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### **Abstract**

Biometrical and morphological differentiation in sex-age groups of Robins migrating through the Polish Baltic coast was studied. Altogether 446 dead birds were collected in 1963-2004 during spring or autumn migration. Dead Robins were measured (wing and tail lengths and wing formula) and additionally in 2002-2004 leg colour and amount of grey colour on head and flanks were determined. After the measurements were taken, individuals were sexed by dissection.

Birds were divided in four sex-age classes: immature females, immature males, adult females and adult males. Wing length, tail length, index of asymmetry ( $E'$ ) and pointedness ( $L$ ) were compared among this classes using  $t$ -test.  $G$ -test was used to compare leg colour and greyness on head and flanks between the sexes for immature Robins. With a method of correlative topography charts showing combination of two parameters - wing and tail lengths - in different sex-groups of immatures were prepared.

Obtained results indicate that sexes differ in wing and tail length and greyness on head and flanks. Males have longer wings and tails and bigger amount of greyness than females. The overlap of females and males is rather large, i.e. in the case of wing length 69-75 mm in immature and 71-74 mm in adult birds and in the case of tail length 55-67 mm in immature and 57-64 mm in adult birds. High probability of sex determination according to wing or tail length is found only in extremes. Combination of these two features only slightly increases possibility of sex determination.

The Robin is a monomorphic species, therefore biometrical differences between males and females could be helpful in sexing. In some studies Robins were sexed according to criteria proposed by J. Pettersson referring to wing length, but only 29% of birds analysed here could be sexed when applying this criterion. These differences may result from varying composition of populations coming from different breeding areas. According to the charts presenting correlation between wing and tail length, three "biometrical" groups are distinguishable in both sexes.

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