

More predators doesn't equal more danger for urban bird nest

September 23 2010, by Jessica Orwig

While birds living in urban areas face more predators than do those in rural areas, that doesn't mean urban birds face more danger from nest robbers.

A six-year study conducted in 19 central Ohio forests from 2004 to 2009 found that, as expected, [rural areas](#) that had higher numbers of nest predators such as raccoons, domestic cats, and crows, also showed lower rates of nest survival.

But there was no relation between the number of predators and nest survival in more urbanized areas.

Researchers believe that's because nest predators in urban areas have access to more human-provided food, making them less likely to prey on nests.

"We have seen the numbers of sensitive [bird species](#) decline in urbanized areas at the same time that predators such as raccoons and domestic cats have increased, so it is natural to try to link the two," said Amanda Rodewald, first author of the study and professor of wildlife ecology at Ohio State University's School of Environment and Natural Resources.

"But we found that there isn't such a link in urban areas. Having more predators is bad news for birds in rural areas, but not necessarily for those in urban areas. We believe that predators are taking advantage of other sources of food in cities, such as trash cans and birdfeeders."

Rodewald's co-authors included Laura Kearns, who is a graduate student in the School of Environmental and Natural Resources, and Daniel Shustack, a recent doctoral graduate. The research was recently published online in the journal [Ecological Applications](#), and will appear in a future print edition.

Rodewald and her co-authors monitored 2,942 nests located in 19 forests, which were rated on a scale from most urban to most rural. These nests were from five different songbird species.

During three years of the study, the researchers also took time-lapse video recordings, day and night, of some nests in order to determine predator species. As a result, 67 nest attacks were recorded and 18 predator species were identified. Some of the predator species included red-tailed hawk, raccoon, barred owl, red squirrel and domestic cat.

Rodewald and her colleagues also counted the number of nest predators at each study site and compared it to the daily nest survival rate for each year of the study.

Results showed a strong relation between predator abundance and nest survival rate within rural forests - the more predators there were, the lower the nest survival rate. However, there was no relation between the number of predators and nest survival for urban forests.

For example, an increase in predator numbers from one to 20 reduced the daily nest survival rate by 22 percent in rural landscapes, but actually slightly increased survival in urban landscapes.

"We think that the reason for the lack of connection between predator and prey within urban landscapes is due to the amount of food provided by humans in urban areas," said Rodewald.

Previous studies by the researchers showed that, compared to rural areas, urban landscapes supplied greater numbers of birdfeeders, abundant fruiting exotic plants and trash receptacles, all of which are appealing to predators such as raccoons and crows.

"The predator-prey relationship is well established in rural areas," said Rodewald. "But that relationship changed completely in our [urban areas](#)."

More information:

www.esapubs.org/esapubs/journals/applications.htm

Provided by The Ohio State University

Citation: More predators doesn't equal more danger for urban bird nest (2010, September 23) retrieved 25 April 2024 from

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