

The book was found

Patterns And Processes Of Vertebrate Evolution (Cambridge Paleobiology Series)



Synopsis

This new text provides an integrated view of the forces that influence the patterns and rates of vertebrate evolution from the level of living populations and species to those that resulted in the origin of the major vertebrate groups. The evolutionary roles of behavior, development, continental drift, and mass extinctions are compared with the importance of variation and natural selection that were emphasized by Darwin. It is extensively illustrated, showing major transitions between fish and amphibians, dinosaurs and birds, and land mammals to whales. No book since Simpson's *Major Features of Evolution* has attempted such a broad study of the patterns and forces of evolutionary change. Undergraduate students taking a general or advanced course on evolution, and graduate students and professionals in evolutionary biology and paleontology will find the book of great interest.

Book Information

Series: Cambridge Paleobiology Series (Book 2)

Paperback: 464 pages

Publisher: Cambridge University Press; 1 edition (April 28, 1997)

Language: English

ISBN-10: 052147809X

ISBN-13: 978-0521478090

Product Dimensions: 7 x 0.9 x 10 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #2,577,377 in Books (See Top 100 in Books) #50 in [Books > Science & Math > Biological Sciences > Paleontology > Paleobiology](#) #2027 in [Books > Textbooks > Science & Mathematics > Biology & Life Sciences > Zoology](#) #3179 in [Books > Medical Books > Medicine > Internal Medicine > Neurology > Neuroscience](#)

Customer Reviews

"It is in my view the most important book in vertebrate evolution since Simpson's *Tempo and Mode in Evolution* (1944), because of what it offers as a summary, an integration, and above all a prospectus for vertebrate biologists of a new synthesis that is showing all signs of a very healthy infancy. Our next generation of scientists would do well to train themselves as Carroll has done in order to fulfill his vision of what integrative vertebrate biology can become." *Science* "Every now and again, a brave paleontologist stands back and looks over the collection for anything that links all the

tales together...Robert Carroll has broken new ground. He views the fossil record with the eyes of a biologist and a geologist...Not since 1953, when George Gaylord Simpson published *Major Features of Evolution* has there been such a well-founded overview of vertebrate fossils, their distribution in time and space, relationships with other organisms and with the environment..." *New Scientist*"Bob Carroll's latest book provides the first modern review of large scale patterns in the evolution of vertebrates viewed in the context of current evolutionary theory. A veritable tour de force...Carroll's book is well written and effectively illustrated...*Patterns and Processes of Vertebrate Evolution* will form an essential resource for all students of the evolution of vertebrates, but it can also be read with profit by anyone concerned with general issues of contemporary evolutionary biology." *American Paleontologist*"*Patterns and Processes of Vertebrate Evolution* is a masterful overview of evolution as it is understood by many vertebrate paleontologists and others today...Carroll writes clearly and rapidly-the whole is remarkably up to date, with meaningful incorporation of much current literature...this is a fine book." *The Society for the Study of Evolution*"...excellent review of the vast recent literature on development, particularly rewarding reading." *American Paleontologist*"Carroll's overview is welcome, well organized...and will prove to be a very useful backdrop to undergraduate courses on general evolution, or vertebrate history." *Geological Magazine*"The book covers a broad compass and the author provides accounts of the immense range of biological and geological topics. It is a useful addition to the literature on fossils and evolution." *Historical Biology*

This text provides an integrated view of the forces that influence the patterns and rates of vertebrate evolution from the level of living populations and species to those that resulted in the origin of the major vertebrate groups. No book since Simpson's *Major Features of Evolution* has attempted such a broad study of the patterns and forces of evolutionary change. The evolutionary roles of behavior, development, continental drift, and mass extinctions are compared with the importance of variation and natural selection that were emphasized by Darwin.

This reference starts off by noting problems in evolutionary theory, particularly that while short-term microevolution shows Darwinian characteristics, long-term macroevolution based on the fossil record does not, with species suddenly appearing and then persisting for long periods with few changes. Vertebrates are proposed as a model for studying evolution, noting that they are a monophyletic group, have sexual reproduction, share a similar body plan, and most importantly have an excellent fossil record. While the knowledgeable reader will find this reference interesting in

its integration of the forces affecting vertebrate evolution, the more general reader will find a variety of topics from fundamentals of population genetics to evolutionary development to the origins of major vertebrate groups, useful reading.

[Download to continue reading...](#)

Patterns and Processes of Vertebrate Evolution (Cambridge Paleobiology Series) Paleontology and Geology of Laetoli: Human Evolution in Context: Volume 2: Fossil Hominins and the Associated Fauna (Vertebrate Paleobiology and Paleoanthropology) Paleontology and Geology of Laetoli: Human Evolution in Context: Volume 1: Geology, Geochronology, Paleoecology and Paleoenvironment (Vertebrate Paleobiology and Paleoanthropology) The First Humans: Origin and Early Evolution of the Genus Homo (Vertebrate Paleobiology and Paleoanthropology) American Megafaunal Extinctions at the End of the Pleistocene (Vertebrate Paleobiology and Paleoanthropology) Graptolite Paleobiology (TOPA Topics in Paleobiology) Cetacean Paleobiology (TOPA Topics in Paleobiology) Dinosaur Paleobiology (TOPA Topics in Paleobiology) Evolution and Vertebrate Immunity: The Antigen-Receptor and Mhc Gene Families (University of Texas Medical Branch Series in Biomedical Science) Origin and Evolution of the Vertebrate Immune System (Current Topics in Microbiology and Immunology) Plants and the K-T Boundary (Cambridge Paleobiology Series) Vertebrate Paleontology and Evolution Avian Evolution: The Fossil Record of Birds and its Paleobiological Significance (TOPA Topics in Paleobiology) The Sauropods: Evolution and Paleobiology Amphibian Evolution: The Life of Early Land Vertebrates (TOPA Topics in Paleobiology) Cambridge Global English Stage 9 Workbook: for Cambridge Secondary 1 English as a Second Language (Cambridge International Examinations) Bavarian Crochet: Learn About Bavarian Stitches and Patterns and Make 15 Cute and Easy Projects: (Crochet Patterns, Crochet for Beginners) (Crochet Books Patterns, Cute And Easy Crochet) 11 Crochet Shawl Patterns: Crochet Poncho Patterns, Free Easy Crochet Patterns and More Dress Up Dolls Amigurumi Crochet Patterns: 5 big dolls with clothes, shoes, accessories, tiny bear and big carry bag patterns (Sayjai's Amigurumi Crochet Patterns) (Volume 3) Dress Up Dolls Amigurumi Crochet Patterns: 5 big dolls with clothes, shoes, accessories, tiny bear and big carry bag patterns (Sayjai's Amigurumi Crochet Patterns Book 3)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

