FUNCTIONAL BIOLOGY SERIES: FOREWORD

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The main aim of this series will be to illustrate and to explain the way organisms 'make a living' in nature. At the heart of this — their *functional biology* — is the way organisms acquire and then make use of resources in metabolism, movement, growth, reproduction, and so on. These processes will form the fundamental framework of all the books in the series. Each book will concentrate on a particular taxon (species, family, class or even phylum) and will bring together information on the form, physiology, ecology and evolutionary biology of the group. The aim will be not only to describe *how* organisms work, but also to consider *why* they have come to work in that way. By concentrating on taxa which are well known, it is hoped that the series will not only illustrate the success of selection, but also show the constraints imposed upon it by the physiological, morphological and developmental limitations of the groups.

Another important feature of the series will be its *organismic orientation*. Each book will emphasise the importance of functional *integration* in the day-to-day lives and the evolution of organisms. This is crucial since, though it may be true that organisms can be considered as collections of gene-determined traits, they nevertheless interact with their environment as integrated wholes and it is in this context that individual traits have been subjected to natural selection and have evolved.

The key features of the series are, therefore:

- (1) Its emphasis on whole organisms as integrated, resource-using systems.
- (2) Its interest in the way selection and constraints have moulded the evolution of adaptations in particular taxonomic groups.
- (3) Its bringing together of physiological, morphological, ecological and evolutionary information.

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