BOOK REVIEW

Microbial Ecology: An Evolutionary Approach. Edited by McArthur, J. Vaun. Academic Press (Elsevier, Amsterdam). 416 pp. ISBN 0123694914 (hardbound). £39.99, US$79.95, €57.95.

Communicating editor: K.J. Flynn

Most microbial ecologists would be surprised to learn that, according to *Microbial Ecology: An Evolutionary Approach*, 'Even though the importance of bacteria and their products is recognized in biogeochemical cycles and secondary production, little is known about the regulation of their abundance, biomass or productivity in any system' (p. 306). Even if this were completely true, the book McArthur has written would not go far in helping to correct our alleged ignorance.

The identity of the audience targeted by the book is very obscure. Given the price and title, beginning graduate students would be a reasonable guess. The publisher's description states that a prerequisite is a general microbiology course, and potential readers are assumed to be ranging from those of the journals *Applied and Environmental Microbiology*, *Microbial Ecology* and so on to those of *Ecology*. However, the depth to which topics are covered, the near-absence of subjects generally essential to understanding microbial ecology (e.g. uptake kinetics and growth efficiency) and the writing style combine to give the impression that the book may have been directed towards high-school students. For example, the species concept, as a general problem, is introduced by stating 'Much thought has been given to the concept of a species. Darwin entitled his book The Origin of the Species. By so naming his book, Darwin acknowledged that an entity called the species does exist' (p. 35).

Unbelievably, the subject of predation is introduced with this paragraph 'Every living thing will eventually be eaten by something. For most, the eating takes place after death without sharp teeth being used and involves microbes and invertebrates. One of the most frightening considerations for humans is the thought of being eaten by some big mean animal. This fear is played on by the makers of many movies where some large predator is terrorizing cities and eating the inhabitants. In ecology, the fear is tempered by the choice of terms. Trophic interactions and trophic levels are used to indicate that something is eating something else' (p. 306).

Despite the title, of all microbes, only prokaryotes are considered and the role of evolution in the ecology of microbes is but marginally treated. I strongly urge those interested in microbial (read prokaryote) ecology to avoid this book and instead acquire Ogunseitan's (Ogunseitan, 2004) fine book *Microbial Diversity: Form and Function in Prokaryotes*. For those more oriented towards evolutionary topics, a recent book (Sapp, 2005) based on a 2002 symposium is a nice starting point.

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REFERENCES

Ogunseitan, O. (2004) *Microbial Diversity: Form and Function in Prokaryotes.* Blackwell, London, 292 pp.

Sapp, J. (ed.) (2005) *Microbial Phylogeny and Evolution.* Oxford University Press, Oxford, 362 pp.

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