

# **Are male collared flycatchers (*Ficedula albicollis*) king of their castle?**

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Collared flycatchers are a small songbird that migrates every year from Africa to southeast Europe and Öland and Gotland. They do so in order to breed, hoping to find ample food in the form of insects and their larvae and to find safe nests in tree cavities. The bird is relatively tame when being handled and their breeding populations can easily be persuaded to live in manmade nestboxes. This sets the scene for species that can be monitored closely. The birds can be ringed allowing the equivalent of a country's citizen registry to be created. This allows researchers to track all aspects of their life; their age, size, colours, how much they explore, their number of successfully hatched chicks, who they partner with and even if they carry diseases.

In this study we looked at males of this species, specifically males that have their breeding territories on one of Sweden's Baltic islands: Öland. This is a relatively new area for them and one could say that they are pioneers for their species as they are colonising the island. In doing so their territory is entangled with that of a relatively closely related species called the pied flycatcher (*Ficedula hypoleuca*). They started to colonise the island from a place near the north of Öland and over time expanded to the south.

When a male is choosing a territory and awaiting the female's arrival he marks it by song. He will use physical threats and attacks towards a competing intruder.

I have been studying this aggressive behaviour of male collared flycatchers and focused mainly on three points. Firstly, are the males of the collared flycatcher species showing the most aggression to only their own species? Secondly, the collared flycatcher males that breed in the part that is most recent in its colonisation on Öland, are they more aggressive individuals in general? Thirdly do these males also act with more aggression towards pied flycatcher males? To answer these questions the male collared flycatchers were monitored in trials in which they were exposed to a same or pied flycatcher species dummy with matched song. Scores were based on their type of aggression; for example a quick swoop near the dummy was considered less aggressive than sitting on top of the dummy and pecking at it.

Collared flycatcher males were indeed more aggressive towards their own species. Next they were also found to be more aggressive in the more recently colonised area. This supports a theory in the field of behavioural ecology that certain personalities are found in varying locations within a population. Here we match with the theory that male collared flycatchers at the edge of the territory are more aggressive, thereby helping the population in expanding its area. A continued study could look into how far male birds travel from their nest of birth to where they have their own territory as an adult and combine it with their aggressive traits; potentially it could find birds that are "brave" pioneers and protective. Lastly we did not find that collared flycatcher males were more aggressive towards pied flycatcher's males in the south. Perhaps there are too many species related boundaries – song, colouration, size, etc. – that downplay an aggressive response from the male collared flycatchers.