

SUN CITY BIRD CLUB



BLUEBIRD NEST_BOX MONITOR'S GUIDE



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THE BIG PICTURE

- Certain birds nest only in cavities.
(Including Bluebirds, Chickadees, Tufted Titmice, Brown-Headed Nuthatches)
- But they can't excavate a cavity.
- So, they compete for the cavities that are available.
- Despite this competition, they fledge young.
- In this environment, these birds have thrived for millennia

WITHOUT OUR HELP

So, why do they need our help now?

1. Changing land management: Specifically, clearing of wooded land (reduced number of cavities).
2. Introduction into the U.S.A. Of non-native birds competing for cavities. (European starling, house sparrow)

We can't do much to change these factors affecting cavity nesting birds. However, we can help by providing cavities (nest-boxes).

Here is our opportunity

To provide a better nesting environment than found in natural cavities.

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Improving the nesting environment

- Nestbox factors

1. Minimum 3/4 inch thickness wood for insulation
2. Hole size 1 1/2 inch to exclude Starlings, Brown-Headed Cowbirds, Woodpeckers, etc.
3. Roof overhang for protection from the weather and to provide shade.
4. Box size, species specific.

- Mount factors

1. 1/2 inch polished and waxed conduit (EMT) as a barrier to snakes and fire ants.
2. Wooden posts are climbing aids for predators.

- Placement factors

1. Forest edge is generally risky: Squirrels can jump 8 feet, Flying Squirrels even farther
2. Some shade on the box after 11AM is desirable.
3. Space 100 yards from other nestboxes.
4. Surrounded by an acre of grassland is ideal. (The young Bluebirds are fed insects).
5. Not in the path of a sprinkler. (We have found this difficult to spot at times)

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- Monitoring as a technique for improving the environment

1. Reducing interference by other species

- A. mammals: Raccoons, cats
- B. rodents: Mice, Flying Squirrels
- C. reptiles: Snakes
- D. birds: House sparrows, house wrens, european starlings, brown-headed cowbirds
- E. insects: Wasps, fire ants

- Maintaining the physical property (the “landlord” factor)

- A. carefully removing old nests
- B. identifying repairs needed to the boxes. (Leaks, cracked roofs, etc)
- C. box temperature issues

- Pairing boxes: A technique for managing competition

Placing a second box out of the line of sight may manage competition between bluebirds and chickadees.

- Rescuing nestlings, on occasion (the “911” factor)

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How to monitor

- Monitor only during calm, dry weather to reduce potential stress to eggs or to chicks
- Monitor about every 7-14 days
- Monitor when adults are out of the box
- Monitor during P.M. during egg laying (Eggs are usually laid in the morning)
- Approach the box while giving some warning (whistling, talking, “pishing”,
- Lightly tap on the nest-box
- Open box slowly.
- If the female is on the nest, close the box. Monitor it later.
- Secure the box door after closing
- Monitoring requires only a few minutes per box

What to monitor

- Make sure the box interior is dry
- The pole mount is slippery (a light vegetable oil can help)
- Insects are absent from around the pole and inside the nest-box
- Predator evidence is absent
- Competition evidence is absent

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BLUEBIRD LIFE CYCLE

EVENT	TIMING	NOTES
Box selection and nest building	Mid-February to late March	The male stakes out the territory and shows a female the nesting sites in his territory. The female may leave a "reservation" piece of pine straw or grass if she interested. Nest building may take as little as 1-2 days.
Egg laying	Usually shortly after nest is done. Early April to June has been typical	May be delayed for weeks after nest is completed. Weather, food supply, length of daylight are possible factors. The nest is called "active" when the first egg is laid. Eggs are usually laid in the morning, one each day. 4-5 eggs are typical.
Incubation	For 12-14 days after the last or next to last egg is laid	Only the female incubates the eggs. While the eggs are laid over several days, the eggs usually hatch on the same day. Hot air temperatures alone can incubate eggs. On the other hand, if the egg is seriously chilled, the embryo may not hatch successfully.
Hatching		Often during the first two hours of dawn. It seldom takes more than a day for the entire clutch to hatch.
Fledging	16-18 days	For the first 6 days or so, the chicks are unable to regulate their temperature and depend upon their mother's heat. At 12 or 13 days, the sex of the chicks can be told from the color of the wings. Do not open the box after the nestlings are 14 days old to avoid "premature fledging". That is, having the birds "fly the coop" prematurely.
First flight		Orienting the box toward a bush or a tree may encourage the first flight. You will probably not be a witness to it.

Ref: Berger, Kridler, Griggs, "The Bluebird Monitor's Guide", 2001, HarperCollins, NY (Cornell

Laboratory of Ornithology and the North American Bluebird Society

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SUMMARY OF BIRD CLUB POLICIES FOR NEST BOX MONITORING

- Monitor nest boxes approximately every 7-14 days.
- Respect the nests of any native nesting bird species, specifically: Bluebirds, Carolina Chickadees, Tufted Titmice, House Wrens and Brown-Headed Nuthatches. These species are protected under Federal Law.
- We have not yet found nests of non-native species such as House Sparrows or European Starlings. These species may destroy Bluebird nests. However, we have not formed a policy concerning their control at this time.
- Don't remove active nests from nest boxes. (This policy will change as we gain experience.)
- Don't open nest boxes if the chicks are due to fledge. (About 14 days after hatching)
- After the young have fledged, remove the old nest and clean out the box.
- Treat any material removed from the nest box as contaminated. Wear gloves. Place material in plastic bags. Dispose of the material away from the nest-box, so you don't attract predators.
- Keep accurate data for each nest box visit. This data will be collected at the end of the season. It will be computerized and reported in detail. We report our results to The Birdhouse Network (TBN) of the Cornell Lab. of Ornithology and to the North American Bluebird Society.

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MONITOR'S TOOLKIT

The following items have been found to be useful from time to time at the monitoring site:

1. Gloves (rubber gloves and work gloves)
2. Spatula, trowel or putty knife to remove wasp nests or debris and to pull old nests out
3. Whisk broom, old paint brush, or old toothbrush to clean house after nest is removed.
4. Plastic grocery bags to carry away abandoned nests or dead birds.
5. Phillips and slot screwdrivers for box adjustments.
6. Pliers to deal with stubborn nails, screws.
7. Duct tape for emergency repairs.
8. Bar soap to coat ceiling to prevent a recurrence of wasp nests.
9. Automobile wax ("Carnuba") to wax EMT conduit against snakes, ants.

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APPENDIX AI: TROUBLE-SHOOTING FOR NEST BOX MONITORS

SITUATION	ACTION	EXPLANATION
INSECTS		
Paper Wasp nest	Scrape wasp nest off with a spatula or a putty knife. Best done in early AM or cool weather, when wasps are inactive.	Nests are usually on the ceiling. Rub ceiling with bar soap, or coat with vaseline if it is a persisting problem.
Fire ants	Prevention: Before the eggs are hatched, rub the mounting post with auto wax (e.g. "Carnuba") Treatment: If ants are in the box or the nest, call an experienced monitor to remove box and nest and treat.	Ants are attracted to the nest usually after eggs hatch. This is one reason to remove all old nests.
Blowflies	Passive treatment: Remove any larvae seen around the nest. Record the infestation. Active treatment: Reserved for severe infestations: call an experienced monitor to remove nest and treat.	Adult blowflies look like houseflies with iridescent blue or green bodies. The larvae (maggots) feed on the chicks at night. The bloated pupae are not harmful to chicks. Severe infestation: 10 or more larvae per chick, or the presence of scabs, scratches, or signs of irritation on the abdomen.
BIRDS		
Nesting Bird: Carolina Chickadee, Bluebird, Tufted Titmouse, Brown-Headed Nuthatch	Do Not Remove*. Call Coordinator to place another nesting box near by. We may still be able to attract Bluebirds to the site.	*Protected by Federal Law, The Migratory Bird Treaty Act of 1918.
Nesting bird: House Sparrow	Not anticipated in our area	Introduced species, not protected under the above Law. We have not formed a policy for management at this time. Report any occurrence at once

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APPENDIX A2: TROUBLE-SHOOTING FOR NEST BOX MONITORS

SITUATION	ACTION	EXPLANATION
NESTS		
Wet nest	Identify the source of the rain leak for repair. Call Coordinator or an experienced monitor to replace box and/or nest with a dry grass nest.	A wet nest loses its power to insulate and the chicks may become hypothermic.
Old nest in box	Remove nest after fledglings have left	Put the nest in a plastic grocery bag. Do not dispose of nest near the nestbox. (Attracts predators). Handle nest with gloves or a lifter, only.
Unhatched eggs	If the entire clutch has not hatched, wait at least 14 days before assuming that the nest has been abandoned. Use a blade of grass in the entrance hole to assess adult bird's presence.	Occur in 10 to 15 percent of nests. Bad eggs may be recognized from flyspecks on the outside of the egg: the flies can tell the odor of a bad egg. Contaminated retained eggs may be a health hazard to the chicks.
Mouse nest	Use a 10% bleach solution to thoroughly wet the nest. Let stand for 15 to 20 minutes before removal. These nests found in the Spring, and are usually cleaned out at that time.	Hanta virus causes a serious illness in humans and can be found in mouse droppings. Mostly an issue in Western states, but has been found nationwide. Dispose as "old nest", below.
NESTLINGS		
Evidence for poor nutrition	Offer meal worms	Poor nutrition suggested by the use of secondary food supply: remnants of fruits and berries, earthworms, etc. Insects are the preferred food. The root cause may be bad weather or a dead male.
Fledgling on ground	If bright, alert, appears healthy: no action required.	Parents will feed.

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APPENDIX B: IDENTIFYING NESTS AND EGGS BY SPECIES

SPECIES	NEST	EGGS
Bluebird	1-4 inches tall, built with fine grasses or pine needles, with a fairly deep nest cup.	4-6 eggs, powder blue, or occasionally white (4-5 % of clutches).
Carolina Chickadee	Soft cup of downy feathers, plant down, and fine dry grasses built on a base of moss.	5-8 eggs, white to pinkish white with small red or brownish-red or purplish-red spots; often heavier on the large end of the egg.
Tufted Titmouse	Soft cup, similar to a Chickadees, built on dried leaves and other matter even including snakeskin.	5-6 eggs, white to creamy-white; fine speckles of chestnut red, purplish red, or brown or sometimes lilac
Brown-Headed Nuthatch	Base of husks of pine seeds, bark strips, rootlets, grasses, pine needles. Cup of soft material: hair, feathers, cotton, etc. Crevasses may be stuffed with cotton or plant down.	5-6 eggs, creamy or white. Heavily and boldly marked with reddish-brown spots and blotches.
House Wren*	Nest box is filled with sticks and has a deep nest cup lined with fine plant fibers or feathers. "Dummy nests" without the nest cup are often built in all other cavities in the male Wren's territory, to reduce competition for resources.	6-8 eggs, tan, speckled with brown and quite small.
House Sparrow**	Tall nest, built with coarse grasses. Often includes scrap paper, cellophane, or other scrap. The nest forms a canopy with a tunnel-like entrance to the eggs.	5-7 eggs, cream-colored with brown markings.

ULTIMATE PROOF: IDENTIFY THE BIRD THAT MADE THE NEST

*Generally not a breeding bird in our area

**Not commonly found in Sun City

Ref: North American Bluebird Society, www.nabluebirdsociety.org/monitor2.htm