

costs of wounding are relatively high. But as these welfare costs cannot be specified, putting down equations distracts and introduces a false note of precision. Relative costs based on physiological measures of hunted and wounded deer would make use of only one out of the variety of measures of welfare advocated by the authors. Nevertheless, this chapter may be recommended for providing an admirable and wide-ranging review of ethical dilemmas in conservation and welfare, the kinds of consideration that need to find their way into more textbooks.

Overall, this book successfully covers many points of contact between conservation and behaviour. More specifically, Pettifor, Norris and Rowcliffe argue in their chapter that introducing the behaviour (loosely defined) of individuals will increase predictive value of population models over those taking a more demographic approach and relying on averages for recruitment rate, time to maturity, etc. Striving for better predictive power is surely something that any conservationist would endorse. A problem though, as the authors point out, is that these 'behaviour-based' models may take a long time to develop; in one example concerning shorebirds evidently it took 20 years to obtain the empirical data needed. For some conservationists, changing the behaviour of people, responding to immediate crises, and adaptive management will seem more compelling activities. Yet we also need to take a long-term view, and develop our ability to understand what we are doing and to predict. So I give Pettifor et al. the last word here: 'Behaviour-based models should simply be viewed as a potential tool to aid conservationists in assessing the impact of environmental change. This seems obvious, but is, nevertheless, extremely important'.

Shenbrot, G. I., Krasnov, B. R. & Rogovin, K. A. 1999: *Spatial Ecology of Desert Rodents*. Springer-Verlag, Berlin. x + 292 pp., 124 figs, 38 tables, US\$ 179.00, £93.00. ISBN 3-540-65124-1.

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This monograph is the twenty-first in a series edited by J. L. Cloudsley-Thompson on 'Adaptations of desert organisms', and it has a stronger behavioral focus than any of its predecessors. Nevertheless, it will still be of interest primarily to that genre of ecologist who feels no inclination to actually watch animals behave, and I suspect that few ethologists will want to own or read it unless they are themselves conducting research on desert rodents.

For those who do work with desert rodents, the book is worth its price. The authors review a remarkable range of literature on desert rodent adaptations and community composition, with a much more cosmopolitan coverage than is usually found in the English-language literature. They present a critical and up-to-date evaluation of various controversies concerning the coexistence of ecologically similar species, the measurement of interspecific competition, and the degree to which the rodent fauna of the world's deserts exhibit evolutionary convergences and common principles of community composition.

The book is more about community ecology than it is about behaviour. For this reviewer (and perhaps for many readers of *Ethology*), that means that there is a little too much in the way of complex cluster analyses of local species lists, where the data are often of questionable repeatability and the conceptual rationale is often obscure. What the authors hoped to convey by the titular phrase 'spatial ecology' never became clear, at least to this reader. If you anticipate, as I did, that its meaning will encompass such things as home range, territoriality, central place foraging, scatter vs. larder hoarding, seasonal variations in mobility, juvenile dispersal, sex differences in any of these things, and the consequences of these various aspects of spatial ecology with respect to social behavior, population genetics, and evolution, then you will be disappointed. None of these topics is mentioned. There is, however, a great deal of behavioral information scattered throughout the book, on such topics as the distribution and ecological correlates of nocturnal vs. diurnal activity, and the specialist-generalist dimension as regards both diet and habitat selection. A section that I found particularly engaging and enlightening concerned locomotory diversity, in which it turns out that the simple dichotomy of bipedal vs. quadrupedal gaits is just a crude first slice.

This book is very well-written and has been very well copy-edited, but the quality of its many figures is sometimes disappointing. Different maps have different conventions (none of which are explicit) with respect to the meanings of such things as dashed lines. Worse, there are several figures for which a key indicates that large areas must originally have included a range of coded values that were distinguishable as distinct shades of gray, although they ended up as a featureless black splotch. In light of both the book's list price and the authors' immense scholarly effort, these aspects of production deserved more care.