Evolution and Development of Fishes

Fish, or lower vertebrates, occupy the basal nodes of the vertebrate phylogeny, and are therefore crucial in interpreting almost every feature of more advanced vertebrates, including amphibians, reptiles, birds and mammals. Recent research focuses on combining evolutionary observations – primarily from the fish fossil record – with developmental data from living fishes in order to better interpret evolutionary history and vertebrate phylogeny. This book highlights the importance of this research in the interpretation of vertebrate evolution, bringing together world-class paleontologists and biologists to summarize the most interesting, current and cutting-edge topics in fish evolution and development. It will be an invaluable tool for researchers in early vertebrate paleontology and evolution, and those particularly interested in the interface between evolution and development.

Dr Zerina Johanson is a leading researcher in the field of early vertebrate evolutionary developmental biology ('evo-devo'), combining paleontological research with developmental studies on living animals. Her diverse research interests include the evolution and development of teeth and dentitions, vertebrate reproduction, paired appendages and the axial skeleton. Dr Johanson has spoken at evo-devo symposia and has a strong commitment to supporting this research via her appointment to several journal editorial boards, and as a co-editor for volumes such as a special issue of *Journal of Anatomy on Vertebrate Evolution and Development* (2013).

Dr Charlie Underwood is a senior lecturer at Birkbeck, University of London, and has over 25 years of experience in research and teaching. His research has focused on fossil sharks and their relatives, as well as their geological and paleoenvironmental context, and has expanded to include the formation of the teeth and skeleton of modern sharks and rays. He has published more than 70 scientific papers. Dr Underwood is an editor for the *Journal of Vertebrate Paleontology* and has served on the committees of several other societies.

Dr Martha Richter has worked at the Natural History Museum in London for nearly 15 years, where she manages collections and curators and undertakes research on fossil fishes, with a focus on extinct Gondwanan ichthyofaunas. Previously, she was an associate professor at several Brazilian universities and head of the Laboratory of Paleontology at the Museum of Sciences and Technology of the Pontifical Catholic University in Porto Alegre. She has published more than 60 papers and chapters in peer-reviewed journals and books, co-edited two Geological Association Special Publications, and acted as an editor for the *Journal of Vertebrate Paleontology.*

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