



MONITORING BLUEBIRD NEST BOXES

Why should you monitor your nest box?

We recommend only putting up a nest box if you are able to monitor it. Neglected nest boxes can have unintended consequences detrimental to the bluebirds, such as encouraging a non-native species like the House Sparrow to nest, which contributes to the population of these non-native birds that threaten our local bluebird population.

Getting Started

You should monitor the box weekly. Bluebirds are remarkably tolerant of nest checks, so monitoring up to twice a week won't deter them. Record your observations; good notes will help you.

With weekly monitoring, you'll be able to observe the birds' activity as they investigate the box for a potential nesting site and, hopefully, ultimately claim the box. You may witness competition between species for the nest box; other native cavity nesters like swallows, wrens, and chickadees may vie for the box. Knowing what species is using the box is helpful. Remember that if a native species other than a bluebird ultimately claims the box, it is *illegal* to disturb their nest. While you may be disappointed it isn't a bluebird in your box, all our native birds are beneficial.

On the other hand, the House Sparrow (not to be confused with our native sparrows) is an aggressive, non-native bird that will often out-compete a bluebird for a nest box. Once the male has chosen a nest box, he will fiercely defend it, sometimes killing the bluebirds competing for the site. House Sparrows are not protected, so you can remove their nests; be aware he will re-build it as many times as you remove one. Don't remove the nest if there are bluebirds nesting nearby; the house sparrow will often retaliate by killing the nearby nesting bluebirds.

As our weather warms in the spring, it's common for paper wasps to build nests in the boxes. Their presence will deter a bluebird from nesting, so removing the wasp nest is advised. Wasps are sluggish in cool early mornings, making removal safer and easier. Never spray an insecticide in the box to kill the wasps. To discourage wasps, rub the inside roof corners and joints with a bar of Ivory soap or "paint" those areas with a plain liquid soap like Seventh Generation applied with a 1-inch paint brush. Mice will sometimes nest in boxes, and they, too, will prevent a bird from nesting. Use care when removing mouse nests due to the risk of hantavirus. [For more information on hantavirus see <https://www.oregonvma.org/care-health/companion-animals/zoonotic-diseases/zoonotic-diseases-rodents>]



How to Monitor

Before approaching the nest box, take a few minutes to observe from a distance what is happening. Are bluebirds sitting on top of the box? Are they going in and out? Are other birds around? Your goal during monitoring is to observe and record the nesting progression, from nest building to fledging of chicks. Be mindful of the weather and avoid opening the box during cold, wet, windy weather to prevent chilling the eggs or chicks in the box. Our monitors often talk softly or sing while approaching the box, alerting a potential occupant to their presence. Notice the ground under



the nest box; are there any signs of predation like broken eggshells or piles of feathers? Tap or gently knock before carefully opening the box. Open it slowly; sometimes there is an egg or a nestling near the edge of the nest, and you want to prevent it from falling out. Using a mechanic's mirror or your smart phone camera can help you count eggs and nestlings. Do not touch or handle the eggs or chicks. Complete your monitoring quickly and quietly to prevent undue stress on the birds.

Nesting

In the beginning, you'll look at the nest in the box and identify the species. A bluebird nest is a neat, cup-shaped round nest, usually of dry grasses. When the birds decide it is time, a female bluebird will lay one blue egg per day, usually in the morning. When the first egg is laid, this becomes a "nesting attempt" and begins a "clutch." The female will not begin incubating her eggs until the clutch is complete; clutches are usually 4-6 eggs. Once the clutch is complete, she will begin incubating the eggs for approximately 14 days. She will occasionally leave the nest to feed, but her mate will also bring food to the box for her. During egg incubation, you may find a female refusing to move off the eggs when you open the box. Don't interfere; close the box and know that next week you'll likely be able to get a count of those eggs.



Hatching

Hatching will occur usually on one, sometimes two, days. The hatchlings are "altricial," meaning they are blind, unfeathered, and helpless. For the first 7-10 days they will depend on the female for warmth, and they instinctively pile together in the nest for warmth. If an egg does not hatch, the female will sometimes push it up onto the edge of the nest. You can remove this nonviable egg; dispose of it away from the nest site to avoid alerting a predator. You won't be able to clearly count the nestlings when they are tiny; make an educated estimate. As they grow larger, they will become more distinct and easier to count.



The nestlings will grow and change rapidly over the next 3 weeks. Their eyes will open, their feathers will emerge, and they will become more lively. They will also eat a lot; you will see the parents spending most of their time catching and delivering food to their chicks.

You should stop opening the nest box when the chicks are 12-14 days old. Opening the box floods the interior with light and may cause the chicks to fledge prematurely. Once out of the box, they will not go back in and will likely perish. Keeping good notes of your visits to the nest box will enable you to keep an accurate record of their age.



Fledging

Bluebird chicks fledge at approximately 21 days of age. Prior to fledging, you will notice the parents stop entering the nest box with food. They may cling to the front of the box, encouraging the youngsters inside to come up to the opening to get their food. This helps prepare the chicks for leaving the nest box. You may also observe the chicks sticking their heads out of the box and looking around. The chicks will usually all fledge on the same day, though sometimes it takes two days.



After Fledging

Once the chicks have all fledged, you should remove the nest and scrape out any debris. Nesting material should be taken away from the nest site for disposal. We recommend using gloves and a mask for your personal safety. The female may start a second clutch as soon as within a week or two, and she will readily rebuild a new nest. Our local bluebirds commonly have 2 clutches, and infrequently 3. You may read differing opinions on removing nests between clutches. While it's true a female will add a layer of grass to a used nest and lay a second clutch of eggs, we recommend removing the first clutch nest. It eliminates the nest debris which helps prevent blowflies, a parasite that attaches itself to the legs of chicks. It also prevents the second nest from being too close to the entry hole, which increases risk of predation and of premature fledging.

End of Nesting Season

Here in the northern Willamette Valley, nesting season winds down in August. Depending on elevation, we see the last clutches in August with a few late ones in September. We recommend scraping out the nest box in the fall so it is empty for winter. Birds will use nest boxes for roosting during inclement winter weather, so don't be surprised to find debris in the box the following spring. At that point, you'll clean out the box again to prepare it for the next nesting season.