

Do collared flycatchers (*Ficedula albicollis*) in newly put nest boxes have different breeding performance?

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Nest boxes are widely used for many studies on hole-nesting passerines in woodlands. Every selected woodland plot has to experience its first breeding season after putting up nest boxes. A new plot is then defined as the woodland plot where we newly put nest boxes before the breeding season in a certain year. In contrast, old plots have been established for more than one year. Based on these definitions, I here focused on whether the age structure, timing of breeding, clutch size and breeding success in nest-box populations of collared flycatcher were different between new and old plots on the Swedish island of Gotland.

Based on the database which included totally 32 years' field work in more than 60 woodland plots, I suggested that there were old birds (older than yearlings) in old plots. Secondly, compared with old plots, the breeders in new plots laid eggs earlier, but did not differ in clutch size. Moreover, the breeding success of birds in new plots was negatively correlated to local breeding density. However, this tendency existed only when the breeding density was not higher than 2 broods/ha. Also, in old plots the breeding success was not related to breeding density.

On the other hand, new plots also had special population dynamics during the first few years. Generally, population increased in first three years, and then tended to be stable around a certain density. Therefore, I suggest that when studying nest box passerines, one should use the reproductive data in new plots with caution and carefully consider the potential influence from new plot effects on different variables, such as population growth and some reproductive parameters.