

# Predator and Competitor Control

## Introduction

Understanding predators and competitors and how to cope with them is an important part of the monitoring job. The information in this section provides species descriptions and control guidelines to reduce predator and competitor problems. Your bander is your best resource. Working together, the two of you can design effective strategies to combat problems that arise. Also review the information in *Enjoying Bluebirds More*.

## Predators

- House cats, raccoons      **SIGNS:** Suspect predation by a cat or raccoon if all nest contents are missing and the nest is pulled to pieces or if parts of the nest have been pulled from the box.  
**ACTION:** Avoid placing nest boxes where there are free-range cats. Discourage climbing predators such as cats and raccoons by mounting nest boxes on metal poles, coating the poles with axle grease, installing one of the baffles described in this section, and/or by installing an entrance hole guard (see Controls at the end of this section). If cats are a continual problem, remove the nest box.
- Snakes      **SIGNS:** Eggs or nestlings are gone but nest is undisturbed.  
**ACTION:** Placing lard on the pole may deter snakes but could attract raccoons.
- Scrub jays      **SIGNS:** You may see scrub jays taking mealworms from feeding stations intended for bluebirds or attacking the adults, preventing them from feeding nestlings.  
**ACTION:** Talk to your bander about installing a specialized mealworm feeder.
- Hawks, crows      **SIGNS:** Some but not all eggs or nestlings have disappeared. You may see signs of predation on the top of the box or kestrels hanging on or around nest boxes.  
**ACTION:** Install a Noel Guard. As a preventive measure, be sure to clean out boxes after nesting finishes, so that bluebirds don't build on top of old nests. This places the nestlings too close to the opening.
- Blowfly larva      **SIGNS:** These uncommon parasites attach to the nestling's feet, legs, abdomen, and underside of wings and beak and suck blood and body fluids, which can cause nestling death. The larva are tan to brown and ~3/8 inch long. They attack nestlings at night and often hide in the nesting material during the day, though monitors may see them attached to nestlings at any time. Look for larva and/or wounds on nestlings. Parasitized nests may be unusually filthy.  
**ACTION:** Talk to your bander for advice and read "Parasites and Insect Pests" in *Enjoying Bluebirds More*.
- Mites      **SIGNS:** Tiny (pin-head size) brown or red "dots" swarming over nestlings and nest. Adult bluebirds acting alarmed. This occurs rarely.  
**ACTION:** Be extremely careful that you do not transfer mites to other nests. If you handle the nest or nestlings, the mites may get on your hands and clothes. You may try replacing the old nest with a clean one, but often there is nothing to do but wait. Talk to your bander.
- Wasps, Yellow jackets      **SIGNS:** Grey, papery nests attached to the roof of the box.  
**ACTION:** Remove the nests early in the morning when wasps are cold and inactive. Coat the inside of the roof of the box with wax by rubbing a candle stump over the wood.

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## ***Predators (continued)***

Intestinal Parasites	<p><b>SIGNS:</b> Tapeworms and thorny-headed worms have both been identified in our population during necropsies of dead bluebirds. There are no obvious signs in live birds.</p> <p><b>ACTION:</b> If you find dead adults, follow appropriate protocols (see “Troubleshooting” in <i>How to Monitor a Bluebird Route</i>).</p>
West Nile Virus	<p><b>SIGNS:</b> The virus has not yet been reported in Oregon, but it is expected to appear here in the future.</p> <p><b>ACTION:</b> Collect and report all dead adult birds to the research coordinator for necropsy. We recommend that you wear disposable rubber gloves when handling dead birds.</p>

## ***Competitors***

Species competing for cavity nest sites range from native mammals, such as chipmunks and field mice, to native birds, such as swallows, chickadees, wrens, and nuthatches. The non-native house sparrows and European starlings are among the most prevalent competitors and commonly attack and kill bluebirds. These non-natives are the only predator/competitor birds that we can legally destroy.

**NOTE: Federal law protects all native birds, their eggs, and nests.**

Mice, flying squirrels, chipmunks	<p><b>SIGNS:</b> These mammals fill the nest box to the top with grass, scraps of paper and cloth, feathers, and fur. When you open it, the animal may leap to escape.</p> <p><b>ACTION:</b> Remove the nest and dispose away from the nest box. Take care not to breathe in dust or detritus from the nest. Sterilize equipment and hands afterward.</p>
Wrens	<p><b>SIGNS:</b> Wrens fill the nest box with sticks, often to the top of the box. They are aggressive competitors and can destroy bluebird eggs.</p> <p><b>ACTION:</b> It is illegal to interfere with nesting wrens. They prefer wooded or brushy areas, so if you observe them going in and out of the nest box before the nest is built, move the box to a more open location. Alternatively, move the nest box after they have finished the nesting cycle.</p>
Swallows	<p><b>SIGNS:</b> You may see swallows engaged in aerial battles with bluebirds as they compete for possession of a nest box. This is normal territorial behavior. See <i>Nesting Activity</i> for nest identification.</p> <p><b>ACTION:</b> As with wrens, it is illegal to interfere with nesting swallows. Discuss doubling boxes with your bander. Sometimes adding boxes in the right location reduces competition so that swallows and bluebirds can coexist.</p>
Chickadees, nuthatches, woodpeckers	<p><b>SIGNS:</b> See <i>Nesting Activity</i> for nest identification.</p> <p><b>ACTION:</b> Prescott actively encourages the use of our boxes by these beautiful, native birds. Add a second box for bluebirds and reduce the competition. A second box number is not necessary for a box mounted within 10 feet of the first one.</p>

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## Competitors (continued)

European  
starlings

**SIGNS:** Prescott bluebird boxes are designed to prevent the entry of this aggressive non-native species. If the entrance hole is enlarged by woodpeckers or damaged, starlings may take up residence. Monitors sometimes find a nest box hole expanded and a big messy starling nest inside.

**ACTION:** Repair the box using a wooden hole reducer or replace the box.

House  
Sparrows

**BACKGROUND:** The house sparrow is a non-native finch introduced in New York around 1850. It took only 50 years to spread across the U.S. and aggressively compete for nesting cavities. House sparrows destroy songbird eggs and kill chicks and adult birds. Monitors frequently find house sparrow nests built on top of bluebird nests. There is no permanent way to prevent sparrows from entering our nest boxes.

**NOTE:** Native true sparrows do not use nest boxes.

The male house sparrow pair-bond is weak. The bond that seems to be stronger is his attachment to a chosen nesting site or nest box. This bonding behavior is not typical of native bird species. If a bluebird or chickadee nest containing eggs is disturbed or vandalized, the pair usually leaves the area, presumably to nest elsewhere. The same seems to be true for tree swallows and other cavity-nesting species. Once a male house sparrow has adopted a box, he is difficult to evict.

**SIGNS:** You may observe active battles between house sparrows and bluebirds, find that sparrows have pecked holes in bluebird eggs, or have pecked nestlings or the brooding female to death. Look for puncture wounds on the head. See *Nesting Activity* for nest id.

**ACTION:** “*I will not, under any circumstances, allow house sparrows to nest in my boxes.*” *Bluebird Trails: A Guide to Success*

PBRP endorses the blue birder’s oath quoted above. It is useless to put up unmonitored bluebird boxes and worse to monitor nest boxes only to concede them to house sparrows.

The commonly recommended means of sparrow control by removing the nest and eggs does not deter the male, though it interferes with the breeding cycle. He rebuilds the nest. If you remove the nest material daily, the female may leave, but he continues to treat the box as his own, hauling in new material, sitting on or near the box and singing to attract a new mate. He defends the box against competitors and often defends other boxes in the immediate vicinity, discouraging bluebirds and swallows. If these species are successful in nesting nearby, the male house sparrow often enters their nest boxes and drops the eggs to the ground, destroys them in the nest, or kills fledglings or brooding females or both. The best solution is to trap and destroy adult house sparrows (see trapping tips under the following section, *Controls*).

Here are some tips for avoiding house sparrow infestations:

- Place nest boxes at least 1000 feet away from barns, livestock, and chicken coops where sparrows feed on the grain and tend to be prevalent.
- Remove the sparrow nest and dispose of it away from the site. Save some feathers for use as bait with the sparrow trap.
- Remove and relocate nest boxes from the area that is infested by house sparrows.
- Remove all eggs but one and allow the sparrows to raise one chick to keep them occupied and reduce attacks on other nest boxes. This is the least preferred option.

# Predator and Competitor Control

## Controls

### Trapping House Sparrows

Trapping and killing house sparrows are unpleasant but necessary actions to protect bluebirds. They can be compared to extracting and destroying noxious weeds from your garden. You are not required to kill sparrows, and if you need help with a sparrow problem, contact your bander.

We recommend the Huber sparrow trap that appears identical in construction to a regular nest box but opens from the top. Use it to replace the nest box the house sparrows are occupying or hang it on the front of the existing nest box. A small robe hook screwed upside down to the back of the trap makes it easy to hang the trap from the hole on the front of the existing box. The house sparrow is not deterred from entering it because it appears to be identical to the original box. Upon entering the trap, the sparrow trips a lever inside the box that drops a metal plate over the exit hole, preventing his escape.

If repeated trapping and removal of house sparrows does not solve the problem, consider removing the nest box and relocating it to a more appropriate bluebird area. Discuss this option with your bander.

Observe the following guidelines when trapping house sparrows:

1. Never leave a set trap unattended for more than 30 minutes. You may inadvertently trap a native species and endanger it if left too long.
2. Be sure the sparrow has started to build the nest before setting the trap, as the bird bonds with the box at that time.
3. Place some of the sparrow nest material in the bottom of the trap, and set the trap so the metal plate is not covering the hole but is ready to be sprung.
4. Carefully hang the trap on the front of the nest box, making sure the trap hole is open.
5. Place one or two pieces of long grass between the lid and body of the trap so it protrudes and is visible to the sparrow. When he sees the grass, he may think another sparrow has usurped the box and is likely to enter the trap to investigate.
6. If you have saved some feathers from old house sparrow nests, place them on the ground under the trap as bait. The male often is unable to resist gathering them up and taking them into the trap.
7. If you are not sure what type of bird triggered the trap, slide a piece of metal hardware cloth under the lid and open it to identify the trapped bird. Always release native birds. (PBRP provides pre-cut hardware cloth for this purpose.)

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8. When the sparrow triggers the trap, there are several ways to remove the live bird:
  - Slowly ease your hand under the lid of the trap with fingers spread to prevent escape, and reach down to the bottom to grab the bird. It won't bite or scratch and typically sits in a corner, though it is quick to fly out.
  - You may prefer to place a plastic bag over your hand before reaching into the trap, then grab the bird, and enclose it in the bag after removing it from the trap. This method reduces escapes and makes for easier disposal.
  - Slide a large plastic bag over the entire top of the trap so that when you lift the lid, the bird flies up and into the bag. Then you can keep the bird inside the plastic bag and smother it.

## Killing House Sparrows

Killing an adult sparrow enclosed in a plastic bag is most easily performed by firmly pressing the bird's breast between your open palms to compress the lungs and smother the bird. This technique is swift, clean, and the least painful for the bird. Snapping the neck or stepping on the bird are also effective techniques. Always dispose of the sparrow body away from the nest box.

## Equipment

The following descriptions of predator control equipment include several devices we provide to monitors and banders. Always discuss predator control techniques with your bander to determine which device is best for the problem. Refer to "Predators" in *Enjoying Bluebirds More* for more information.

### PVC Baffle

PBRP provides these. They are constructed from the following materials:

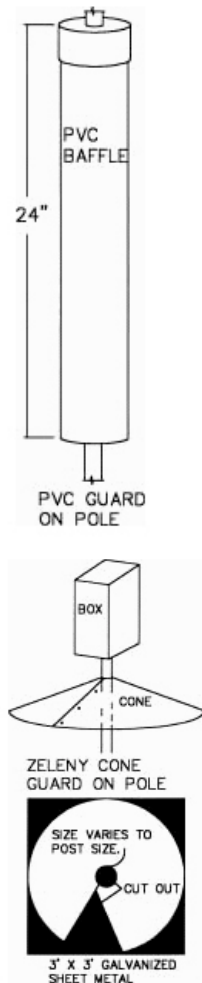
- 4-inch thin-wall PVC at least 2 feet long
- 4-inch PVC cap
- some screws
- 1 conduit hanger or hose clamp.

The baffle must be free-swinging on the pipe or pole the nest box is mounted on and must wobble when the predator (cat, raccoon) tries to climb it. The hole drilled in the top of the PVC cap should be about 1/8-inch larger than the pipe itself. It prevents mice from climbing up the pole and allows the baffle to wobble. An oversized hose clamp is recommended to give the PVC added wobble.

### Cone Baffle

Constructed from the following materials:

- 3-foot diameter circle of 24- or 26-gauge galvanized sheet metal (Disc blades also work well and can be found at farm auctions.)
- 1/4-inch round-head stove bolts
- 2 hanger iron straps

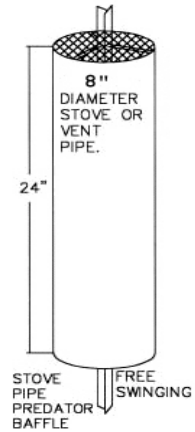


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## Stove Pipe Baffle

Constructed from the following materials:

- Galvanized stove or vent pipe
- 5- to 7-inch diameter x 24 inches long
- 8-inch circle of 1/2-inch hardware cloth
- 2 hanger iron straps, 7 inches long
- 2 #8 B32 x 3/4-inch machine screws and nuts



## Metal-Wrapped Post

Simply wrapping and nailing sheet metal around wood fence posts or nailing L-shaped metal strips to the edges of 4'x4' posts that nest boxes are mounted on deters climbing predators. These materials are inexpensive and available at hardware and home improvement stores.

## Noel Guard

We provide completed Noel guards for screwing to the front of our nest boxes. They are best adapted for use with side-opening boxes and must be removed completely to open a front-opening box.

