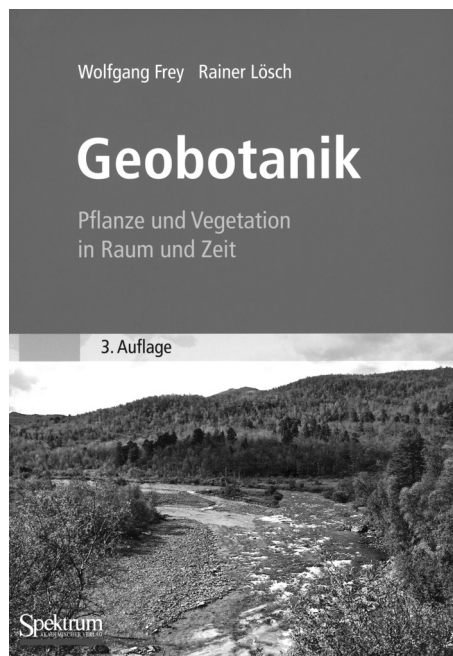


WOLFGANG FREY & RAINER LÖSCH 2010. *Geobotanik. Pflanze und Vegetation in Raum und Zeit*. 3. Auflage. Spektrum Akademischer Verlag, Heidelberg, 600 pp. + 16 unnumbered pages, 284 figures, 67 tables, 93 color photographs. Hardback, 24.5 × 17.3 cm. ISBN 978-3-8274-2335-1. Price: 49.95 € in Germany, 51.35 € elsewhere in Europe.

The term 'geobotany' is subject to various interpretations. Sometimes it is understood as a synonym for plant geography or phytosociology. Most often, however, geobotany is seen as the branch of botany that examines the interrelationships between plants and their geographical setting. Viewed in that way, geobotany is an eclectic branch of botany which summarises and integrates the achievements and results of other more detailed branches such as phytogeography, phytocoenology, environmental botany, phytosociology and the history of vegetation. In the end it must attempt to explain the influence of the habitat and/or region on the occurrence of plants and/or their communities or formations. Such an interpretation of geobotany is adopted in this textbook, authored by two eminent German botanists, Professors Wolfgang Frey and Rainer Lösch. Professor Frey is Lecturer in Botany of many years' standing at the Free University of Berlin. He specialises in the plants and vegetation of Central Europe and Southwest Asia, especially their structure, adaptations and life strategies, and the taxonomy of bryophytes. Rainer Lösch is Professor of Botany at Heinrich Heine University in Düsseldorf. His scientific interests focus on ecological aspects of evolutionary

processes in plants, the biology of neophytes, and the ecophysiology of tropical plants. They have put their vast teaching experience into this textbook, which has gained great popularity with several generations of students. The best proof of its value is the publication of a third edition within a span of thirteen years. The two earlier editions appeared in 1997 and 2004 under the title *Lehrbuch der Geobotanik*. The title is not the only thing changed in the present edition: it is greatly expanded and includes the latest achievements of branches of botany relevant to geobotany. A measure of this topicality is the huge set of references. Of the 1965 cited items, no fewer than 700 (over 35%) refer to literature published in or since 2004, that is, after the second edition came out.

Since geobotany cannot be learned from textbooks alone, the authors base their reasoning and arguments on examples drawn from Central European phenomena familiar to less advanced students of botany. The authors use those examples to reinforce the idea that the world's vegetation is one large entity and that therefore it is difficult or impossible to understand local geobotanical problems without that broad perspective, without considering them in the global context.



Frey and Lösch's textbook consists of ten chapters. They are richly illustrated with line drawings, maps, graphs and colour photographs, and documented with many tables which help to facilitate an understanding of the text. These are all indispensable elements of any modern textbook. The book's layout is user-friendly. The main part is preceded by a four-page list of abbreviations, symbols and constants used in the text. One possible defect is the absence of a glossary of terms used, at least some basic ones, as this would certainly be welcomed by users.

In two short introductory chapters the authors define and outline the main tasks of geobotany and present its history and current trends. The third chapter addresses the basic questions of plant geography, dealing with classical problems associated with plant ranges ('floristic geobotany' or chorology) as well as molecular and systematic analyses of phytogeographical differentiation (phylogeography). The fourth chapter deals with plant communities: the nature and mechanisms of their origin, the methods by which they have been investigated, and their classification,

dynamics and geographical distribution ('coenological geobotany' or phytosociology). Problems associated with plant distribution and the historical aspects of the development of vegetation cover ('historical geobotany') are discussed in the fifth chapter.

The most extensive part of the book is devoted to 'ecological geobotany', that is, plant ecology in the narrower sense, including an analysis of habitat and its influence on the life functions of plants. These topics are broadly discussed in the next three chapters. Apart from autoecological aspects, which are extensively presented in the sixth chapter, synecological and ecomorphological problems are also considered, and the seventh chapter describes basic questions of population ecology. The eighth chapter gives a new slant, introducing readers to plants' adaptations and life strategies in various types of habitat. The ninth chapter reviews the vegetation of the Earth, including its zonal arrangement from evergreen tropical rainforest to polar desert, as well as azonal and extrazonal types of vegetation. Separate subchapters deal with altimontane vegetation, with special reference to tropical regions. The tenth chapter gives data on various types of human activity and their impact on the natural environment and on biotopes. At the end of this final chapter some basic questions of nature protection are discussed.

The task of making a comprehensive synthetic presentation of the many problems associated with geobotany is not an easy one. The authors' mastery of this difficult exercise has provided an excellent textbook for students and academic teachers. It presents an overview of the majority of the problems of modern geobotany in a very competent and balanced way. The great popularity it enjoys in German-speaking countries is hardly surprising.

This textbook is of such great value that it really needs to be published in a Polish-language edition. Our botanical literature suffers very much from the lack of a modern textbook on geobotany; indeed, a book of this kind has never appeared in Polish. Without such textbooks one cannot expect dynamic developments in Polish geobotany, which currently is not keeping pace with world trends in this field. The best evidence of that is that only a very few Polish publications are cited in this work.

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