

Bird song-sharing like verbal sparring

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Research conducted at Queen's University Biological Station in Kingston, Canada, suggests that song-sharing amongst song sparrow populations is actually an aggressive behavior, akin to flinging insults back and forth. Credit: Scott MacDougall-Shackleton.

While singing the same songs as your neighbours may sound harmonious, research conducted at Queen's University Biological Station (QUBS) suggests that song-sharing amongst song sparrow populations is actually an aggressive behavior, akin to flinging insults back and forth.

"It's been hypothesized that repertoire size and [song](#) complexity is about the singer's ability to advertise their quality as a mate," says lead author Janet Lapierre, a visiting [biologist](#) from the University of Western Ontario (UWO). "Song-sharing, where birds sing a smaller number of their species' greatest hits, is a more aggressive and attention-seeking behaviour. It's also a behaviour most often displayed by belligerent older males."

Ms Lapierre and fellow QUBS researchers Daniel Mennill (University of Windsor) and Beth MacDougall-Shackleton (UWO) used a 16-channel acoustic location system to investigate whether

male [song sparrows](#) preferentially choose to sing highly shared song types or whether they use all song types interchangeably. They found no general tendency amongst the [sparrows](#) to either preference.

Instead, they found that the performance of highly shared songs is determined more by individual differences like age and the kind of neighbourhood the sparrows live in. 'Tougher' neighbourhoods had a higher percentage of sparrows who engaged in more aggressive song-sharing bouts, whereas 'mild-mannered' [neighbourhoods](#) tended to support more conflict-averse sparrows that avoid using shared song types.

Older male sparrows were the most likely to engage in more aggressive or attention-seeking song-sharing bouts, suggesting that older males may be more willing or able to risk conflict and may also have more experience in which songs are effective signals in their local area.

"The novelty of this study was that we looked at how birds use songs rather than just examining the content of their repertoires," says Dr. MacDougall-Shackleton, a biology professor from the University of Western Ontario and a regular QUBS researcher. "We really could not have done this research without the longstanding study population of song sparrows at the Queen's University Biological Station."

These findings were recently published in *Behavioural Ecology and Sociobiology*.

Provided by Queen's University

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