

Monitors: "Tape your boxes"

By Kent Hall

Prior to the 2008 season, Patrick Ready, WB Editor, suggested to me that if we could somehow block the entrance to nest boxes for a week after bluebirds fledged their first brood, we could prevent occupation by other cavity nesting species and increase the chances that bluebirds would fledge a 2nd brood. This article gives proof that Pat's idea was a good one and does lead to increased fledging of 2nd bluebird broods.

All data have been collected on the Audubon Bluebird Trail in central WI.

Design flaws and successes:

2008 Season: Our experimental design was so flawed that we could not conclude anything from the design in this season. The goal was to block nesting by other species for a period of a week after finding that bluebirds had fledged. We first tried to leave the nest boxes open. That did not work because "good Samaritans" came along and closed them, thinking that they had been left open by mistake.

2009 Season: This season our techniques worked better but were not fool proof. Initially, we tried to stuff grass into the entrances but found that all cavity nesting species could remove them, even when a stiff plug was inserted. We were amazed! The technique that worked best was to duct tape the boxes. But not just any taping process works. Even duct tape will not adhere to wood that is wet and birds can pull the ends of tape, so ends must be sealed inside the nest boxes. Nabs-style boxes must be taped starting inside, across the opening, around the front opening, along the side and back and taped on the inside back. Peterson boxes can simply be tape-wrapped around the entrance but with the end of the tape inside the box. Finally, K-boxes can be taped starting underneath the

box and across the front and down the inside of the front board. The tape can then be pinched so that it adheres at the entrance, effectively sealing the entrance from other species.

2010 Season: We expect that our taping techniques will be 90+% effective in preventing any cavity nesting species inside our nest boxes for the week that we want them closed.

Data Collection in the 2009 season:

Closing boxes for a week after the first brood fledges to increase production is based on these solid facts:

Table 1a. The vast majority of hens that produce a 2nd brood produced their first brood in the same box.

Table 1b. 90-93% of those hens that fledge a 1st brood go one or more weeks before building a nest for a 2nd brood.

Table 1c. 29.5% of nest boxes that are not blocked (2008) have other species build in them or do not build a 2nd nest

Table 1c. By taping boxes, the 29.5% was dropped to 11.7%, an improvement of about 18%.

Our preliminary data shows that taping is especially effective against House Wrens & House Sparrows and decreases the number of boxes without nests. There was only a 1% increase in Tree Swallow nests, so little can be concluded from that change. I am hopeful that in areas where there are larger concentrations of Tree Swallows, there will also be a depression in their numbers. It could be, however, that by the time the first brood of bluebirds fledges, there simply are not that many Tree Swallows still reproductively motivated to nest.

I strongly encourage people to try this technique (Table 1d.) to increase bluebird production. It is my hypothesis that we can increase statewide bluebird production by 5-10% by using this technique.

Table 1. Post-fledging nest box taping to increase production in the Eastern Bluebird

- a) Observation #1: If a bluebird hen fledges a first brood and a second nest is built in the box, it is usually by the same hen
Evidence: a) ALASBT: A white egg nest that fledges young that has a 2nd nest, usually has white eggs again (80%)
b) Study by Medhavi Ambardar: 21 of 24: 87.5%

- b) Observation #2: Bluebird hens usually go one or more weeks between fledging and starting a 2nd nest

Year	Total Boxes	Same Week	1st Week	2nd Week	Weeks 3-6	Total 2+ Weeks
2008	322	9.0%	62.7%	22.0%	6.2%	28.2%
2009	117	6.8%	53.6%	36.8%	3.4%	40.2%

- c) Observation #3: During the weeks after the 1st brood is fledged, HOWR's TRES's & HOSP's occupy the nest boxes preventing a SBN (Second Brood Nest) by bluebirds (or the birds do not try a SBN at all).

Year	Total Boxes	SBN's	HOWR	TRES	HOSP	No Nest
2008 (No Tape)	430	70.5%	9.1%	2.3%	1.4 %	16.7%
2009 (Taped)	214	88.3%	1.9%	3.3%	0.0%	6.5%

- d) Protocol for Taping nest boxes:

- 1) Remove old nest (leave if new nest has been started)
- 2) Tape box with duct tape if both parents are absent (nearly 100% 2nd nests are built if one or both are present; do not leave doors open or stuff holes with grass)
- 3) Remove tape in one week
- 4) Hoped for result: More hens will successfully build 2nd nests and bluebird productivity will increase