

An introduction discusses the definition of the region and its included mammal fauna and divides the area into six subdivisions (most with further subdivisions) based on their mammal composition. The processes of assigning available material to a classification in line with current nomenclatural practice are also discussed. In undertaking such a wide ranging review, the authors have tended to accept an existing view where available; nevertheless, it is somewhat surprising that only two new names are proposed and only 14 'original, unpublished or unorthodox' nomenclatural combinations are highlighted.

The main body of the book is the systematic account. Species accounts give synonymy, range (mostly also included in maps), variation and remarks on systematics and status. It is not a field guide, but there are keys or identification tables for most genera and species and for the higher taxa. The bats (307 species) were compiled by Hill, the rest by Corbet. Six appendices include a simple check list of species and mini biographies of all those who have made important contributions to mammal studies in the area. There is a bibliography of 3000 references.

While of obvious importance in understanding the fauna of the region, conservation does not figure in the volume, except that CITES and IUCN red list categories are included where appropriate. Thus Mammals of the Indomalayan Region is not a conservation book, but will doubtless be a key reference for years to come. There naturally remain many mysteries about the status and distribution of specimens and species and the authors have clearly had to make decisions between conflicting opinions on

classifications, but this review is much needed and will be widely welcomed.

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**Wild Pigs of the United States: Their History, Morphology and Current Status** by John J. Mayer and I. Lehr Brisbin Jr (University of Georgia Press, 1991, ISBN 0 8203 1239 8, 313 pp., HB \$40)

More than 30 exotic mammal species have become naturalized in the United States since the earliest European colonial settlements were established nearly half a millennia ago. Pigs were amongst the first of these exotics to establish free-ranging populations and, with various recent estimates of between 0.5 and 2 million wild individuals ranging through at least 16 states, they are now among the most abundant and widely distributed of all introduced forms. Being both adaptable and prolific they are also among the most aggressive and destructive of these exotics, and they are regarded by most US agencies, land managers and environmental interest groups as a nuisance, if not a major environmental pest. Contrarily, they have long been a coveted target of recreational hunters and game meat producers, many of whom (along with a few equally irresponsible landowners) have actively facilitated their spread through deliberate or careless releases of founder stocks.

The authors have chosen not to explore the issues and concerns relating to these releases and the continuing expansion of many of the wild populations of these animals. Rather, they have painstakingly traced and documented the history of the releases, the present distri-

bution and (legal) status of the descendant pigs in each union state, and the origins, affinities and morphology of the various introduced stocks, which they have attempted to distinguish (somewhat unsatisfactorily) as 'European wild boar', 'feral hogs' and 'wild boar x feral hybrids'. While all this is manifest in the title, and a worthwhile exercise in itself, the resulting text is unfortunately far too long and is tortuously exacting in its detail and analyses. Moreover, by concentrating on the least contentious (and in some ways least interesting) aspects of these introductions they have not only omitted discussion of most of the topical issues, but have failed to develop any really useful conclusions or recommendations about the future management of these animals.

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## ECOLOGY, ENVIRONMENT AND ECONOMICS

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**The Balance of Nature? Ecological Issues in the Conservation of Species and Communities** by Stuart L. Pimm (University of Chicago Press, Chicago and London, 1992, ISBN 0 226 66830 4, 434 pp., SB £21.50/\$26.95)

This important, interesting and readable book addresses 'scientific issues in conservation biology'. Stuart Pimm is concerned about the 'impending catastrophe' of extinctions and in this book examines what we know about the stability of populations and natural communities. Stability is reduced to a number

of less nebulous components: resilience and variability (population parameters), persistence and resistance (community parameters). Questions such as what contributes to the variability of a population, what determines population resilience (bounce-back), which communities can persist in the face of invaders, and what happens when a species is removed from a community, are discussed. Theory and models form the basis for discussion followed by a review of the available data collected from many sources. Necessary mathematics and modelling techniques are introduced gently, leading to a clear understanding of how theory and data interact in ecology.

The book emphasizes some gaps in our knowledge; we clearly need more long-term data, we need to repeat experiments in time and space and we need to know which experiments produced non-significant results. We also need to know more about the interface between the traditionally separate population and community ecology because how a population responds to perturbation may well depend on other species. Given these gaps in our knowledge, the book is rather preliminary and theoretical in many respects. Those at the 'sharp end' of wildlife conservation may find the emphasis on theory frustrating, but much of the available data is well summarized, and could lead to some useful practical insights.

The book does have imbalances. Data and concepts from plant ecology are under-represented, even where relevant (for instance in discussions of population variability and community assembly). Not surprisingly, given Pimm's involvement in food web theory, this

area of community ecology is overemphasized. Sometimes Pimm uses an anecdotal style, reporting individual studies in more detail than can be justified by the conclusions that can be drawn from them and he seems ready to make fairly strong general statements based on only a few examples.

Despite these reservations, I recommend this book to anyone interested in the science of ecology and learning about what it and ecologists can contribute to an understanding of community and species loss. Potential readers range from motivated upper level undergraduates to practising scientists. I certainly learned a lot from it and gained some surprising and illuminating insights, which will be included in my future teaching and research.

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**Economics for the Wilds – Wildlife, Wildlands, Diversity and Development** edited by Timothy M. Swanson and Edward B. Barbier (Earthscan Publications, London, 1992, ISBN 1 85383 124 7, 226 pp., SB £12.95)

The sustainability debate rolls on. While many acknowledge that wildlife use can provide an economic incentive for conservation – and argue that in many cases sustainable exploitation is the only option available – there are those who view the concept of wildlife exploitation with deep distrust.

In recent years the 'use it or lose it' lobby has gained relatively wide credibility, yet examples of successful sustainable wildlife management remain sparse. One reason is

that sustainability encompasses so many issues – not only biological, ecological, and environmental but also sociological, legal, political, and, as the authors of this book argue, economic.

This is a book written, by and large, for economists by economists. It attempts to review, from an economist's perspective, the reasons for the impoverishment of 'wildlands', and surveys the obstacles that prevent both recognition of the true economic value of biodiversity and the establishment of sustainable management.

One of the strengths of the book is that a good range of case studies are presented to illustrate the various points raised, much of the original research being supported by the IUCN and WWF. However, while the various authors make concerted attempts to tackle these important subjects the discussion is continuously clouded by verbose and poorly edited text.

Seven of the book's 10 chapters are written wholly or jointly by the two editors, both from the London Environmental Economics Centre. An external editor would, I suspect, have been a wise investment because, without doubt, many potential readers will be put off by economists' jargon and indigestible prose.

There are more fundamental problems with this book: all too often one is left feeling that much of the discussion is academic and divorced from reality. Not only are there too many heavy-handed attempts to make extremely complex ecosystem processes fit economic theories but there is an extremely important problem the authors choose to ignore. This is the much broader question of the appropriateness of using the market economy as a