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The dynamics of the timberline in Central Europe

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FOREWORD

This volume of *Geographia Polonica* shows the results of investigations on the timberline carried out by scientists from Poland, the Czech Republic and Slovakia in mountain ranges in the Carpathians and Sudetes. Studies were made of natural and anthropogenic factors influencing the contemporary limit of the timberline in the highest massifs of the Carpathian and Sudetes Mountains as well as of changes in the timberline location reconstructed using different methods.

Recent results of team investigations on Babia Góra Mountain were presented alongside the results of investigations concerning different mountain massifs in the Carpathian and Sudetes Mountains. The latter research was carried out in the period 2011-2015 as part of the MNiSW (Polish Ministry of Science and Higher Education) research project NN306 070640 entitled *Natural and anthropogenic conditioning of the occurrence of the timberline on Babia Góra Mountain, and its dynamics over the last 200 years*. The papers included in this volume concern the main research tasks investigated in this project, which are as follows:

1. Cartographic studies of the timberline ecotone on the Babia Góra massif with the application of GIS techniques and LiDAR data;
2. An evaluation of the influence of slope processes on the location of the timberline ecotone;
3. An evaluation of the influence of contemporary climate change on the location of the timberline;
4. An analysis of soils in the ecotone zone of the timberline;
5. An examination of forest structure in the ecotone zone of the timberline;
6. An evaluation of past and contemporary human influence on the extent of the timberline;
7. The preparation of a model of the contemporary dynamics of the timberline ecotone on Babia Góra massif.

The papers included in this volume represent a thematic coherence and revise the results of the investigations of different authors concerning different aspects of timberline functioning in the highest ranges of the Carpathian and Sudetes Mountains. In the final paper the authors provide a recapitulation of the latest knowledge on the timberline on Babia Góra Mountain. It should be stressed that due to the very dynamic nature of the natural environment in mountains, especially dynamics resulting from contemporary climate change, one of the main conclusions of the authors is the necessity of further research on the factors that determine the extent of the timberline. A similar conclusion can be drawn from the studies on the factors, which determined the extent of the timberline in the past. A recent improvement in the access to certain information sources has provided new opportunities for studies on temporal changeability in the alignment of the timberline.

Guest Editors

