

Foreword

60 years have passed in 2009 since the joint work „Collective investigations concerning the Zadroże Dune near Toruń” was published at the Nicolaus Copernicus University in Toruń, established in 1945. The work was published in 1949 as Supplement I of the periodical *Studia Societatis Scientiarum Torunensis*, Toruń – Polonia, with the financial support of the Presidium of the Council of Ministers and the then Science Department of the Education Ministry. The publication presented the results of the first team research project conducted together by ecologists and geographers on deforested inland dunes covered with heaths and psammophilous vegetation. Dr Jan Prüffer was the editor of the book – Professor at the Stefan Batory University in Vilnius (today in Lithuania) and since 1945 at the Nicolaus Copernicus University in Toruń. With a large group of professors, who moved from Vilnius to Toruń after the 2nd World War, Dr Jan Prüffer created our University and our Faculty, as well as he initiated the research on heaths in the vicinity of our city. Also Professor Dr Józef Mikulski greatly supported the editor of the book in his research and prepress works. In 1947, Professor Dr J. Mikulski took the supervision of the first European Department of Nature Conservation and Ecology in his Faculty of Mathematics and Nature, NCU.

We want to honour the 60th anniversary of the aforementioned work with this special issue of *Ecological Questions*. This international journal has been published since 2000. The 12th title, the Special Issue of EQ reads „Threats, management, conservation and structural changes of heathlands in the Toruń Valley and other sites of Europe”. The publication is sponsored by the Provincial Environmental Protection Funds in Toruń. We hereby wish to express our gratitude to this institution, as without its support the publication would be very difficult. The papers included in this Issue present the changes that took place on the Zadroże Dune and the adjacent heaths over the last 60 years. Our objective was to investigate the problems related to the management and protection of the flora, fauna and ecosystems occurring on heaths in Toruń and in the Toruń Valley with reference to the situation occurring on heaths from other parts of Poland and Europe.

The special issue of EQ No. 12 includes 11 papers written by ecologists and geographers from the Nicolaus Copernicus University in Toruń, as well as by biologists and ecologists from Italy. The first paper of this collection is dedicated to physiographic determinants of the occurrence of heaths in the Toruń Valley. A great deal of space in this paper was devoted to inland dunes, which condition the occurrence of pine forests in this region, as well as the occurrence of heaths after cutting down the forests. The second paper, written by 8 authors, presents transformations on the Zadroże Dune over the 60 years. The next four papers are dedicated to vegetation and habitat variability within heaths, as well as psammophilous grasslands and pine forests occurring in the city of Toruń and in its immediate vicinity. Through the temporal series of street plans, topographic maps, as well as aerial and satellite images, the extinction of heaths was demonstrated in the suburban zone of Toruń, which results from urbanization processes and contamination of the atmosphere by industrial and municipal services.

The seventh paper presents the differences in species composition between heath communities from the neighbourhood of Toruń and those occurring in other regions of Poland. These differences were presented by the methods of numerical taxonomy. The eighth paper presents some aspects of site conditions of heathlands in the Toruń Valley.

One paper is dedicated to the distribution of heaths in other regions of Poland. It presents the distribution of heaths in Pomerania, i.e. the region, which covers a large part of northwestern Poland.

The last two papers were written by ecologists from Italy. The first paper provides information on the extent to which heathlands were incorporated into natural and vegetation maps of this country. The second paper concerns the ecology and particularly the germination behaviour of four species of low shrubs from the genus *Cistus*, occurring in the low-shrub communities in southern Italy.

We do hope that the presentation of heaths from the vicinity of Toruń in the special issue of our journal, dedicated to different aspects of scientific studies on this vegetation formation over a larger area of Poland and Europe, will intensify the cooperation of our university centre with other scientific institutions in Poland and abroad, within the framework of the European Heathlands Network.

Papers included in the Ecological Questions vol. 13 will deal with the fauna occurring in the Toruń Valley, including heaths of this region.

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