

Brought together by Winston F. Ponder and David R. Lindberg, experts on the evolution of the Mollusca provide a detailed, comprehensive, and up-to-date review of the evolutionary history of this fascinating group. The Mollusca are the second largest animal phylum and boast a fossil record stretching back over 540 million years. They exhibit remarkable anatomical diversity and include familiar groups such as the bivalves (scallops, oysters, and clams), gastropods (limpets, snails, and slugs), and cephalopods (squid, cuttlefish, and octopus). Molluscs range in body size from tiny worm-like animals to giant squids and occur in almost every habitat found on Earth. They are of great economic and ecological significance and carry some diseases that infect humans; they are also among the organisms most vulnerable to extinction.

The result of an international collaboration of thirty-six scientists from eleven countries, this study treats each major taxon in a similar format and provides general information as well as overviews of evolution and phylogeny using data from different sources—morphological, ultrastructural, molecular, developmental, and the fossil record. The evolutionary overviews and classifications presented here will greatly assist molluscan workers in disciplines as disparate as ecology, physiology, biogeography, medicine, and conservation biology.

"This volume is the most up-to-date summary of what we know and don't know about molluscan phylogeny. It will serve as a standard reference work for years to come."

GEERAT J. VERMEIJ, University of California, Davis

"Ponder and Lindberg provide a breathtaking overview of the evolutionary history of the Mollusca, effectively melding information from anatomy, ecology, genomics, and paleobiology to explore the depths of molluscan phylogeny. A must for malacologists."

BRUCE RUNNEGAR, University of California, Los Angeles

"Our understanding of the phylogeny and evolutionary history of the Mollusca has been revolutionized over the past two decades through new molecular data and analysis, and reinvestigation of morphological characters. Ponder, Lindberg, and their colleagues do a wonderful job of integrating this work to provide new perspectives on the relationships of the major molluscan clades, their evolutionary dynamics, and their history. Particularly timely is the coverage of molluscan evo-devo and genomics."

DOUGLAS H. ERWIN, Curator of Paleozoic Invertebrates, National Museum of Natural History

WINSTON F. PONDER is an Honorary Fellow at the Australian Museum in Sydney, Australia, from where he recently retired after a long career as a research scientist specializing in molluscs.

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