JOURNAL OF HUMAN ECOLOGY

International Interdisciplinary Journal of Man-Environment Relationship

© Kamla-Raj 2011 PRINT: ISSN 0970-9274 ONLINE: ISSN 2456-6608 J Hum Ecol, 33(1): 11-15 (2011) DOI: 10.31901/24566608.2011/33.01.02

Intergenerational Changes in the Biological Dynamics of Populations from Southern Poland in the 20th Century

Oskar Nowak¹, Janusz Piontek² and Maria Zadarko-Domaradzka³

^{1,2} Adam Mickiewicz University, Faculty of Biology, Institute of Anthropology, Department of Human Evolutionary Biology, 61-614 Poznañ, Umultowska 89, Poland

¹E-mail: oskarn@amu.edu.pl

³ University of Rzeszów, Department of Human Biology and Wholesome Education,

University of Rzeszów, Department of Human Biology and Wholesome Education, Cathedral of Biomedical Bases of Physical Education and Sport

KEYWORDS Crow Index. Mortality. Fertility. Opportunity for Natural Selection

ABSTRACT The study material contained questionnaires with questions referring to three generations of women living in two geographical regions of Poland, Podbeskidzie (313 families) and Podkarpacie (437 families). By computing fertility rates, we attempted to find out whether there were any regional factors determining the biological dynamics of these populations in the 20th century. We were also looking for an answer to the question whether living conditions specific for functioning in various types of population clusters (such as village, town, and city) had an effect on the fertility and mortality levels in the families of the subjects of the study The dynamic nature of the processes associated with fertility and mortality on the population level was studied with the use of the index of opportunity for natural selection . Populations inhabiting the geographical regions under study were similar in terms of the mean number of children in families that had finished reproduction. The intergenerational comparison revealed a significant decline in the total fertility rate in all subgroups formed by size of population cluster. The analysis of the data for the generations of the subjects' mothers and grandmothers showed a distinct decline in child mortality rate. The increase in the fertility rate in the generation of the subjects' mothers may be explained with improving social care provided by the state at that time.