

## Singing Shows My Generation For Young Songbirds, But Not All Try To Bring Them Down

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A white-crowned sparrow. Older male white-crowned sparrows are less intimidated by young males. (Photo: Gary Kramer, U.S. Fish and Wildlife Service)

Male white-crowned sparrows don't care that youth is wasted on the young. In fact, the songbirds aren't intimidated by territory-encroaching youngsters – mostly because females prefer more experienced mates.

Researchers at Ohio State University found that older, more mature, male white-crowned sparrows aren't as aggressive towards younger males singing on their turf. The study, published this month in *Biology Letters online* <sup>[1]</sup>, also demonstrated that two males of the same age are more likely to spar over a mate or nesting territory.

Male white-crowned sparrows assess the threat level of a rival based on their age, which is determined by his singing, explains Angelika Poesel, lead author of the study and curator of Ohio State University's Borror Laboratory of Bioacoustics and the tetrapod division. Poesel, along with Douglas Nelson, associate professor of evolution, ecology and organismal biology at Ohio State and director of the Borror Lab, conducted the study in a migratory population of

white-crowned sparrows in a state park in Bandon, OR, from 2008-2011.

“It was a classic playback experiment,” Poesel says. “We knew where a male would hang out, so we would simulate an intruder or new neighbor using a stereo and we would play the either a repertoire or one song.”

Male white-crowned sparrow use song to claim nesting territory and win mates, so males will often attack those singing in their territories. In some species, like the white-crowned sparrow, second-year males will differ in plumage from older birds. But a white-crowned sparrow’s singing will also differ with age. Males usually settle on one song later in life, switching between two tunes in their youth, Poesel explains. Therefore, a repertoire would signal younger males and a single song type would represent older males.

“We observed how the male would actually respond to these different species,” Poesel says. She and Nelson would observe how close a male would approach the speaker acting as a male rival, with a closer approach and singing being the more aggressive response.

This study is one of the first to suggesting birds will use song in addition to plumage to determine age.



(Photo: Douglas Nelson, Ohio State University)

“Whether this delayed song maturation actually means something to the receiver was what we studied,” Poesel adds.

Poesel and Nelson have been studying this population since 2005. In another study conducted with H. Lisle Gibbs and published in *Behavioral Ecology online* <sup>[2]</sup> this month, younger males were shown to be less attractive to females.

“Older males have more experience, so they’ve already bred in that area before; they have high quality territory already with food resources,” Poesel says. “It’s really the experience of the older males that attracts mates.”



(Photo: Gary Kramer,U.S. Fish and Wildlife Service)

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