

Biology and Systematics of Colonial Organisms

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Coloniality is a very loosely used word in biology and if it is used precisely it generally has different meanings for different specialists. A very wide range of organisms are supposed to show colonial or social behaviour, including bacteria, protozoans, coelenterates, bryozoans, echinoderms, bivalves, certain insects and gregarious vertebrates including man. Is there a common factor to these different biological associations or are there very different biological phenomena involved?

In this volume specialist authors from a wide range of research backgrounds present their views on a particular group of colonial or social organisms. The editors have tried to cover as many different groups as possible, fossil and living, but inevitably the bias is on invertebrates. There is a general emphasis throughout on the likely adaptive advantages and possible evolutionary reasons for the development of coloniality. Within this general framework subjects discussed include coordination, histoincompatibility, functional morphology, chemoreception, electrophysiology and the ecological strategies of colonial growth forms. By keeping the concept of coloniality as open as possible this volume provides specialists in any one group of organisms with information about other groups, and also presents stimulating alternative viewpoints for establishing a broader biological relevance to the concept of coloniality.

This book will appeal to a wide spectrum of biologists; invertebrate zoologists, palaeontologists, marine biologists, and animal behaviourists. Ornithologists, microbiologists, entomologists, plant ecologists and school biology teachers will also find much useful information reviewed here.

Contents Include: Introduction: Modules, Members and Communes **B. R. Rosen**. The Affinity and Paleobiology of Stromatoporoids: A Critical Review (Abstract) **J. Kaźmierczak**. Bacterial, Fungal and Slime Mould Colonies **M. J. Carlile**. Group Phenomena in the Phylum Protozoa **C. R. Curds**. Individuality and Graft Rejection in Sponges, or a Cellular Basis for Individuality in Sponges **A. S. G. Curtis**. Coloniality (Addendum) **A. S. G. Curtis**. Taxonomy, the Individual and the Sponge **W. G. Fry**. Coloniality in the Scyphozoa **B. Werner**. Development of Coloniality in Hydrozoa **K. W. Petersen**. Colonies of Colonies in *Physalia* (Addendum to paper by Petersen) **P. F. S. Cornelius**. Co-ordination of Behaviour in Cnidarian Colonies **G. A. B. Shelton**. On Some Aspects of Coloniality in Permian Corals **J. Fedrowski**. Coloniality in the Lithostrotionidae (Rugosa) **J. R. Nudds**. Some problems in Interpretation of Heteromorphy and Colony Integration in Bryozoa **P. L. Cook**. Structural and Physiological Aspects of Coloniality in Bryozoa **J. S. Ryland**. Coloniality in Vermetidae (Gastropoda) **R. N. Hughes**.

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