

\$2.00



# Bluebird Restoration Association of Wisconsin

## Information Packet: Attracting Eastern Bluebirds & Other cavity nesters

6th  
Edition

By Kent Hall & Patrick Ready (BRAW Editor)

### Life cycle of the Eastern Bluebird (*Sialia sialis*) by Patrick Ready.



Pair select box and female builds the nest.



Within a week or two  
3-5 eggs are usually  
laid in the nest.



The male stands guard.



After 13-14 days of  
incubation the  
chicks hatch.



After 16-22 days old the chicks  
are ready to fledge.



The chicks grow  
quickly being fed by  
both parents.



**Bluebird Restoration Association of Wisconsin, Inc.** has come a long way since its inception in 1986 with its understanding about how to effectively manage Eastern Bluebirds. This booklet pulls together the collective experiences of people who work especially for the interests of bluebirds, particularly those persons who record and summarize their nest box data and whom we term “monitors.” BRAW’s handling and interpretation of monitor data is done through data entry and computer analysis.

**BRAW is the first to admit** that not all experiences with bluebirds are typical of them throughout the state. However, most of our knowledge appears to be true regardless of where we encounter them. But bluebird management can be restricted by climate, geography, and habitat. The presence or absence of one or more natural enemies of bluebirds can alter results or even be a disaster. Nest box design, how a nest box is mounted on a post, and the spacing of boxes can profoundly affect what happens on a bluebird trail.

**It is our hope** that this **Informational Packet** produced by the Bluebird Restoration Association of Wisconsin, Inc. will bring you better understanding about how to succeed in helping this bird “with the sky on its back.”

### **BRAW**

The Bluebird Restoration Association of Wisconsin, Inc. (BRAW) is a nonprofit organization incorporated under the Laws of the State of Wisconsin. The **purpose and mission** of BRAW is to increase the production of the Eastern Bluebird and other native cavity nesting song birds through a coordinated, statewide nest box construction and monitoring program. BRAW seeks to expand public knowledge and enthusiasm for the Eastern Bluebird so that a growing number of people will have the desire to aid cavity nesters and have the knowledge about how to best accomplish this in their own communities. BRAW coordinates its cavity nesting recovery program through a network of volunteer **County Coordinators**, workshops, meetings, its official *Wisconsin Bluebird* newsletter and our website: [www.braw.org](http://www.braw.org).

When BRAW was organized in 1986, it was estimated that the Eastern Bluebird population *in its historic range* had declined by 90 percent during the preceding 50 years due to changes in agriculture practices, competition from the House (English) Sparrow and European Starling, severe weather in its central and southern winter ranges, and the loss of nest sites, such as tree cavities and hollow wooden fence posts.

A few far-sighted individuals and local organizations that took note of the plight of bluebirds in their respective communities had helped bluebirds and other cavity nesters during those bleak years. Much experimentation was done to develop nest boxes. Some of those efforts were more successful than others. Bluebird “trails” consisting of a few or many bluebird nest boxes were established by some persons. Special care of nest boxes (monitoring) was begun by more knowledgeable bluebirders. A few individuals kept records by documenting bluebird nesting success and events on their trails.

BRAW and its website [www.braw.org](http://www.braw.org) works to bring to light the efforts of Wisconsin citizens who had been helping bluebirds in the past and those who have recently joined their ranks. Since 1996, BRAW has entered monitors’ data into a computer database and as a result, through computer analysis of the data, we are gaining better insights and nest box designs affect bluebird population dynamics.

Through workshops, the Annual State Convention, and publication of research findings in the *Wisconsin Bluebird* newsletter, BRAW shares successful production techniques while hopefully avoiding some of the mistakes painfully learned by earlier bluebird enthusiasts.

### **County Coordinators**

County Coordinators are the “grassroots” of Wisconsin’s Eastern Bluebird restoration program. County Coordinators often conduct local workshops each year that are usually held in late winter and early spring. BRAW’s County Coordinators distribute literature, are sources for nest box construction plans, answer questions, and otherwise serve as knowledgeable persons to help individuals, clubs, and organizations effectively aid bluebirds and other cavity nesting birds. The County Coordinators assist interested persons in becoming members of BRAW.

BRAW members provide the financial base for the publication of the quarterly newsletter, *Wisconsin Bluebird*. The newsletter reports monitors’ data, data interpretations, various readers’ experiences with cavity nesters. In addition the newsletter covers how to recognize good habitat, why and how to monitor a bluebird trail, spotting bluebirds’ natural enemies, defending bluebirds against them, and identifying nest failures and solutions. Read about the impact and significance of other bird species that may nest in bluebird nest boxes, the names and addresses of County Coordinators and BRAW, Inc. officers and directors in the *Wisconsin Bluebird*.

### **Partnerships**

BRAW, Inc. maintains liaisons with the Department of Natural Resources’ Bureau of Endangered Resources, the UW-Stevens Point, the North American Bluebird Society (NABS), the Audubon Society, WI Purple Martin Association, WI Chimney Swift Working Group, The Raptor Resource Project and the Wisconsin Society for Ornithology.

We invite you to join us and be a part of the bluebird conservation movement in Wisconsin.

**Visit our web site at: [www.braw.org](http://www.braw.org)**



## Bluebird Restoration Association of Wisconsin, Inc. (BRAW)

In 1986, it was estimated that the Eastern Bluebird population in its historic range had declined by 90% during the preceding 50 years. Loss of habitat, increased populations of predators such as house sparrows, European starlings and raccoons, and the loss of natural cavity nest sites contributed to the bluebirds decline.

In an effort to reverse this trend, private citizens and the Department of Natural Resources organized BRAW, an independent nonprofit organization of citizens. With the use of man-made nest boxes, bluebirders have been able to gradually increase bluebird numbers.

Since its founding, BRAW has encouraged its members to participate in a unique nest box monitoring program. This program, in which about 20% of BRAW's members participate, involves the once-a-week collection of simple, but extremely useful data about nest box activity.

BRAW asks its volunteers to report data on the BRAW Easy Summary Form. People from all over Wisconsin file the reports each year. Based on those data, BRAW reports to all of its members by means of its quarterly newsletter, *Wisconsin Bluebird*, the production of bluebird trails throughout Wisconsin.

### You can Help

We have had great success over the years. This resulted from changes in the selection of box types (from deep boxes to small, shallower boxes) and from changes in box management methods. Today, most Wisconsin monitors have switched away from the use of closely spaced boxes to widely spaced boxes (at least 100 yards apart). There is more to be done. Bluebirds still need our help. There is room for a lot more bluebirds and you can make a difference. You can put up a couple boxes or several and monitor a bluebird trail. Whatever you decide will help bluebirds!

### BRAW Provides Resources

BRAW coordinates its bluebird recovery program through workshops and meetings, press releases, web site, articles in publications, and its official



quarterly newsletter, the *Wisconsin Bluebird*. BRAW also has an annual membership meeting, located in different parts of Wisconsin.

The network of BRAW County Coordinators conduct local workshops each year, typically during the late winter and early spring. These resource people help individuals, clubs, and organizations to effectively erect and monitor nest boxes.

BRAW members provide BRAW's financial base, e.g. for the publication of the *Wisconsin Bluebird*, construction of nest boxes, research and education.

### Bluebird Nest Box Design

The entrance hole should be accurately bored. Oval holes are recommended. Bore two 1-3/8" holes centered 7/8" apart. Do not drill holes in the bottom platform of the nest box as the holes will clog up with nesting material and will not allow drainage.

Vent the boxes, but block the vents until June 1 and then unblock them for circulation during warm weather. Do not put a perch below entrance hole. This only helps predator birds.

All nest boxes should permit interior access to allow for inspection (monitoring) of the box and for cleaning out when needed.

A generous roof overhang, especially over the entrance hole, helps to keep out rain and predators.

Do not use large or deep boxes. Inside floor area should be not larger than 4x4" and 3-1/2 to 5" from bottom of hole to floor. Painting boxes is unnecessary.

### Bluebird Nest Box Placement

1. Using a standard 10 ft. section of 3/4" EMT conduit, cut off about 2-2½ ft. (hack saw) and discard
2. Flatten tip of the 7 ½ ft. or 8 ft. section with hammer or sledge. This makes it easier to pound pole in the ground, and prevents it from turning.
3. Attach box to pole using 3/4" conduit clamps fastened with screws.
4. Do not mount box on a tree or wooden post.
5. Place nest box away from woods or brushy area.
6. There should be no shading from sunrise to noon.
7. Put box 20-100' of a tree(s).
8. Face entrance to E, or SE away from prevailing winds.
9. Use a nail or screw on the back to prevent box from slipping down the pole.

Bluebirds thrive in a short grass habitat. Mowed lawns, such as on residential, corporate, church cemeteries, or school grounds provide excellent habitat. Unsprayed, rural roadsides are fine. For bluebirds place boxes at least 100 yards apart. Close placement enhances production of Tree Swallows and wrens that sharply cut down on the production of bluebirds.

### Bluebird Nest Box Management

Please check your nest boxes every 6-8 days during the nesting season, first of April to mid-August. Eliminate all House Sparrow nests and contents. House Sparrows kill nestlings and adults of cavity nesting songbirds. Federal law allows trapping and elimination of House Sparrows from boxes. Remove a nest box when it is no longer properly located, or when you cannot watch or maintain it. Abandoned boxes attract House Sparrows, a known bluebird predator.

Download Form 22 for your written record of what you see at each weekly visit to your nest boxes, and report your data using the BRAW EZ Summary Form, at the end of the nesting season. Mail it or email it. It's a satisfying conservation project for cavity nesting songbirds.

Forms can be found at [www.braw.org](http://www.braw.org)



# Nest Guide to Cavity Nesters

by Patrick Ready/BRAW

## Eastern Bluebird

Fine or coarse grasses, pine needles, lined with fine grasses.



## Tree Swallow

Similar to bluebirds, coarser grasses & straw, lined with feathers when eggs are laid.



## Black-capped Chickadee

Moss, fine grass, lined with animal hair.





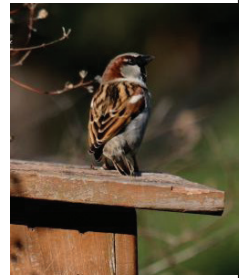
**House Wren**

Sticks and twigs jammed in tightly. Lined with a small amount of fine grass and hair. Often builds dummy nest with a few sticks but without lined cup.



**House Sparrow**

Grass, straw, feathers, paper, plastic, etc. and they usually swirl the grass upward to fill the box, then tunnel down in. Sometimes when a nest is first started it may be hard to tell what species is nesting. Wait a day or two to see how the nest develops. Feathers and wrappers early on with some grass pieces are definite signs of House Sparrows.



Above: Peterson box filled with straw, grass, and garbage indicates a House Sparrow nest.  
Middle: Eggs-white or grey with brown specs.

Left: Beginning nest. Similar to bluebird and tree swallow but note chicken feathers and debris are signs of a House Sparrow nest.

**Species Identification of Cavity Nesters**

**Male & female Eastern Bluebird.**



**Female & male Tree Swallow.**



**Fledgling Eastern Bluebird.**



**Black-capped Chickadee, sexes similar.**



**House Wren, sexes similar.**



# Make a Predator Guard

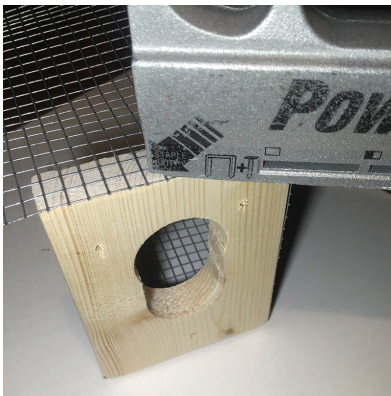
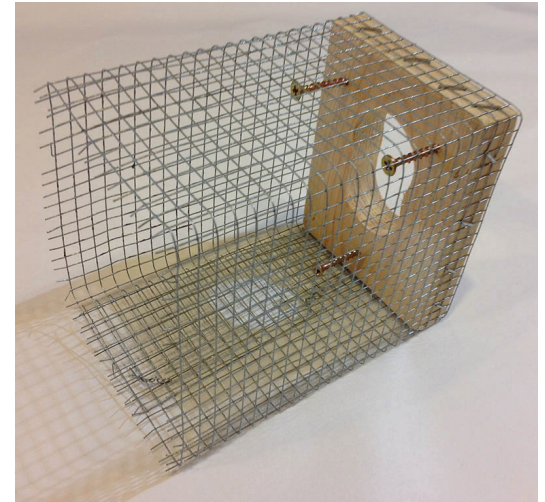
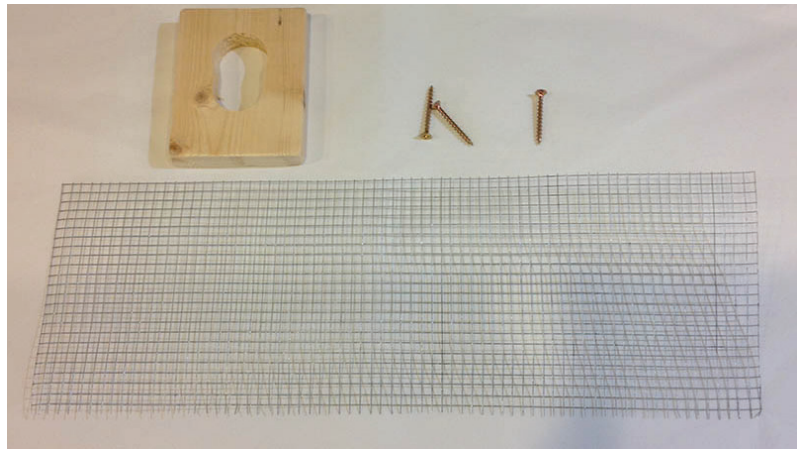
## Materials:

- 1 x 4" pine or cedar board
- Hardware cloth cut to 16"x6"
- 3 Screws 1-1/2" long

## Tools:

- Staple Gun
- Drill
- Hammer (to pound staples down firm)
- Cut the wood to 4-1/2" length
- Drill a 1-1/2" entrance hole or an oval hole in the piece.

Starting on the bottom wrap the hardware cloth around the wood piece stapling it several times as you go. Drill 3 holes for screws in the wood piece for easy fastening to the box.



The wood block is optional. You can attach the wire directly to the front of the box with several screws but the block of wood makes a sturdier guard.

# 3/4" Conduit Mounting System

By Bob Tamm

1. Using a standard 10 ft. section of 3/4" EMT conduit (available at Menard's, Home Depot, etc.), cut off about 2 - 2 1/2 ft. (hack saw) and discard.
2. Flatten tip of the 7 1/2 ft. or 8 ft. section with hammer or sledge. This makes it easier to pound pole into ground, and prevents it from turning.
3. Loosely attach 3/4" EMT conduit 2-hole straps to back of box using 3/4" deck screws. (Note: 3/4" deck screws are hard to find. I get mine at Menard's.)
4. Using post pounder, pound long conduit section into ground, allowing about 6 to 6 1/2 ft. above ground.
5. Slip box with straps onto conduit and adjust box for height. Then tighten screws.

Use a nail or screw on the back to prevent box from slipping down the pole.

Note: If you would like to use the entire 10 ft. section, try this: Measure two sections to 6'-8" and cut. You will have two left over 3'4" sections, which will make a third 6'-8" section if you use a coupler. If you drive these sections about 14 inches into the ground, you will still have enough conduit above ground to mount a box on the 5 ft. above ground conduit. You then have three mounts from two 10 ft. sections.





# NABS style Bluebird Box

Cedar, 7/8" lumber preferred.

8" wide for top

6" wide for back, front, sides & bottom

All angle cuts are 10 degrees

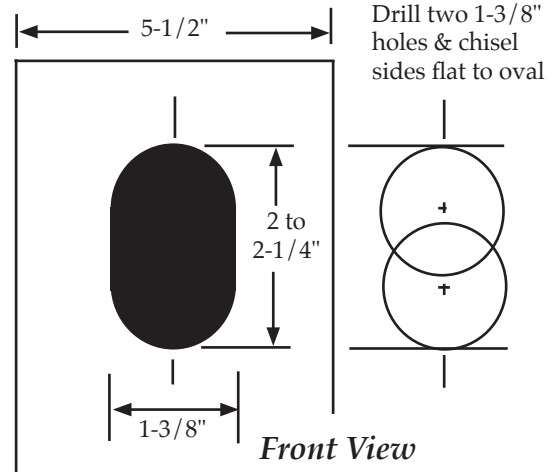
Roof is 7-1/2" wide x 10-1/2" long

Sides 9-7/8" long x 5" wide

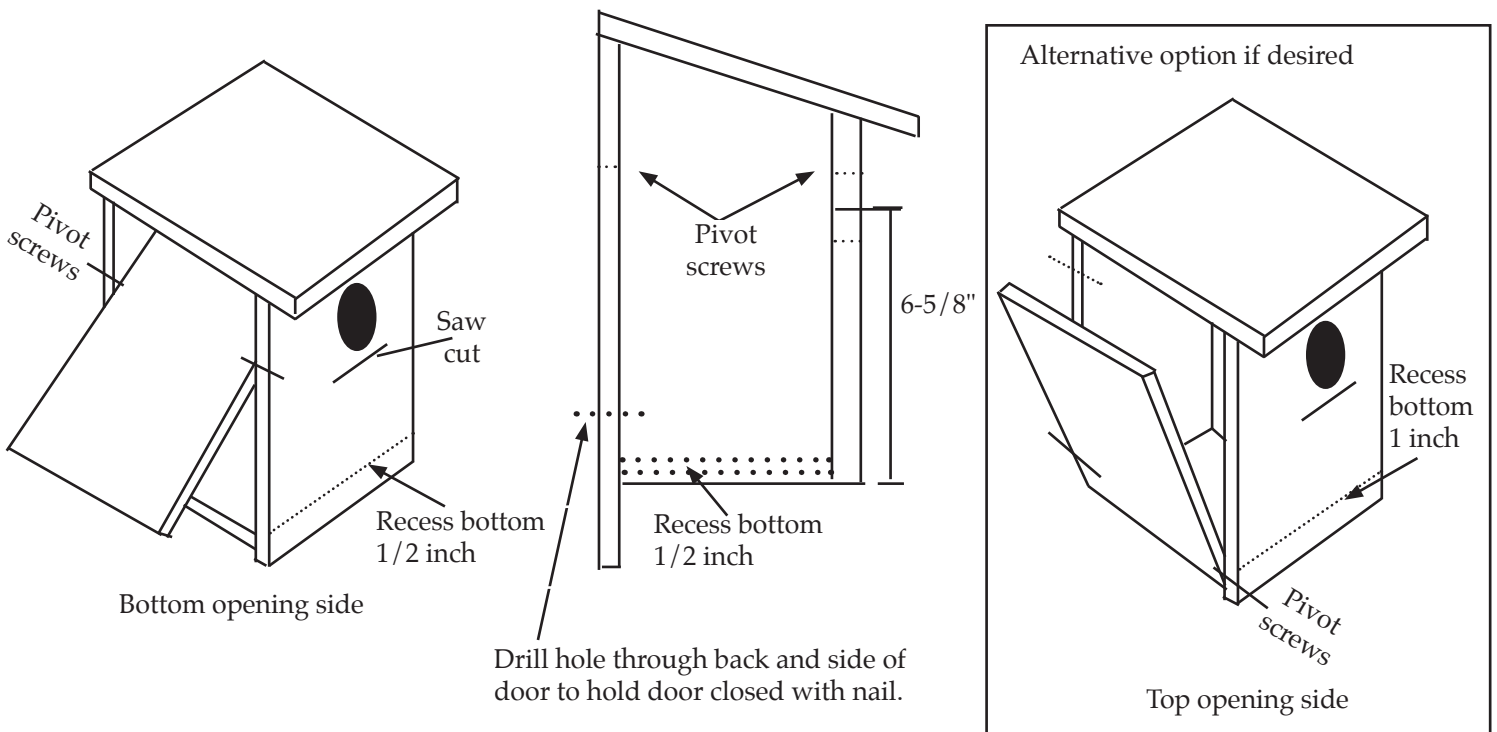
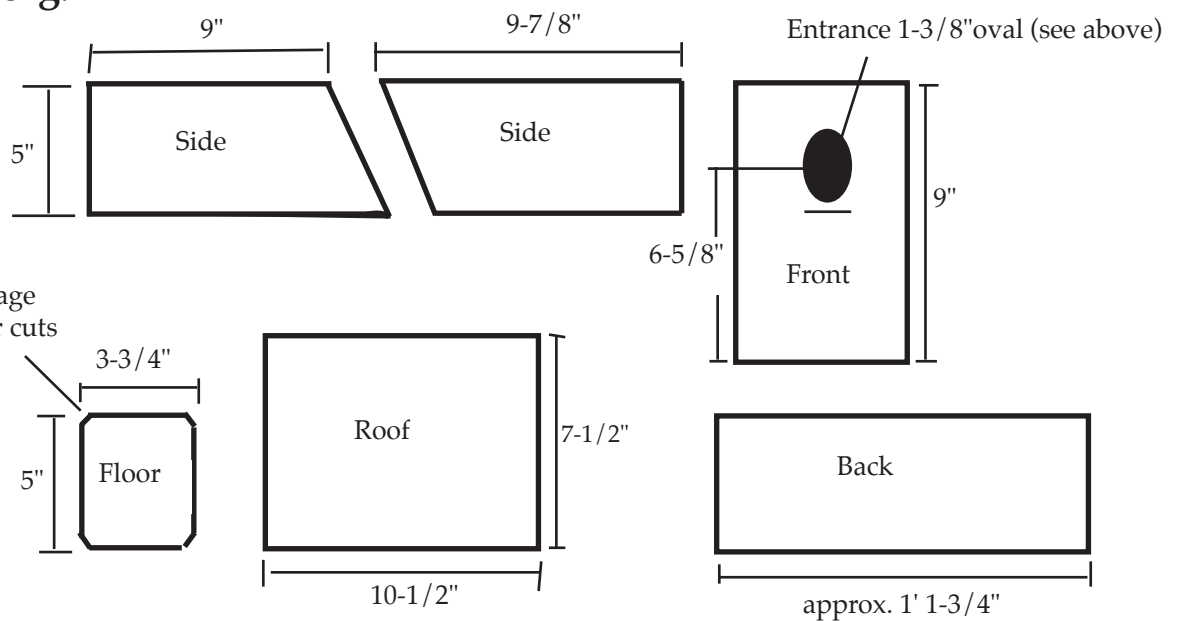
Floor is 5" x 3-3/4"

Back & front 5-1/2" wide

## Recommended Oval Hole Plan



More nest box plans can be found on our website: [braw.org](http://braw.org).





## Bluebird Restoration Association of Wisconsin Inc.

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### Common Predators of Eastern Bluebirds: Raccoons, House Sparrows, Black Flies and Mice

- 1) **Raccoons:** To prevent raids of your nest boxes by raccoons, three preventive measures are suggested: A) Use steel wool or a wire brush to smooth off oxidized PVC and /or B) smear car wax paste on the post. C) Predator Guard on front of box.
- 2) **House Sparrows** are an introduced species from Europe. They have no legal protection from the USFWS in North America. They have a strong, seed crushing beak that easily out-competes the slender/ weaker insect-eating beak of other songbirds. The best way to prevent these pests from occupying your nest boxes is to keep them away from livestock (especially cattle) or homes with feeders using millet and /or cracked corn as these locations attract large numbers. Control sparrows with the Van Ert sparrow trap. Van Ert traps are easy to insert and highly effective when used properly.
- 3) **Black flies** are a menace like no other to cavity nesting songbirds. Female flies are attracted by CO2 given off by incubating hens or immobile chicks and bite them for a blood meal. Female bluebirds are driven off their eggs by the persistent biting of black flies but chicks can't get away from black fly bites. We now have a way to prevent black flies. It's best to use Permethrin-10 poultry insecticide. Dilute it to 0.50% concentration and place it into an aspirator bottle such as a "Windex Bottle". When you find black flies around your nest box spray the opening and all cracks on the box, both inside and out. If there are eggs or chicks in the nest, put a small, clear jar over the eggs and spray the nest box thoroughly. The 2nd week, spray the hole and cracks on the outside of the box only.
- 4) **Mice:** Mice will often use a box to nest in. Cover your nose & mouth before removing mice nest as their feces can carry hantavirus bacteria which can be inhaled causing severe illness.

### Use the Van Ert Trap to Solve Your House Sparrow Problems



**Figure 1– Installation**  
Installation is quick and simple provided there is a screw intact.

Install the trap and set it per instructions. Watch to see if you catch a House Sparrow or return to the box after a short time to check to see if the trap was sprung. You don't want to trap a bluebird and leave it trapped. To check caught bird put a large, clear plastic bag over the box and slightly open the side. The trapped bird will fly to the top of the bag for you to see what you have. Release bluebirds and remove House Sparrows.



**Figure 2– The visible red bulls eye invariably suggests a trapped sparrow.**

Order traps online from Van Ert Enterprises at  
[vanerttraps.com](http://vanerttraps.com)

Approximately \$10.00 + Shipping