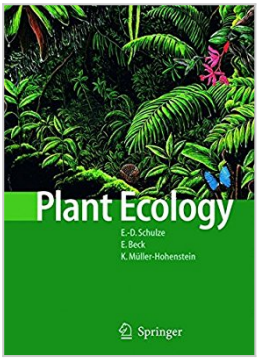

Plant Ecology

By Ernst-Detlef Schulze, Erwin Beck, Klaus Müller-Hohenstein

Plant Ecology By Ernst-Detlef Schulze, Erwin Beck, Klaus Müller-Hohenstein

This textbook covers **Plant Ecology** from the molecular to the global level. It covers the following areas in unprecedented breadth and depth:

- Molecular ecophysiology (stress physiology: light, temperature, oxygen deficiency, drought, salt, heavy metals, xenobiotica and biotic stress factors)
- Autecology (whole plant ecology: thermal balance, water, nutrient, carbon relations)
- Ecosystem ecology (plants as part of ecosystems, element cycles, biodiversity)
- Synecology (development of vegetation in time and space, interactions between vegetation and the abiotic and biotic environment)
- Global aspects of plant ecology (global change, global biogeochemical cycles, land use, international conventions, socio-economic interactions)

The book is carefully structured and well written: complex issues are elegantly presented and easily understandable. It contains more than 500 photographs and drawings, mostly in colour, illustrating the fascinating subject.
The book is primarily aimed at graduate students of biology but will also be of interest to post-graduate students and researchers in botany, geosciences and landscape ecology. Further, it provides a sound basis for those dealing with agriculture, forestry, land use, and landscape management.

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Plant Ecology By Ernst-Detlef Schulze, Erwin Beck, Klaus Müller-Hohenstein Bibliography

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- 700 pages

Editorial Review

Review

From the reviews:

"The approach is comprehensive and attempts to cover all aspects of plant ecology from the molecular to ecosystems and global ecology. It succeeds very well and in its 700 pages is found a staggering wealth of information which is extremely good value for money. ... In addition to the general text, there are very useful boxes giving an account in short detail of specific areas. The illustrations are excellent." (Bulletin of the British Ecological Society)

"This is an in-depth and up-to-date textbook of ecology in its broadest sense. The coverage is wide, but also detailed and well explained. ... A strength of the book is that it is abundantly illustrated with many photogrphas, graphs and drawings to explain the more complex issues described in the text. ... Overall, Plant Ecology is a broad-ranging textbook aimed at graduate studetns, postgraduate students and teachers of ecology, which will aslo be of considerable use to researchers in botany, foretry, agriculture and landscape studies. It brings together for the first time in a single text the huge range of topics that fall under plant ecology with an emphasis on the physiological." (Times Higher Education Supplement)

"A substantial reference text for the advanced student ... Here is a courageous attempt to encompass the whole discipline in the broader sense - from biochemical structures and pathways to whole-plant biology and from laboratory to field and socio-economic interactions. ... reviews physiological and whole plant ecology, the ecology of ecosystems and plant communities, including historical apsects of vegetation and plant geography, and human impact and global change in biodiversity and climate. Each chapter points to relevant literature and websites, and over 500 diagrams, tables and colour photographs illustrate the text." (Plant Talk)

"The book is well written and the figures, including many rare photographs covering the whole world. are very impressive. The whole layout is of high quality ... The authors have been very successful in writing a high-standard textbook. ... I recommend this book for graduate students of ecology and geosciences; PhD students and researchers will also use it as a thorough reference for many questions." (Phytocoenologia)

"This large (almost 700 pages), comprehensive and well illustrated book provides interested students and teachers with a large survey of various aspects of plant ecology, covering a large range of spatial and temporal scales. The approach used by the authors is to start at plant level, producing some really up-to-date information on plant stress physiology, and to gradually integrate knowledge at larger scales (whole plant level, followed by ecosystems, phytocenoses, and finally global approaches). Each of the five large chapters provides a really detailed overview of the field ... the present book is a perfect tool to all those interested by gaining a broad overview of a modern form of plant ecology." (Annals of Forest Science)

" ... one of the most comprehensive textbooks of plant ecology so far. The authors aim to 'for the first time bring together and clearly organize the large subdisciplines of plant ecology' and, to a large extent they have succeeded. The book is well written, and its more than 500 illustrations are beautifully laid out and well chosen to help the reader understand the theory. It is clearly suitable not only to its intended public, graduate students in biology, but also for undergraduates, while it provides a very useful reference for researchers in ecology and related fields. .... I find this a excellent textbook. It provides an integrated understanding of

plants from the molecular to the global, and in doing so gives plant ecology the place it deserves: a scientific field that will play an increasingly important role in infuencing the decision-making process regarding the sustainable use of our natural environment locally, regionally and world-wide." (Annals of Botany)

"In the more than 700 pages of this volume the various aspects pertaining to plant ecology are thoroughly covered … . Numerous figures – more than 500 – also make up the volume and many of them are in colour. At the end of the book there is a 24-page subject index. … The book provides a unique and up-to-date treatment of all aspects of the field of plant ecology, making it ideally suitable as a textbook and reference work for students, researchers and practitioners." (Enrico Rinaldelli, Advances in Horticultural Science, Issue 4, 2006)

"This book provides an authoritative coverage not only of plant ecology in the strict sense, but also of molecular ecophysiology and biogeochemistry. … The book is carefully structured and well written. Terms are defined clearly and concisely … . the authors do a good job of cross-referencing material of other sections. … The book provides a good framework and reference for university teachers … . I would like to compliment the authorship on having embraced this subject and produced a major work … ." (Thomas N. Sieber, Schweizerische Zeitschrift für Forstwesen, Vol. 157 (11), 2006)

"This textbook covers plant ecology from the molecular to the global level. … The book is carefully structured and well written: complex issues are elegantly presented and easily understandable. It contains more than 500 photographs and drawings, mostly in color, illustrating the broad subject. The book is primarily aimed at graduate students of biology but will also be helpful for post-graduate students and researchers … . Further, it provides a sound basis for those dealing with agriculture, forestry, land use, and landscape management." (K.-H. Feger, Journal of Plant Nutrition and Soil Science, Issue 1, 2006)

"This modern textbook presents distribution of plant species as dependent on abiotic environmental factors that are considered to set potential areas of plants. … The book provides broad physiological background. … I greatly appreciate the book’s graphic design, including the clear structure, summary and list of recommended literature in each chapter … . The textbook provides useful and comprehensive information to students and researchers as well as to practitioners dealing with plant physiology and ecology, vegetation and ecosystem science, and global change research." (Hana Skálová, Folia Geobotanica, Vol. 42 (1), March, 2007)

From the Back Cover

Plant Ecology provides a unique and up-to-date treatment of all aspects of the field, making it ideally suitable as a textbook and reference work for students, researchers and practitioners.

More than 500 high-quality images and drawings, mostly in colour, aid the reader in visualizing and understanding numerous key topics. Its clear structure and straightforward style make it user friendly and particularly accessible for students. The integrity and authoritativeness of the information is guaranteed by an experienced author team.

Whilst Plant Ecology is primarily aimed at graduate students of biology, post-graduate students and researchers in botany, geosciences and landscape ecology will also find this text invaluable as a reference work. In fact, everybody whose study or work touches on agriculture, forestry, land use, and landscape management will find this text a rich learning experience.

Key Topics:

- Molecular ecophysiology (stress physiology: light, temperature, oxygen deficiency, drought, salt, heavy metals, xenobiotica and biotic stress factors)

- Autecology (whole plant ecology: thermal balance, water, nutrient, carbon relations)

- Ecosystem ecology (plants as part of ecosystems, element cycles, biodiversity)

- Synecology (development of vegetation in time and space, interactions between vegetation and the abiotic and biotic environment)

- Global aspects of plant ecology (global change, global biogeochemical cycles, land use, international conventions, socio-economic interactions)

From the reviews of the German-language edition:

"No other work is as compact and comprehensive in comparison. … nobody dealing with plant ecology in any form can afford to pass by this book." (Entomologia Generalis)
"With Plant Ecology, a new botanical standard work has been born. ... a worthwhile purchase." (www.pflanzenbuch.de)
"A book with scientific depth – a future standard work. Its up-to-date and global approach alone make it of interest to a large target group. ... Numerous images, tables, flow charts, graphics, and memory boxes facilitate comprehension. The comprehensive manner in which individual topics are presented make the book both a sound textbook and reference work." (Forstzeitung)
"The book is carefully structured and well written, and thus even complex issues as the self-thinning rule are elegantly presented and easily understandable. The register is extensive and represents certainly a useful selection of the most important key words. ... I recommend this book to advanced students, university teachers and other researchers in (plant) ecology, it is also inspiring reading for high school teachers." (Phytocoenologia)

Users Review

From reader reviews:

Richard Reid:

As people who live in often the modest era should be revise about what going on or details even knowledge to make these people keep up with the era which is always change and progress. Some of you maybe will update themselves by studying books. It is a good choice to suit your needs but the problems coming to anyone is you don't know which one you should start with. This Plant Ecology is our recommendation so you keep up with the world. Why, because book serves what you want and want in this era.

Grady Long:

Information is provisions for anyone to get better life, information presently can get by anyone from everywhere. The information can be a understanding or any news even a problem. What people must be consider when those information which is inside the former life are difficult to be find than now could be taking seriously which one is suitable to believe or which one the particular resource are convinced. If you receive the unstable resource then you get it as your main information it will have huge disadvantage for you. All of those possibilities will not happen throughout you if you take Plant Ecology as the daily resource information.

Robert Garcia:

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