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BOOK REVIEW

Campbell, G. S.: **An Introduction to Environmental Biophysics.** Heidelberg Science Library. — Springer-Verlag, New York—Heidelberg—Berlin 1977. 159 pp. US $ 8.90.

This is one of the best textbooks dealing with interactions between living organisms and their physical surroundings, that has appeared during the last years. Using the up-to-date knowledge of environmental biophysics, the author gives a characterization of all main components of a microclimate (*i.e.* temperature, air humidity and turbulence, radiation), which is necessary for understanding the exchange processes (heat, mass and momentum transfer) between plants or animals and environment. As far as the plant-environment exchange processes are concerned, they are described and discussed on the level of both the individual organism (or its organs) and plant communities and include variables such as photosynthesis, transpiration, leaf energy budget, radiation and evapotranspiration in plant canopies, *etc.*

The presentation of problems is not intended to be exhaustive but it is clear enough to make the text comprehensible to readers of different specializations. Emphasis is laid on teaching the reader how to quantify the effects of physical environment on the behaviour of organisms. That is why the author chose mainly numerical examples to demonstrate a practical application of basic physical laws and principles to single exchange processes. He uses simple simulation models and appurtenant mathematical equations in order to calculate rates of heat and mass transfer and to perform energy budget analysis. The understanding of relations between variables analyzed is made easier by an abundant number of figures and tables which illustrate the limits of applicability of single mathematical solutions. At the end of each chapter, some problems are given to help the reader to develop skill in using the particular equations and to stimulate active approaches to the subject discussed.

The book is arranged in keeping with strictly logical structure of explanations. It is complemented with the subject index, tables of physical constants and list of symbols and units consistent with the Système International d'Unités (SI). It is highly reccommended not only as a really modern textbook but also as the useful manual for specialists working in various fields of plant physiology, ecology, crop productivity, agronomy, *etc.*

DANUŠE HODÁŇOVÁ (*Praha*)