
Book reviews

Böhlmann, D.: Bio-Praktika. Ökophysiologisches Praktikum – Grundlagen des Pflanzenwachstums. Hamburg Berlin: Paul Parey 1982. 214 pp., 138 figs., 22 tabs. DM 38,-.

Dietrich Böhlmann's book fills a gap in the field of teaching ecophysiology. The course is centered around plant growth in an ecosystem. All ecological factors influencing plant growth and development are covered in this textbook and a huge number of student experiments are offered to illustrate the subjects.

Ecological factors, light, heat and water, are compared for their impact on vegetation differentiation and plant growth. An autecological and synecological view is offered. Some plant physiological aspects concerning water and nutrient supplies are shown in relation to environmental aspects. The ecology of the soil is thoroughly studied in the fields of biogeology, microbiology, botany and zoology; an integrated view is given in these fields of biology. Much attention is given to the formation of soils in different vegetations and climates and compared to agricultural circumstances.

Some special aspects of ecological selection is shown in examples of adaptation to such special circumstances as nitrogen-fixation by *Rhizobium* symbiosis – the system of mycorrhiza and lichens. Attention is given to the exploitation of animals by plants, for example in *Drosera* and *Nepenthes*. Attention is also given to the relation between hosts and epiphytic or parasitic species and in the last chapter a number of morphological adaptations are presented as they are caused by selection.

The well-edited book offers much information and practical experiments for teaching autecology and synecology. It is written in German but it should be translated in English.

M.J.M. Martens, Nijmegen

Reinert, J.; Teoman, M. M.: Plant cell and tissue culture. A laboratory manual. Berlin Heidelberg New York: Springer 1982. 83 pp., 37 figs.

In the last decades, the techniques of plant cell and tissue culture have become one of the basic experimental skills for many experimental botanists and have been an essential part of teaching programmes in many universities. This laboratory manual emerges at just the right time. In its 17 carefully selected experiments it covers isolation of plant material and studies on growth and cell division; bioassay systems for cytokinins, morphogenesis in vitro; isolation, culture and fusion of protoplasts from higher plants; secondary metabolites in tissue cultures; and, embryo and organ culture. With its up-to-date contents, this book provides a number of features which are very practical for both students and teachers. Sufficient theoretical background, concise and precise explanations, detailed materials and methods supplemented by clear illustrations, valuable questions and references, all these will satisfy readers in their experiments. This is an easy book to read and is ready for use. It will give students and technicians a good introduction to the field of plant organ, tissue and cell culture.

Zhang Hong-qi, Nijmegen