

NestWatch

Where Birds Come to Life

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Predator Guards Carry Their Weight



Photo © Glenda Simmons ([http://nestwatch.org/connect/hib-contest-2016/bluebird-safety-10](#))

Humans have been providing nest boxes for cavity-nesting birds for hundreds of years. In the last 50 years, a lot of creative ingenuity has gone into trying to solve the problem of nest predation. Enter the predator guard, a device that is installed on or below the nest box to keep predators away from vulnerable eggs, nestlings, and even incubating females. However, almost no studies have tested their performance. In 1969, L. Kibler hypothesized that metal cone-shaped guards on nest-box mounting structures are 'probably' the most reliable device against ground predators, yet five decades later no conclusive research has been published.

With the rise of citizen scientist nest monitors, it's now possible to test the effectiveness of predator guards in promoting the nesting success of cavity-nesting birds at a large spatial scale (United States and Canada). Using NestWatch data from 24,114 nest records submitted from 2014–2016 to NestWatch, the Cornell Lab of Ornithology tested whether installing predator guards on nest boxes is an effective management technique. We also tested how different guard types compared to each other, and whether or not multiple guards is any better than a single guard.

GUARDING YOUR INTERESTS

When we looked at all species combined, the nest survival data suggested a 6.7% increase in nest success for attempts in boxes with guards versus attempts in boxes without guards. That may not be the 100% protection that many people believe they're providing, but 7% is actually a large

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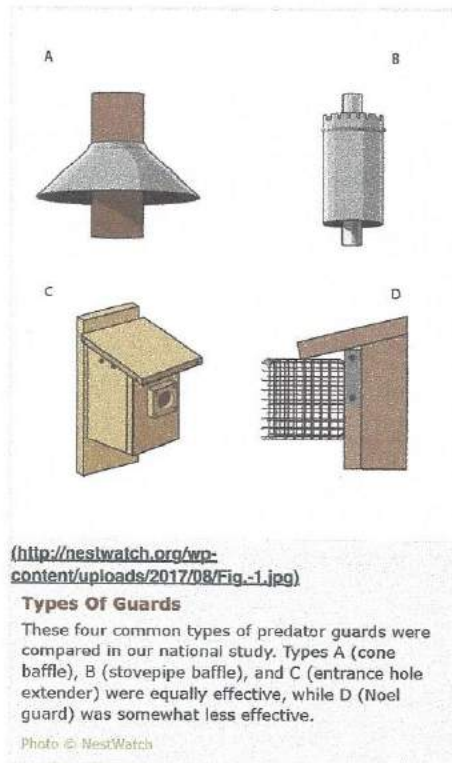
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increase at the national level. There are few other actions a homeowner can take that would improve nest success to that extent. However, all species did not benefit equally. Western Bluebird stood out as a species for which a predator guard did not seem to make a difference. We're not sure why, but it could be that other factors (e.g., drought, insect supply) have more impact on their nesting success than do predators. Other species, such as the Carolina Wren, showed a 15.7% increase in nest survival when guarded!

Although all types of guards were correlated with improved nesting success, birds nesting in boxes with cone-type baffles, stovepipe baffles, or entrance hole extenders (also called "wooden block hole guards") were most likely to result in successful nesting. The Noel guard did not rise to the top as a clear leader, although it is surely better than nothing (see guard types in photo above). Additionally, birds nesting in boxes with multiple predator guards (such as a cone baffle and a hole extender) were more successful, on average, than birds nesting in boxes with only a single guard.



(http://nestwatch.org/wp-content/uploads/2017/08/EABL_WilliamPagePully-828x1024.jpg)

Eastern Bluebird Box With Hole Guard

WE ARE A FORCE FOR BIRDS

At NestWatch, we know that caring for wild nesting birds is a top motivation for providing nest boxes, and most people want to maximize nesting success while minimizing human effort. The predator guard is therefore an inexpensive, passive, and effective way to increase the survival of nests, especially with other factors being less under our control (e.g.,

No Nest Required
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Patricia Gowaty
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plants
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predator guard
(<http://nestwatch.org/tag/guard/>)

A female Eastern Bluebird feeds her youngster through an extended nest hole entrance. Not all extenders are made of wood; some designs are made of metal or plastic. These keep predators from easily reaching into the box.

Photo by [William Page Pully](http://nestwatch.org/connect/hth-contest-2017/bluebird-dinner/) (<http://nestwatch.org/connect/hth-contest-2017/bluebird-dinner/>)

weather, food supply).
[Download predator guard plans here](#)

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White Tern (<http://nestwatch.org/tag/white-tern/>)

(<http://nestwatch.org/learn/all-about-birdhouses/dealing-with-predators/>). However, there is still no such thing as a "predator-proof nest box" because it is hard to control for predators such as bears and House Sparrows, which are not so easily deterred.

We would like to thank the legions of NestWatchers who monitored 12,274 nest boxes (both guarded and unguarded), enabling this comparative study. Without you, large-scale studies like this would not be possible!

References:

- Bailey, R. L., and D. N. Bonter. 2017. Predator guards on nest boxes improve nesting success of birds. *Wildlife Society Bulletin*; DOI: [10.1002/wsb.801](https://doi.org/10.1002/wsb.801) (<http://onlinelibrary.wiley.com/doi/10.1002/wsb.801/epdf>).
- Kibler, L. F. 1969. The establishment and maintenance of a bluebird nest-box project: a review and commentary. *Bird-Banding* 40:114-129.

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