

## Book review

*Mkomazi: the Ecology, Biodiversity and Conservation of a Tanzanian Savanna*. 1999. Coe M, N. McWilliam, G. Stone & M. Packer (eds.), Royal Geographical Society (with The Institute of British Geographers), London. 608 pp.

Mkomazi Game Reserve (MGR), a relatively little known conservation area in north eastern Tanzania, is described in this rather voluminous treatise spanning a total of 37 chapters. The book sets out to '*describe the floral and faunal diversity of Mkomazi's habitats and work towards an understanding of observed patterns of distribution, abundance and species diversity*' as well as '*generate baseline data against which any effects of human-induced change inside and around the reserve might be studied*' (pages 12 and 254). The book is divided into three sections: the first dealing primarily with a mixture of ecological and biological information (32 chapters over 505 pages); the second focusing on human aspects associated with the reserve (two chapters over 20 pages); and the third section covering management options (three chapters over 20 pages).

Under the direction of Dr Malcom Coe, the Mkomazi Ecological Research Programme (MERP) has undertaken a monumental task of amassing this amount of information. The study, in fact, is classical in that it has reverted to the basic building block on which conservation should stand—that of knowing what is in fact being conserved. According to current thinking, such studies are unfortunately supposedly outdated, yet form the very basis upon which biodiversity arguments hinge.

The quality of the book would have been greatly improved if more thought was given to the structure of the chapters as well as the manner in which information is presented. Chapters dealing with patterns (species list and distribution data) and processes (fire, climate, pollination, herbivory) were mixed in a rather haphazard manner. It may have been more appropriate to have consolidated these

ideas with the species lists restricted to appendices at the rear of the book than interperse them within the text. In the same vein, the text could have been considerably reduced if attention was given to eliminating unnecessary repetitions of background information and 'Conservation and Management' sections in most chapters. In many chapters (and particularly the shorter invertebrate studies), the management recommendations proposed seem to bare no relevance to the information presented. However, throughout the book, the overriding recommendations seemed to focus on the importance of conserving the biologically rich forested areas as well as the need to control human-induced fires. There was also the unnecessary inclusion of lengthy descriptions of remote sensing (Chapter 4) and insect life cycles and ecology (Chapters 12, 17, 18, 21) that could have been adequately covered by references.

One theme that seems to pervade throughout the text appears to be a lack of a uniform research design. If fire was perceived to have been a major ecological process affecting the biodiversity in addition to altitudinal and climatic variation, why were most of the studies not focused into sampling in a systematic manner? I was frustrated in certain sections trying to tease out the methods actually employed. Furthermore, the protection of burn and non-burn controls with firebreaks (knowing very well about the frequency of fires in the reserve) as part of the study design would have greatly helped the scientific comparisons. I also found the glowing lack of inside and outside reserve comparisons a great loss, particularly since it was part of the overall project objectives. The frequent reference to inadequate resources, time and sampling problems by many of the stud-

ies was rather negative. In particular, the small mammal study was one of poor design and insufficient trapping to measure this component of biological diversity. Nonetheless, the broad scope of groups sampled, and particularly amongst the invertebrates, was notably interesting, although I'm not sure as to why certain insect groups were focused upon. Inclusion of the rationale as to why specific insects families were sampled could have been included into Chapter 10.

The two chapters (33 & 34) covering reserve/human conflicts appeared to paint a negative picture as to the attitude of the neighbouring people to the reserve, in contrast to that stated in the acknowledgements. References to livestock numbers in the area in Chapter 33 appear to have been inflated, as tactfully covered in Chapter 37, while the discussion on the impact of livestock on the vegetation inside and outside the reserve appeared rather circumstantial. Greater coverage of the historical information as to the numbers and distribution of people and cattle, and the legal framework prior to and at the time of the proclamation of the reserve may have brought more balance to these chapters and could have been included in an expanded introductory section.

The chapters (35 & 36) on management of the reserve were rather inclusive. The sug-

gestion in Chapter 35 that the reserve's resources should be exploited on some trial basis could lead to huge problems because once privileges are granted they are very difficult to remove. The recommendations advocated in Chapter 36 appear to bear little relevance to any of the information collected by the MERP. For instance, if man-made fires were considered to be having a negative affect on the reserve, why were firebreaks not recommended as a management tool? Furthermore, the description of MGR as Mkomazi and Umba Game Reserves (MUGR) in Chapter 36 certainly could lead to confusion.

In conclusion, the book documents a large section of the biodiversity of an important section of the semi-arid African savanna. Its sheer scope would be the envy of most other conservation areas in Africa, and thus in itself challenges similar such projects to be undertaken elsewhere on the continent to further our comparative biological information base.

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8 October 2000