Burga, C.A., Kratochwil, A. (ed.): **Biomonitoring: General and Applied Aspects on Regional and Global Scales.** – Kluwer Academic Publishers, Dordrecht – Oxford – London 2001. ISBN 0-7923-6734-0. USD 120.00, EUR 111.00, GBP 76.00 (hardbound).

Recent global warming, mainly due to global climate change, lead to a great variety of tasks for vegetation science. This book—appearing as the 35th volume of the Kluwer series "Tasks for Vegetation Science"—is devoted to different aspects of applied biomonitoring related to environmental changes. These concern various ecosystems, *e.g.*, Central European beechwoods, Insubrian evergreen broad-leaved forests, thermophilous lowland deciduous forests, dry grasslands of the lower montane belt of the Ticino Alps, alpine mountain peaks of Switzerland and Austria, Swiss alpine timberline ecotones, and high arctic tundra vegetation.

The content of the volume, prepared by 26 authors from Austria, Germany and Switzerland, is arranged in three chapters. The first one deals in three articles with general aspects of biomonitoring (tasks and limits, vegetation mapping and observation of permanent plots, statistical design and analysis in long-term vegetation monitoring, administration levels, tasks and methodology of nature conservation efficiency control).

Six articles of the second chapter present examples of applied biomonitoring in Germany and Switzerland (monitoring of recent vegetation changes and heavy metal concentrations, traditional phytophenological observations, species responses to climatic variation, monitoring on a small-scale restoration site, changes in soil conditions, technical approach of vegetation monitoring, *etc.*).

The third chapter discusses in five articles aspects of global change in the Alps in the high arctic region (long-term monitoring of mountain peaks, general features of the upper limit of the forest and tree limits, spreading of evergreen broad-leaved species ("laurophyllisation") as a sign of the climate change, phytomass and carbon balance in a high arctic tundra, *etc.*). In most papers presented in this volume, the readers of Photosynthetica can find interesting data on biomass production and allocation. Mainly the third chapter presents a useful information on carbon and CO_2 fluxes.

Generally, the articles of the volume show a high complexity of global climate change, especially global warming, and ways for future research in this field. Most of the articles are supplemented by both English and German summaries and keywords. Each article contains methodological part, and is accompanied by a list of references (together more than 500). The book is well edited and produced, however, it is a pity that the volume has not been provided at least by a subject index. I can recommend the volume to attention of ecologists, ecophysiologists, and plant and soil scientists, as well as to everybody interested in present and future impacts of global climate change on biosphere.

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