

# Preface

Africa's natural habitats are disappearing at a rapid rate accelerating markedly since the 1970s. A continent outstanding for its exuberance of life, both in numbers and variety of flora and fauna, this largely historical treatment provides benchmarks against which change can be assessed and man's role in shaping the ecology of Africa, with putative illustrations of habitats prior to this change. The study offers an holistic approach, covering themes of significant importance which are usually neglected in ecological treatments, such as climate, fire, locusts, animal and human diseases; especially tsetse flies and trypanosomiasis, two of the most important influences in African ecology; as well as treating of the more striking aspects such as elephant and hippopotamus populations. One of the basic tenets of ecology is the food web, and Beckerman and Petchley (2009) pointed out that the fundamental question about patterns of, and mechanisms driving, complexity in food webs, has effectively ignored parasites and diseases; although a small but growing number of studies do include them and show how parasites influence measures of species' richness and food web complexity, according them a prominent role in ecological networks. Although Hobbie attempted to alert to the importance of wild animal diseases in 1932, it is only very recently there has been an increasing awareness and interest of their importance in the way in which they affect ecosystems. Despite the sleeping sickness epidemics at the beginning of the nineteenth century there has been less attention paid by ecologists to the way in which human epidemic disease, and chronic diseases also, influence African ecosystems. This study combines these into a single approach, and in what has been termed the "Anthropocene age", which argues that ecologists need to accept the central place of humans in most ecosystems, it treats humans and their diseases as an integral part of African ecology. If it reaches into discussions of examples from other countries, as in the case of plague and its ancient history, this is because Africa, and the diseases which may have shaped its past, cannot be viewed in isolation.

I began to put this book together in the early 1970s, anticipating present day concerns, and the culmination of an interest spanning many years the draft was virtually complete when I read Sinclair and Walker's remarks in *The Kruger Experience* (2003): "...had we known what was present on many of the continents

in the 1700s or 1800s, we would have a better idea of what to conserve and how to conserve it. In one hundred years, future generations may wish that we had been wiser". Clark reminded us of this change as early as 1928: "...between 1909, when I first went to Africa, and 1923, when I went again, vast changes took place in the animal world. In 1909 the Athi Plains swarmed with game. Huge herds of zebras, hartebeests, impallas, giraffes, and scores of other harmless creatures, together with occasional rhinos and lions and other animals, all could still be found on those wonderful grassy plains. To-day one may travel for days at a time in that same district and see only a fraction of the numbers that once covered the plains as far as the eye could reach. To the newcomer, a herd of 50 zebras is a wonderful sight. A few hartebeest, half a dozen giraffes in the distance, and a handful of others may excite him tremendously, and give him the impression that the game is still numerous. But to those who knew the Athi Plains as they were only a little while ago, the remnants of game now to be seen there are pitiful indeed".

Reiners and Lockwood (2010) recently observed that "...some of the ideas we seek [in ecology] have long existed but scientists are disconnected from our own history. This is exacerbated by our new techniques of extracting literature through electronic means which filters out older material". Evans (2008) found that as more journal issues come online, the articles referenced tend to be more recent, fewer journals and articles are cited, and more of those citations are to fewer journals and articles, concluding that although searching online is more efficient than searching print, and following hyperlinks quickly puts researchers in touch with prevailing opinion, this may narrow the range of findings and ideas built upon. In other words, history, the formative background to the present, is forgotten.

Growing interest in the subject of change and its historical background resulted in an international conference in 2008, *Ecosystems Changes and Implications on Livelihoods of Rural Communities in Africa*. Kangalawe (2009) notes that the impact of ecosystems' changes are becoming vivid not only globally but at national and community levels, and that understanding the social driving forces and impacts on ecosystems has emerged as a major objective of the science of global environmental change. In African ecology historical change has been driven more by the human dimension than climate, the latter looms significant in palaeohistoric change, but within the past century has not had the same impact on changing the natural environment as have human factors. The subject matter is changing so rapidly that this volume can provide only a starting point. By the time this is published the glaciers of Africa's highest mountains may well have disappeared along with Lake Chad, and their loss already felt by both habitats and people.

Showing what rich fields of original investigation still await, especially in the realm of parasites and diseases and their hosts, and employing a different approach to other works on African ecology with its holistic treatment encompassing historical observations and background, treating especially of man as well as animals, this work should provide an indispensable sourcebook setting the benchmarks for African ecology, particularly for students and teachers.

Evans, J. A. 2008. Electronic Publishing and the Narrowing of Science and Scholarship. *Science*. 321, 395–399.

Reiners, W. A. and Lockwood, J. A. 2010. *Philosophical Foundations for the Practices of Ecology*. Cambridge, Cambridge University Press.

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