

Bookreview

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MEDITERRANEAN-TYPE ECOSYSTEMS

The Role of Nutrients

Ecological Studies 43, Springer-Verlag, Berlin, Heidelberg, New York and Tokyo 1983, 552 p., 143 Figs. Price DM 98,—

The book is edited by three authors from South Africa — from the South African Forestry Research Institute, the Department of Botany and Department of Zoology at the University of Cape Town. It contains six sections with 27 chapters (articles) and deals with ecosystems of the mediterranean-climate zones, particularly with the comparison of ecosystems of South Africa and Australia. The list of all contributors contains 35 names (12 from USA, 9 South Africa, 7 Australia, 2 Chile, 2 Israel, 1 UK and 1 France).

The first section (p. 3—100) "Evolution and Character of Mediterranean-Type Ecosystems" is made up of five articles dealing with the evolution of Mediterranean-type ecosystems, heathlands and sclerophyllous shrublands, ecological control of the vegetation, the influence of nutrients and definition of Mediterranean growth forms.

The second section (p. 101—176) includes papers on plant form and function. This section contains four articles dealing with the carbon-gaining capacity and allocation patterns of plants, moisture regime and nutrient control of seasonal growth, the canopy structure of shrubs and the carbon and nitrogen economy of *Diplacus aurantiacus* (a semi-drought-deciduous shrub common in vegetation throughout California).

The third section (p. 177—243) contains four articles on the theme "Nutrient cycling" (nutrient cycling in Australian heath and South African fynbos, the impact of fire on nutrient cycles, decomposition and mineralization processes and the effect of different fire regimes on soil nutrient levels in *Quercus coccifera* garrigue).

The fourth section (p. 244—317) provides information on plant nutrition and contains four articles (strategies for maximizing nutrient uptake, the effect of fire on photosynthesis, mineral nutrient and nonstructural carbon pools in shrubs and comparative phenology of plant communities).

The fifth section (p. 319—505) is concerned with community patterns and the diversity of plant and bird communities in the other regions of the Mediterranean-climate zone. European botanists will be interested in the methods used. 8 articles deal with competition, dynamics and diversity in plant communities, on alpha diversity and the richness of the Cape flora, plant community structure etc.).

In the final section (p. 507—542) plant-animal interactions are considered. This part has two articles both on herbivores. The last 10 pages contain a subject index.

This book, very rich in facts and observation was prepared from the papers presented at a symposium held at the University of Stellenbosch in South Africa. The majority of articles deal with Mediterranean-type ecosystems of South Africa and Australia. It is a excellent work with the accent on the methods used and their results.

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