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ORNIS SCANDINAVICA 18: 205-215. Copenhagen 1987

Song differences between the Pied Flycatcher Ficedula hypoleuca, the Collared Flycatcher F. albicollis, and their hybrids

Hans P. Gelter

Gelter, H. P. 1987. Song differences between the Pied Flycatcher $Ficedula\ hypoleuca$, the Collared Flycatcher $F.\ albicollis$, and their hybrids. – Ornis Scand. 18: 205–215.

The song of Ficedula hypoleuca, F. albicollis, and their hybrids was described by seven song variables. The two species differed significantly in five of these, and were best discriminated by the faster song tempo of hypoleuca and the use of higher frequencies by abicollis. The song of some hybrids did not differ significantly from that of albicollis but differed in several parameters from that of hypoleuca. Also some hypoleuca males sang a song resembling that of albicollis. The occurrence of hybrids and hypoleuca males singing albicollis song is proposed to be a consequence of song learning from surrounding males in areas with high densities of albicollis.

H. P. Gelter, Dept of Zoology, Uppsala University, Box 561, S-751 22 Uppsala, Sweden. (Present address: Dept of Genetics, Uppsala University, P. O. Box 7003, S-750 07 Uppsala, Sweden.)

Introduction

Closely related sympatric species often differ markedly in their song and several studies indicate that related species can discriminate between each others' vocalizations (see Becker 1982 for a review). Interspecific discrimination of song minimizes hybridization and interspecific conflicts, and permits territorial overlap between closely related species.

Species specific song characters can be studied in three different ways. Statistical analysis can evaluate song variables which might be used for species discriminaton (Sparling 1978, Martindale 1980, 1982). Song variables may also be modified in tape-recorded songs and played back to territorial males (Becker 1982). Their reaction then provides information on which song variables may be used for species recognition. This ap-

Received 10 January 1986 Revised 28 August 1986 Accepted 24 September 1986 © ORNIS SCANDINAVICA

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proach can only be applied to species that actively defend territories, and only measures the reaction of males. A third approach is to study the reaction of the female to different songs. Here, however, the practical problems of scoring the female's reactions are profound, and such studies are scarce (Searcy et al. 1981, Baker 1983, Eastzer et al. 1985).

This study attempts to decribe the alarm call and some song variables from a pair of closely related and partly hybridizing species, and to compare the song of the hybrids with those of the parental species.

Species description

The Collared Flycatcher Ficedula albicollis and the Pied Flycatcher F. hypoleuca hybridize to some extent in areas of overlap. These species probably originated dur-

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Song Differences between the Pied Flycatcher Ficedula hypoleuca, the Collared Flycatcher F. albicollis, and Their Hybrids, by Hans P. Gelter © 1987 Nordic Society Oikos.

Abstract

The song of Ficedula hypoleuca, F. albicollis, and their hybrids was described by seven song variables. The two species differed significantly in five of these, and were best discriminated by the faster song tempo of hypoleuca and the use of higher frequencies by albicollis. The song of some hybrids did not differ significantly from that of albicollis but differed in several parameters from that of hypoleuca. Also some hypoleuca males sang a song resembling that of albicollis. The occurrence of hybrids and hypoleuca males singing albicollis song is proposed to be a consequence of song learning from surrounding males in areas with high densities of albicollis.

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