
From the Preface to the First Edition

It is to students, professional non-zoologists, and non-professional zoologists that this dictionary is addressed.

Apart from the entries describing taxa (arthropods, other invertebrates, fish, amphibians, reptiles, birds, and mammals) the dictionary covers animal behaviour, cell structure and function, Earth history, ecology, evolutionary concepts, genetics, physiology, taxonomic principles, and zoogeography; and I have also included brief biographical notes on some of the individuals whose names are likely to be familiar. To help the user I have also added internal cross-references, indicated by asterisks.

In many entries, the number of species said to belong to a particular taxon is only approximate, and often rounded. The number of genera given should also be regarded as approximate since the definition of a genus is more arbitrary than that of a species and opinions may differ over the allocation of species to genera.

At every taxonomic level, entries are under the Latin names, with common names in parenthesis, and cross-referenced. This arrangement permits consistency, with groups treated in the same way whether or not they have common names, and it avoids the confusions that would arise with groups that have more than one common name.

Without the support, hard work, and intellectual rigour of my colleagues, compiling the book would have been very much more difficult than it was. I am grateful to them for their help and for the unfailing cheerfulness and promptness with which they dealt with the hundreds of pages of computer print-out I mailed to them.

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Preface to the Second Edition

Much has happened during the six years that have elapsed since the publication of the first edition of this book. The discovery of 'extremophiles', organisms living in environments formerly considered impossibly hostile, and comparisons between their DNA and that of other organisms have necessitated a major taxonomic revision at the kingdom level. New animals have been discovered and relationships revealed by genetic studies have caused some species to be reclassified.

In this second edition I have tried to take account of these and other developments. I have been helped greatly in this by Robin Allaby, who scrutinized all my revisions, made many of his own, and contributed a substantial proportion of the new entries. Many entries have been brought up to date and many new entries have been added, making this edition substantially different from its predecessor. It is also somewhat longer, because very few of the original entries have been removed. As well as describing some of the newly discovered species, both living and fossil, we have increased the number of entries defining terms from genetics and evolutionary studies and have also added a number of entries relating to mammalian physiology.

The aim remains unchanged. I hope this dictionary will help everyone sufficiently interested in the animals of this planet, past and present, to read books and journal articles containing words and expressions with which they are unfamiliar.

I am very grateful for the help I received while preparing this edition and wish to express my thanks to Ailsa Allaby, Colin Groves, Linda J. Losito, and Ruth Slater. Without their advice and contributions the new edition would have been much weaker than I hope it is.

MICHAEL ALLABY



abiogenesis - The development of the first organisms from non-living matter, as in the origin of life on Earth, or in the concept of spontaneous generation which was once held to pertain to the origin of life but which modern understanding of evolutionary processes has rendered obsolete.

abiotic - Non-living; devoid of life. See *parabiotic*.

abomasum In *Ruminantia*, the fourth and final region of the specialized stomach, corresponding to the stomach in other mammals and the area in which digestion proceeds with the abomasal gastric digestive enzymes.

aboral - Away from the mouth, on the