



Polish Botanical Studies 11

(1996)

MOUNTAIN VASCULAR PLANTS IN THE POLISH LOWLANDS

MARIA ZAJĄC

Polish Bot. Stud. 11: 1–92, 1996

Abstract: Mountain species of vascular plants that have stations in the lowlands are discussed in many aspects. The study considers the typology of their ranges in Poland, affiliations with geographical elements and the nature of their habitats in mountains and lowlands. The material of the study includes 126 cartogramme maps showing species distribution in Poland within the ATPOL grid; most of these maps are published for the first time. The typology of the ranges and the correlation between the type of local range in Poland and the affiliation with geographical elements are tested by numerical methods. The author also provides hypotheses about the age of lowland stations linking them with the late glacial and Holocene alterations in vegetation cover. Throughout the study, problems which SZAFER (1930) brought up in his classic study are referred to and discussed.

Key words: vascular plants, distribution, mountains, lowland, maps, Poland, geographical elements, numerical analysis

Maria Zajac, Institute of Botany, Department of Plant Taxonomy and Phytogeography, Jagiellonian University, Lubicz 46, 31–512 Kraków, Poland

CONTENTS

AIM OF THE STUDY	2
ANALYSIS OF THE CONCEPT OF MOUNTAIN SPECIES	2
THE PROBLEM OF MOUNTAIN SPECIES AT LOWLAND STATIONS IN CENTRAL EUROPE	3
LIST OF MOUNTAIN SPECIES IN THE LOWLANDS	3
Szafer's list.....	4
The author's list.....	4
RANGES IN POLAND OF MOUNTAIN SPECIES HAVING DETACHED STATIONS IN THE LOWLANDS	5
Methodology of map preparation.....	5
Cartogrammes, range and habitat characteristics for individual species.....	9
Altitudinal groups among the mountain species occurring in the lowlands	34
Classification of mountain species in terms of the nature of their mountain and lowland ranges	34
The phenomenon of synanthropic expansion of lowland ranges and the question of the disappearance of mountain species stations.....	40
NUMERICAL ANALYSIS OF CARTOGRAMMES FOR MOUNTAIN SPECIES OCCURRING IN THE LOWLANDS	41
CHARACTERISTICS OF LOWLAND RANGES AND AFFILIATION WITH GEOGRAPHICAL ELEMENTS	44
CHARACTERISTICS OF MOUNTAIN AND LOWLAND HABITATS OF THE STUDIED SPECIES.....	46
DISTRIBUTION CENTRES OF MOUNTAIN SPECIES IN THE POLISH LOWLANDS	50
THE AGE OF LOWLAND STATIONS OF MOUNTAIN SPECIES VIEWED AGAINST THE BACKGROUND OF THE QUATERNARY HISTORY OF VEGETATION IN POLAND AND MIGRATION ROUTES	55
FINDINGS AND CONCLUSIONS	64
ACKNOWLEDGMENTS	66
REFERENCES.....	66
Maps	