

MIGRATION DYNAMICS AND SEASONAL VARIATION
IN THE BIOMETRICS OF THE EURASIAN CURLEW
(*Numenius arquata*) MIGRATING THROUGH THE LOWER
VISTULA VALLEY (N POLAND) IN AUTUMN

Robert Krupa, Włodzimierz Meissner,
Małgorzata Krupa and Agnieszka Sereda

ABSTRACT

Krupa R., Meissner W., Krupa M., Sereda A. 2009. *Migration dynamics and seasonal variation in the biometrics of the Eurasian Curlew (Numenius arquata) migrating through the lower Vistula valley (N Poland) in autumn*. Ring 31, 1: 41-51.

The aim of this study was to present data on the phenology of autumn migration of the Eurasian Curlew passing the lower Vistula valley and to determine whether there is a difference in biometrics between early and late migrants, which may reflect different timing of migration of birds from different parts of the breeding range. Studies were conducted in the lower Vistula valley in 2003-2008. Median date of migration fell into 9-13 August pentade. The migration dynamics showed major day-to-day changes in bird numbers and almost all of observed flocks migrated without staying in the study area. Moreover, only one bird was caught twice during the season. It indicates that lower Vistula valley is not an attractive stopover site for Eurasian Curlews. There were significant differences in the total head lengths, bill lengths and body masses of birds caught in different ten-days periods with larger and heavier birds occurring towards the end of the study period (ANOVA, Neuman-Keuls test: $p < 0.05$ in all cases). The gradual increase in the total head and bill lengths and probably also in body mass indicates that bigger birds from the eastern part of the breeding range migrate later than smaller birds, which breed in the west. There were no significant differences in wing length, tarsus length and tarsus with toe length (ANOVA, Neuman-Keuls test: $p > 0.05$ in all cases). Subspecies *N. a. arquata* and *N. a. orientalis* have similar wing length and in this study there were no significant differences for this measurement between following decades of the studied period. Collected data suggest that the wing length, which had clearly bimodal distribution, should be the best linear measurements for sexing at least juvenile Eurasian Curlews.

R. Krupa, A. Sereda, Dept. of Zoology, University of Warmia and Mazury in Olsztyn, Oczapowskiego 5, PL-10-975 Olsztyn, Poland, E-mail: krupi.r@gmail.com; W. Meissner, Avian Ecophysiology Unit, Dept. of Vertebrate Ecology and Zoology, University of Gdańsk, Legionów 9, PL-80-441 Gdańsk, Poland, E-mail: w.meissner@univ.gda.pl; M. Krupa, Directorate Regional for Environmental Protection in Olsztyn, Piłsudskiego 7/9, PL-10-575 Olsztyn, Poland.

Key words: Eurasian Curlew, migration phenology, biometrical analysis, northern Poland