

General Preface to the Series

Because it is no longer possible for one textbook to cover the whole field of biology while remaining sufficiently up to date, the Institute of Biology has sponsored this series so that teachers and students can learn about significant developments. The enthusiastic acceptance of 'Studies in Biology' shows that the books are providing authoritative views of biological topics.

The features of the series include the attention given to methods, the selected list of books for further reading and, wherever possible, suggestions for practical work.

Readers' comments will be welcomed by the Education Officer of the Institute.

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Institute of Biology
41 Queen's Gate
London SW7 5HU

Preface

The invertebrates present us with a diversity of adaptive strategies to the problem of balancing an animal's metabolic requirements with its accessibility to oxygen. This book represents an attempt to use these strategies in illustrating fundamental principles of respiratory physiology without an overburden of purely physical or chemical discourse. An encyclopaedic account of respiratory adaptations was resisted and the examples were chosen to reflect recent research trends. I have considered the invertebrates not as 'lower' animals trying inefficiently to copy the vertebrates, but as organisms with control and regulatory capabilities which have to cope with large environmental exigencies.

Auckland, 1980

R.M.G.W