

# Early arrival gives bluebirds an edge in keeping nest sites

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A Mountain Bluebird pair claims a nest box in British Columbia. Credit: S. and R. Proulx

Finders, keepers: Mountain Bluebirds are more likely to defend nest cavities against competition from other birds such as swallows if they get there first, but climate change may disrupt the migratory timing that lets them beat their rivals to the punch, according to new research in *The Auk: Ornithological Advances*.

The outcomes of interspecies battles for nest sites depend on a number of factors—while some species are inherently better competitors than others, the one that claims a site first also can have an advantage. To test what happens when Tree Swallows and Mountain Bluebirds compete for nest sites, Karen Wiebe of the University of Saskatchewan set up side-by-side pairs of nest boxes in grassland habitat in central British Columbia. When bluebird and swallow pairs moved in next door to each other, she would either block the entrance to one box and let the two pairs of birds compete for the one that remained, or remove both boxes and replace them with a fresh one.

Wiebe found that when Tree Swallows were defending their previously owned box or when the two species were competing over a new box, Tree Swallows won 65-70% of the time. Bluebirds got a boost when they defended a box they already occupied, however, fending off swallows 77% of the time. Mountain Bluebirds typically arrive on their breeding grounds earlier than Tree Swallows, giving them a chance to secure nesting locations before their competitors. However, [climate change](#) is moving up the timing of swallows' spring migration, which may bring the two species into direct competition more often and reduce bluebirds' ability to claim and defend nest sites.

"I became interested in this topic after watching many competitive interactions over natural tree holes during a long-term study of Northern Flickers in central British Columbia," says Wiebe. "In early spring when the birds are trying to claim a nest site, these disputes can be intense and really grab your attention. Because bluebirds and swallows readily use [nest boxes](#), I was motivated to try some experiments in a system where I could have more control over the spacing of nests and settlement patterns of the birds."

"This is a nice set of clever and simple experiments that show that species are not the same when it comes to the importance of being the first one to occupy a [nest](#) site," according to ecologist Hanna Kokko of the University of Zurich, an expert on interspecies competition in birds. "The one that currently tends to arrive first, the bluebird, relies more on this, which could easily cause problems if the arrival order changes on a changing planet."

**More information:** Interspecific competition for nests: Prior ownership trumps resource holding potential for Mountain Bluebird competing with Tree Swallow

[www.aoucospubs.org/doi/full/10.1642/AUK-16-25.1](http://www.aoucospubs.org/doi/full/10.1642/AUK-16-25.1)

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