BLUEBIRD TRAIL MONITOR REPORT FOR 2013 & 2014

Bluebird numbers fell in 2013 then recovered somewhat in 2014

By John Krerowicz

2012 was the best year of the past four for bluebirds and tree swallows occupying the Chiwaukee Prairie nest boxes. Generally, their numbers of nests, eggs, chicks and fledglings (those that successfully grew and left the nest) per box dropped in 2013 then picked up in 2014.

For example, the number of fledged bluebirds was 1.266 per box in 2012 (19 fledglings divided by 15 boxes). The result dropped to 0.722 in 2013 and rose to 1.0 in 2014.

The statewide per box number of 3.8 for bluebird fledglings in 2012 was the highest reported in eight seasons, according to the Bluebird Restoration Association of Wisconsin. BRAW also reported a drop in bluebird fledglings per box statewide for 2013, to 2.7. Statewide results for 2014 haven't been posted yet. From a percentage viewpoint, Chiwaukee bluebird production fell 42 percent from 2012 to 2013, much more than the statewide drop of 29 percent.

What is of concern to me is that the number of Chiwaukee bluebird fledglings per box is about one-third of the statewide 2012 figure and almost one-fourth from 2013 (see Conclusions for more comments).

Tree swallow fledgling numbers per box didn't rebound: 4.0 in 2012, down to 3.333, and then 3.222 this year. House wren fledglings were zero in 2012, 0.111 in 2013 and 0.278 in 2014. No house sparrows fledged (see explanation at the end of this section).

<u>2013 information vs 2012</u>:

NESTS: 47, up from 23
Tree swallows, 17 (up from 14 in 2012), or 36 percent of all nests (vs 61 percent in 2012)
Bluebirds, 5 (down from 6*), or 11 percent (vs 26* percent)
House sparrows, 13 (up from 2), or 28 percent (vs 9 percent)
House wrens, 12 (up from 1), or 26 percent (vs 4 percent)
*This number was readjusted from the 2012 report.

EGGS: 116, up from 106
Tree swallows, 74 (up from 71), or 64 percent of all eggs laid (vs 68 percent in 2012)
Bluebirds, 14 (down from 24), or 12 percent (down from 23 percent)
House sparrows, 24 (up from 10), or 21 percent (vs 9 percent)
House wrens, 4 (up from 0), or 3 percent

CHICKS: 94, down from 95
Tree swallows, 64 (down from 65), or 68 percent of all chicks produced (the same percentage as 2012)

Bluebirds, 13 (down from 24), or 14 percent (vs 25 percent)
House sparrows, 15 (up from 6), or 16 percent (vs 6 percent)
House wrens, 2 (up from 0), or 2 percent

FLEDGLINGS: 75, down from 79
Tree swallows, 60, the same as 2012, or 80 percent (vs 76 percent in 2012)
Bluebirds, 13 (down from 19), or 17 percent (vs 24 percent)
House sparrows, 0
House wrens, 2 (up from 0), or 3 percent

While tree swallows' percentage of all nests and eggs dropped in 2013, the percentage of fledglings increased. Overall, tree swallows dominated the results, as they did in 2011 and 2012. They typically have the largest numbers in the trails I've monitored.

Chiwaukee bluebirds lost a good share of their percentages all the way around in 2013.

BRAW explanations for the statewide fledgling decline included a cold and wet spring. The weather meant fewer or no insects around the nest boxes. Bluebirds forage close to home. But tree swallows and house sparrows can travel up to 4 miles from a box to search for food, allowing them to build nests and lay eggs even with few nearby food sources. BRAW reported that, because of the weather, many swallows and sparrows established nests earlier than bluebirds, crowding them out. That appears to be what happened locally, too.

House sparrows' percentages of all nests, eggs and chicks increased in 2013. House wrens' percentages also increased. I remove sparrow chicks from nests so they cannot fledge. House sparrows are not native birds and therefore are not protected by law. They can be quite vicious, are known to kill other birds – I've seen bluebirds and tree swallows that have been decapitated by the sparrows -- and sometimes occupy the victims' nest boxes to lay their eggs there. See the 2012 report for the theory behind allowing house sparrow eggs to hatch in the first place.

<u>2014 information</u>

Here are the numbers for 2014 vs 2013:

NESTS: 37, down from 47
Tree swallows, 13 (down from 17), or 35 percent of all nests (vs. 36 percent in 2012)
Bluebirds, 7 (up from 5), or 19 percent (vs 11 percent)
House sparrows, 13 (the same as 2013), or 35 percent (vs 28 percent)
House wrens, 4 (down from 12), or 11 percent (vs 26 percent)

EGGS: 124, up from 116
Tree swallows, 69 (down from 74), or 56 percent of all eggs laid (vs 64 percent in 2012)
Bluebirds, 23 (up from 14), or 19 percent (vs 12 percent)
House sparrows, 25 (up from 24), or 20 percent (vs 21 percent)

House wrens, 7 (up from 4), or 6 percent (vs 3 percent)

CHICKS: 96, up from 94
Tree swallows, 65 (up from 64), or 68 percent of all chicks produced (the same percentage as 2013)
Bluebirds, 18 (up from 13), or 19 percent (vs 14 percent)
House sparrows, 8 (down from 15), or 8 percent (vs 16 percent)
House wrens, 5 (up from 2), or 5 percent (vs 2 percent)

FLEDGLINGS: 81, up from 75
Tree swallows, 58 (down from 60 in 2013), or 72 percent (vs 80 percent in 2013)
Bluebirds, 18 (up from 13), or 22 percent (vs 17 percent)
House sparrows, 0
House wrens, 5 (up from 2), or 6 percent (vs 3 percent)

The number of bluebird nests built, eggs laid, chicks hatched and chicks fledged all increased from 2013. None of the other species using Chiwaukee nest boxes were as prolific.

BOWL EXPERIMENT

In 2012, I began experimenting with a bowl in seven of the 15 boxes. I made the bowls from the bottom of plastic, 64-ounce juice containers. They help make checking for eggs and chicks easier by allowing me to pull the bowls – with the nests built inside -- out of the box for a brief look rather than pushing parts of the nest down in order to see what's inside.

Bluebirds apparently didn't care for that arrangement. However, results for bluebirds in 2013 suggest they preferred boxes with bowls by fledging eight chicks from boxes with bowls vs. five from boxes without bowls.

Tree swallows in 2012 didn't seem to mind nesting in the bowls but produced fewer eggs in them. For 2013, they preferred not dealing with bowls: 35 chicks fledged from boxes without while 25 came from those with.

House wrens preferred boxes without bowls in 2013. House sparrows built 9 nests in boxes with bowls and 4 in those without. Maybe this suggests that one way to control sparrows might be to keep bowls out of boxes in locations that seem to attract that species.

For 2014, bluebirds, swallows and wrens definitely preferred not having the bowls. House sparrows again preferred having the bowls.

I think I will try a few more seasons with the bowls to determine whether there is a definite preference. However, I'm planning to remove bowls from boxes that sparrows often use, in hopes of reducing their numbers.

In 2013, I added bowls to 2 of the 3 new nest boxes.

TRAIL CHANGES

I added 3 nest boxes to the trail for 2013 (see the 2012 trail report for locations), bringing the total to 18. The 3 new boxes added for 2013 haven't yielded any bluebirds. For 2013, one box produced 2 house wren nests but no eggs, and 5 tree swallow fledglings from 1 nest. Another box had 5 tree swallow fledglings. The third new box was filled with a bluebird nest but no eggs, followed by a house sparrow nest and 3 eggs. 2014 numbers were similar except no bluebird nests.

TIMETABLE

Most nests in 2012 weren't in place until April 30. In 2013, a few house sparrow nests had been built by April 27, with 8 tree swallow nests found between April 27 and May 5. The first bluebird nest was built between May 5-12. 2014 attracted house sparrow nests first, but this time they were earlier by about 2.5 weeks (April 9). The first bluebird nest showed up between April 9-22. The tree swallows were building nests within the next 10 days.

The most eggs produced at a time during 2013 for bluebirds was 4; tree swallows, 7. In 2014, the number was 5 for bluebirds and 7 for tree swallows. That's been typical egg production at Chiwaukee boxes.

PREFERRED BOX STYLE

The Chiwaukee bluebird trail has 3 nest box styles: the Tuttle, which is a rectangle set up vertically with a flat roof; NABS, which is about three-quarters the size of a Tuttle and having a downward slanted roof that overhangs the front by a few inches, and Peterson, which also is rectangular but with the front wall slanting forward so the floor is smaller than the roof. The roof is slanted and overhangs the front, like the NABS. The Peterson's slanted roof and slanted front wall are designed to thwart predators. I set up the Peterson in 2013. It was built and donated by Dennis Persinger, a Pleasant Prairie resident who also is monitoring bluebird boxes in this area.

Bluebirds generally preferred the NABS to the Tuttle in 2013 with an 8 to 5 fledgling ratio. The previous year, however, bluebirds built nests only in Tuttles. Tree swallows preferred Tuttles in 2013 (31 to 23 fledglings), as they did in 2012. House sparrows and House Wrens preferred Tuttles both years.

In 2014, bluebirds had a slight preference for Tuttles, with more nests and eggs in them although the number of chicks and fledglings was the same for each style (9). Tree swallows crowded into Tuttles in large numbers (49 to 9). House sparrows and House Wrens again preferred Tuttles.

Several more years of data probably are needed before I can make assumptions, if any, about which box style to add or use as replacements in the future as a way to help bluebirds and cut down on house sparrows.

WHAT'S NEXT?

I plan to review the information to decide which, if any, boxes that are frequented by house sparrows need to be moved. There are 4 posts parallel to First Court and north of 121st Street, near the weather station, that were set up originally as part of the trail some 15 years ago. I had removed the boxes that had been on those posts, but, if I do take down one of the other boxes now used mostly by sparrows, I might put it on the post farthest north along First Court if the distance to the closest box is about 300 feet away, which is the bluebirds' preferred distance between boxes.

During 2014, there were a few instances of eggs and chicks mysteriously disappearing from nest boxes, including one instance with bluebirds and at least two with tree swallows. Bird monitors across the state were reporting the same thing. Raccoons apparently were climbing the posts, reaching inside the boxes and enjoying easy meals. I don't know whether raccoons raided the Chiwaukee boxes, but PVC pipes have been recommended by BRAW to help protect the boxes. However, BRAW also reports that raccoons are adapting to the slippery pipes and finding ways to climb them. The group suggests using silicone spray, Vaseline or car wax to make the pipes more difficult to grasp.

In fall 2014, I will be adding PVC pipes to nest box poles in hopes of reducing the chances that predators will be able to climb them. The CPPF generously approved paying toward the pipes cost. If raccoons find a way to climb the PVC, I will add a spray, Vaseline or wax.

I'm also going to research more ways to improve bluebird production at Chiwaukee. The per box numbers of bluebird fledglings there of 1.266 in 2012 and 0.722 in 2013 (with 1.0 in 2014) are far below the statewide figures of 3.8 in 2012 and 2.7 in 2013. Kent Hall, BRAW coordinator of data collection, reported in his 2013 annual report that he's certain that with good weather, proper habitat and good management practices, there's no reason why a trail couldn't produce at least 2.0 bluebird fledglings per box.

BRAW information is available online at www.braw.org.

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