

## Paperback Re-issue

The book traces the ways in which terrestrial animals have evolved from aquatic ancestors and discusses the means by which they are adapted to life on land. The most important physiological adaptations are those involving salt and water balance, the excretion of nitrogen, reproductive mechanisms and the sense organs, and these are given priority. Evidence from fossil history is combined with that from the ecology and physiology of present-day species to assess the probable routes along which various evolutionary lines have moved on to land.

Individual chapters are concerned with specific animal groups and emphasis is placed on comparisons of physiological mechanisms between closely related animals before attempting wider generalisations. The book starts by considering animals such as flatworms, nemertines, nematodes and annelids, which are restricted to humid environments, moves on to molluscs and crustaceans, and then discusses the several arthropod groups in which adaptation to dry climates reaches a peak. The vertebrates are considered in more general terms to allow contrast with the invertebrate groups.

The final chapter puts the whole story of the conquest of land by animals into the more general context of the evolution of land floras and the development of terrestrial ecosystems. It makes comparisons between animal groups by considering the effects that various routes on to land have had on physiological and anatomical adaptations; and it deals with the interactions between groups, many of which have been important in limiting or enhancing success on land. The book closes with a brief account of the recolonisation of the sea and fresh waters by terrestrial animals.

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