and beyond", Tim asked his local roofer for some spare metal roof material and Elvin Siding and Roofing donated a pile. Tim wore out his hands cutting the sheet metal into the correct size for metal roofs to be installed on the kestrel boxes. By doing so, we are hoping to keep temperatures inside box lower (by reflecting the sun) while increasing boxes' useful lifetime by shedding water. As an extra bonus, the students laser-cut Jill's name and phone on the bottom of each new box.



This gives you a perspective on the size of a female kestrel in relation to the box. Note the metal on the roof. Tim purchased special self-tapping screws with gaskets so the metal could be attached without having water infiltration in the 4 extra holes. Below is Tim replacing an old box with a new one with a metal roof. Lance is supervising and holding the ladder.



This year we decided to try something new. We installed 4 new kestrel boxes on fenceposts to see if kestrels would use them. It would be nice to not need a ladder to study them! We have also begun to explore using a small camera to examine the nest box contents before we break out the ladder. If we could get it to work, we wouldn't need to climb up to each and every box like we have done for 14 years. Age is not a friend to knees or backs.



The Wegner boys expressed interest in placing boxes for screech owls, so Lance gave them a new box and told them how and where to place it to maximize the potential for success.



For the second year in a row, we found a honeycomb inside SVRSA a nest box. They attached it to the lid sometime after 5 kestrels had fledged last June and, it was clear in this case, the bees died during the winter. Froze to death? You can see them clinging to the honeycomb.



WINTER TRAPPING OF KESTRELS

Our annual winter trapping of kestrels this year was pathetic by any measure. This winter we only were able to trap about 4 days (as we avoided days with high winds, storms, and snow/icy roads during January and February).

We managed to retrap a 3 year old male kestrel and 5 previously unmarked kestrels in our study area.



Above is a photo of a BC, a noosed trap used for capturing kestrels. This photo was taken by Lance's cousin Terri who is a professional photographer. She graciously allowed us to use this photo in our Maryland Birdlife paper – printed on glossy paper in color! The last day we trapped felt like a sign that we should cease. After driving many miles looking for a trappable kestrel and failing several times, we were on the way home when we saw the kestrel hanging around box # 60. We deployed the traps and sat back to wait. Soon a fast moving vehicle came around the corner and clipped the BC on the edge of the road, crumpling it and tossing it into the ditch. One of the mice in the BC escaped unharmed – until the kestrel we were attempting to catch swooped down and grabbed it, flew up to wire and had a warm meal! The other mouse was killed outright by the car collision and our trap was mangled but can be repaired.

Fortunately, Zig and Alan helped by recapturing 2 females (previously banded as nestlings) who are now nearly 2 & 3 years old. Both were trapped using mice in BCs within the SVRSA and both were near the boxes where they had bred last year.

SQUIRRELS

As usual, we always have fox squirrels use a couple of kestrel nest boxes. This year was no exception. The photo below was taken on March 3rd, showing nearly full-sized fox squirrels that were born in January and should be leaving the nest soon! The mother squirrel brings in dead leaves and grass to make her nest. We've even had nests constructed of dried corn husks and broken corn cobs. In another box we had a white-footed deer mouse construct a nest of shredded polyester with dry leaves. She ran out of a drainage hole in the bottom of the box so we removed her (empty) nest so a kestrel could use it. Although, it would have been a nice bonus for a kestrel searching for a place to nest to find a nest full of baby mice!



SCREECH OWLS

Although John Spahr in Highland County has screech owls using his kestrel boxes for nesting, we here in the SVRSA have caught a couple screech owls roosting during the daytime but they haven't yet nested in our kestrel boxes.



Since we really enjoy screech owls, we put some old kestrel boxes up in our woods near the house. Last week, while checking these boxes, Jill found a redmorph screech owl inside the box! Jill took a quick photo and left the owl alone, hoping to find it nesting there next month. The owl just hunkered down in a corner of the box, head down.



Here is a gray-morph screech owl in a box where it appears he/she has been dining on passerines.

BLUEBIRDS

Below is a photo of newly hatched Eastern Bluebirds in our SVRSA box 2021. Since our bander, Judy, has been unable to tend to the bluebird boxes for the past couple years, we have been struggling to band as many as we can but only those bluebird boxes that are near our kestrel boxes. Last year we banded only 44 bluebirds, 8 tree swallows and 6 wrens.



The bluebird boxes are also falling apart so we needed replacements ASAP. Fortunately, the word got out to Eagle Scout candidate Owen who, along with his mother, delivered a carload of new bluebird boxes!!!





Thank you, Owen!

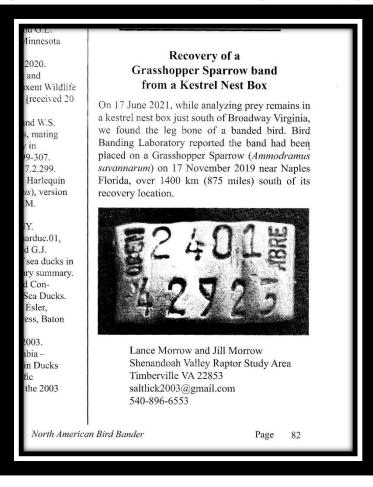
RECENT PUBLICATIONS

We don't just relax at home eating bon-bons during August-January when we aren't out doing field work. A former colleague of Lances, the famous raptor biologist William Clark, asked us to co-author a paper on how to age kestrels based on their tail feathers. This paper was published in the most recent *North American Bird Bander*, Vol. 46 (3 & 4) page 59-64.



Basically, this paper allows anyone to determine how old this female kestrel is from this photo. Note the subterminal (blackish) band is much wider than the other dark bands and the tips of the tail feathers are rounded; meaning that this is a mature female kestrel. Immature tail feathers would have dark bands of equal width and the tips are more pointed than adults. The shape of tail tips can also be used to age male kestrels. Of course, there are always exceptions, but researchers can use this information to age kestrels with more confidence. Also, that same volume of NABB had our write up of a tiny, banded leg we found in a kestrel box last summer. Since it is just a paragraph, you can read our scanned version below.

In addition, the same NABB issue, under the heading RECENT LITERATURE, published a review of our kestrel productivity paper that came out in late 2021 in



ResearchGate

the journal *Maryland Birdlife*. This was entirely unexpected, but we appreciated the acknowledgment of the author Walter H. Sakai. Plus, he mostly agreed with us!

Lastly, we published a paper in The Bulletin of the Texas Ornithological Society on the oddly pale plumages of two kestrel nestlings in the SVRSA. These nestlings had some similarities to the aberrant plumage of a kestrel we'd captured in Texas decades ago – so we published in the same journal that prints photos in full color! Go to our Research Gate page to read an of our papers:

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