



**Review: [Untitled]**

Reviewed Work(s):

*Biogeography and Ecology of the Rain Forest of Eastern Africa.* by J. C. Lovett; S. K. Wasser  
Pierre Binggeli

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## Book review

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LOVETT, J. C. & WASSER, S. K. (eds). 1993. *Biogeography and ecology of the rain forest of eastern Africa*. Cambridge University Press, Cambridge. 341 pp. ISBN 0-521-43083-6. Price: £75, \$120 (hardback).

In recent years many books have been published on the biodiversity of the tropical rainforests of Asia and America while those of Africa have received far less attention. This book on the scattered and small forests (c. 2% of land area) of eastern Africa will do much to draw attention to their biological importance. Most of eastern Africa consists of large arid plains dotted with a number of ancient crystalline or more recent volcanic mountains. The higher rainfall encountered on the eastern side of these mountains as well as part of the narrow coastal strip and small offshore islands results in forest islands of varying sizes. Since the rainfall may be as low as 950 mm the book title is somewhat misleading when it refers to rainforests; moist forests or even just forests would have been more appropriate.

The book is divided into four unequal parts with 14 contributions by 16 authors, all of them from the first world with the exception of one Tanzanian. The introductory section includes chapters on geology and on changes in forest cover in relation to the climatic history. Soils and climate are only briefly mentioned and should have received fuller treatment. The second part contains two chapters on the tree forest flora, one on the mountain forests and the other on the coastal forests, which are treated in greater detail. The bulk of the book is allocated to the montane forest fauna including contributions on millipedes, dwarf spiders, butterflies, amphibians and reptiles, birds and three chapters on mammals. Most of these chapters document the patterns of endemism and species distribution in eastern Tanzania, where most research has been carried out, and the results are then related to findings reported from Kenya, Mozambique and central Africa. Two chapters on monkeys focus on their behavioural ecology, particularly their feeding habits. The final chapter discusses forest conservation. It is stressed that these forests have been much reduced in size and are threatened by many factors such as agricultural expansion, and low levels of official protection hampered by limited financial resources.

The uniqueness of these forests is clearly demonstrated by the levels of endemism which range from *c.* 35% in mammals to 100% in millipedes. Each author discusses the questions associated with the distribution of each group of organisms in relation to their present isolation and probable timing and likely migration routes from the main block of African forests. In the absence of an overview chapter, the reader is left to summarize the overall picture. Much of these discussions is very speculative and some chapters (e.g. butterflies) would have benefited from heavy editorial pruning. It is noticeable that most authors tend to explain the absence of a species in a particular forest as a failure of the species to disperse and ignore the possibility of successful dispersal and establishment followed by extinction. This process is particularly relevant considering the limited size of the forest patches and the time scale involved, often millions of years, and the dramatic environmental changes that have taken place during that time.

Despite all the extensive fieldwork carried out by the contributors, all investigated taxa, including birds, have yet to be fully documented in some or even the majority of forest blocks. In recent years new species have been discovered in all taxa and in some, as the millipedes, many have yet to be named. Much work has yet to be done to document fully the biodiversity of these unique forests. It is hoped that this volume will generate further research including studies on the morphological and genetical variation of plant and animal species which have been isolated from the central and western African forest, sometimes for millions of years. The forests of eastern Africa are an exceptional natural laboratory for the study of migration and evolution.

The editors have brought together a wealth of information, including a large number of references, on many aspects of the forests of eastern Africa. However, the book does not provide a complete overview of our knowledge of these forests. Readers with particular interest in, for instance, soils, climate, hydrology, tree and forest ecology, epiphytes and forest products (including medicinal plants) will have to look elsewhere. The book is well produced with few typographical errors. The fact that a chapter abstract at the start of each chapter is sometimes present and sometimes absent is a major inconsistency. The long tables containing species lists could have been made more readable and saved space by the use of a smaller typeface. The maps provided are not always adequate; often the reader needs to flick through the volume to find a map which will give the location of a particular mountain, river or forest. Although this book is a timely and worthwhile contribution to our knowledge of the eastern African forests, at a price of £75 it will not be accessible to African scientists and decision makers, who would greatly benefit from reading the excellent chapter on forest conservation.

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