

Book Reviews

(Books for review should be sent to the appropriate Executive Editor)

Parasite Communities: Patterns and Processes: Edited by G. Esch, A. Bush and J. Aho. Chapman & Hall, London. 1990. 335 pp. ISBN 0-412-33540-9. Price \$89.50.

Parasitology is usually the "parent pauvre" of textbooks on biology and ecology. Finding a good, elaborate book on parasites is a hard task these days. It is thus always a pleasure to discover one. As the authors put it: "Parasites are fascinating. They represent what is probably the most prevalent lifestyle, they exhibit an extraordinary diversity of form and function and they are ubiquitous in distribution. However, the potential role of parasitic systems as models for understanding patterns and processes in community ecology has not been fully explored". This book contributes largely and beautifully to this exploration.

At first, one believes to have been misled by the title, if one expected to read a general overview of parasitic phenomena throughout the parasite world. It is indeed entirely devoted to patterns and processes in helminth communities. However, the reader becomes rapidly aware that such a thorough study provides much information on principles regarding a broader spectrum of parasites. The book was written after a very specialized meeting on helminth communities of the American Society of Parasitologists, held at Wake Forest University in Winston-Salem, NC. It is thus a collection of contributions dealing with various aspects of the topic and covering it quite thoroughly. Anyone expecting this book to be a very accessible and general overview of parasitism will be disappointed. This is a work for specialists, fully aware of complex concepts of parasitology, ecology and population dynamics and feeling at ease with mathematics. For them, it will be delightful reading, clear and precise.

After a general introduction, a chapter is devoted to the concept of host populations as resources which define the organization of the parasite community. One of the striking aspects of this book is the observation, in the various following chapters, of a wide range of host species for helminth parasites (molluscs, seawater fish, freshwater fish, amphibians, reptiles and mammals), demonstrating in each case how parasite communities adapt differently to each host and how they modulate their transmission patterns. Some challenging models for multi-species parasite–host communities are proposed. Before the concluding remarks, a superb chapter is devoted to fundamental questions about communities of individuals, such as food webs and size ratios, combination of species, spatial segregation (dispersion, overlap niche shift, etc . . .).

So the book has, in fact, much wider implications than just looking at parasite community structures. It will also be very useful to those interested in ecology in general and in the organization of free-living organisms. Indeed, tremendous lessons can be drawn from parasites since their life cycles are permanently under extremely strong selection pressures and since they represent such vivid caricatures of community life. The book can thus be recommended not only to parasitologists for the clear updating it provides on parasite community patterns, but also to all biologists concerned with species relationships in a biotope, a matter which is synonymous to ecology itself.

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