Meeting parasites

F.E.G. Cox

Foundations of Parasitology, 3rd Edn. By Gerald D. Schmidt and Larry S. Roberts. *Times Mirror/Mosby/Blackwell Scientific*: 1985. Pp.775. \$34.95, £33.50.

LIKE International Congresses of Parasitology, new editions of *Foundations of Parasitology* appear every four years. This is probably the most popular textbook on the subject, and is now bigger and better than ever before. It is a conventional and comprehensive account, in the tradition of Chandler and Read, and Noble and Noble, and deals in some detail with the parasites of man, in somewhat less detail with those of domesticated animals and in varying detail with those parasites of more interest to zoologists. Starting with definitions, principles and concepts, the 40 chapters work their way through the protozoa, helminths, pentastomids, crustaceans, insects and arachnids in a logical manner, leaving very few obvious gaps.

Within this largely systematic approach, the authors have tried to incorporate some of the modern aspects of immunology, biochemistry and physiology, and have done so very successfully by introducing just enough of these subjects to maintain interest without interrupting the logical sequence of the text; epidemiology and parasite ecology, however, receive scant treatment. The text is enlivened by copious drawings and photographs. These are mainly taken directly from the literature, which means that they are very variable in quality; still, it is pleasant to encounter so many old acquaintances. There are also ample references (though somewhat arbitrarily chosen), and students will welcome the fact that key words are printed in bold type and will find the glossary indispensable.

Progress in parasitology makes a book such as this impossible to keep up to date, but there can be no excuse for perpetuating the myth that in the malaria life-cycle merozoites reinfect liver cells as shown in Fig.8.1 (the text gets the story right, however). There are a few other places where newer figures would have been appropriate, and perhaps reference to some of the many recent reviews would have been better than some of the outdated papers cited. However, any criticisms are minor given the strengths of the book, and I hope that the authors will feel able to undertake the task of preparing a fourth edition in time for the 1990 International Congress. □

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All about the mosses and liverworts

A.J.E. Smith

Introduction to Bryology. By W.B. Schofield. *Macmillan/Collier Macmillan*: 1985. Pp.431. \$45, £45.

DURING the past ten years several books and conference reports on the Bryophyta have been published, but this is the first textbook in the classical systematic botany genre to appear for some time. Almost two-thirds of it is devoted to detailed, excellently and abundantly illustrated descriptions of the morphology and anatomy of representative members of the various subclasses of mosses and orders of liverworts. Each account usually begins with an itemized list of distinguishing features, followed by descriptions (which contain a great deal more information than is readily available elsewhere) and finally a section on evolution and relationships. As is inevitable in writing about a group of plants about whose ancestry nothing is known, some of the remarks about evolutionary trends, either inferred or stated, are very much open to question. This is not pointed out in the text and what in many instances are mere hypotheses are likely to be taken as gospel by the unwary reader.

Most of the remainder of the book is given over to brief chapters on history, cytology and genetics, chemistry, physiology and ecology, topics which are covered, in most instances in more detail, in D.H.S. Richardson's *The Biology of*

Mosses (Blackwell Scientific, 1981). The last chapter, dealing with world distribution patterns, is longer and clearly the subject matter is closer to the author's heart.

Each chapter ends in a very adequate list of further reading, but there are no references in the text. Whilst this makes for a flowing style, it can be extremely irritating not knowing in which of up to 110 references additional information may be sought. This criticism applies particularly to the later chapters because of their introductory nature.

Also included are a glossary, and ten appendices covering topics ranging from a world list of floras, collecting and keys to major taxonomic groups, to squash techniques for the study of moss chromosomes (too inadequate to be of use). The contents of most of these appendices could have been incorporated into appropriate parts of the text with a considerable saving of space.

The work is more lavishly produced than is usual in specialized textbooks and there are few typographical errors. The style of writing is excellent and the author's enthusiasm is abundantly clear, especially in the systematic section which is at the same time easily intelligible to the beginner and readily acceptable to the knowledgeable. The book should appeal to the field biologist who wishes to know more about mosses and liverworts, as well as to advanced students of bryophyte systematics, and will serve as a reference book for those interested in other aspects of bryology. □

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On the waterfront

Ralph A. Lewin

The Physiological Ecology of Seaweeds. By Christopher S. Lobban, Paul J. Harrison and Mary Jo Duncan. *Cambridge University Press*: 1985. Pp.242. £30, \$44.50.

PROMETHEUS, who upset the Gods by stealing some fire from the Sun, was condemned to being chained to a cliff, where he had to endure the rigours of a harsh Caucasian climate. Many seaweeds, perhaps in expiation for their utilization of solar energy, have to endure an equally uncomfortable existence. Baked by unshaded suns in summer, scourged by icy waves and even chillier winds in winter, they are not to be envied. How do they manage to survive? This and similar problems are the subjects of *The Physiological Ecology of Seaweeds*. Lobban and his colleagues have done a wonderful job. The old saw about "filling a much-felt need"

has been misused often enough, but in this case its use is fully justified.

Physiological ecology is, I suppose, a branch — perhaps the main leader — of synecology. For this book, the title has been interpreted generously, and there is also a fair amount of biochemistry here, as is only proper. Light and photosynthesis occupy 30 pages; carbon metabolism, 20; nutrients, 35; temperature and salinity effects, 24; water motion, 14. All that takes up about half of the book. There are 34 pages dealing with communities of the seashore, where land meets sea and autecology meets synecology. (One may question the relevance of sections on grazing, species diversity and population dynamics, topics which are certainly ecological but hardly physiological.) Some 20 more review morphogenesis, the physiological interactions in multicellular systems. Finally, 20 pages are devoted to pollution: practical matters such as spilled oil and other organic and inorganic waste products of improvident mankind. Not much of relevance has been omitted —