

Functional Anatomy of the Vertebrates: An Evolutionary Perspective

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This book introduces students to the groups of vertebrates and explores the anatomical evolution of vertebrates within the context of the functional interrelationships of organs and the changing environments to which vertebrates have adapted. The text contains all of the material taught in classic comparative anatomy courses, but integrates this material with current research in functional anatomy. This integration adds a new dimension to our understanding of structure and helps students understand the evolution of vertebrates. Warren F. Walker, Jr., is Emeritus Professor at Oberlin College, where he taught for 38 years after taking a Harvard doctorate. Well known for his articles on reptile anatomy and locomotion, Dr. Walker is the author of seven laboratory manuals and textbooks published in over 30 editions and in several translations. In addition to being the coauthor of Vertebrate Dissection, Dr. Walker is also coauthor of the Brooks/Cole title FUNCTIONAL ANATOMY OF THE VERTEBRATES, Third Edition by Liem/Bemis/Walker/Grande. Part I: Background for the Study of Vertebrate Anatomy. 1. Introduction. 2. Phylogenetic Relationships of Chordates and Craniates. 3. Diversity and Phylogenetic History of Craniates. 4. Early Development and Comparative Embryology. 5. Form and Function. Part II: Protection, Support, and Movement. 6. The Integument. 7. The Cranial Skeleton. 8. The Postcranial Skeleton: The Axial Skeleton. 9. The Postcranial Skeleton: The Appendicular Skeleton. 10. The Muscular System. 11. Functional Anatomy of Support and Locomotion. Part III: Integration. 12. The Sense Organs. 13. The Nervous System I: Organization, Spinal Cord, and Peripheral Nerves. 14. The Nervous System II: The Brain. 15. Endocrine Integration. Part IV: Metabolism and Reproduction. 16. The Digestive System: Oral Cavity and Feeding Mechanisms. 17. The Digestive System: Pharynx, Stomach, and Intestine. 18. The Respiratory System. 19. The Circulatory System. 20. The Excretory System and Osmoregulation. 21. The Reproductive System and Reproduction. Part V: Conclusion. 22. Conclusion/Epilogue. Other Books

Mammalogy. The fifth edition includes· for the first time, stunning color photographs throughout· chapters rearranged and grouped to best reflect phylogenetic relationships, with updated numbers of genera and species for each family· updated mammalian structural and functional adaptations, as well as ordinal fossil histories· recent advances in mammalian phylogeny, biogeography, social behavior, and ecology, with 12 new or revised cladograms reflecting current research findings· new breakout boxes on novel or unique aspects of mammals; new work on female post-copulatory mate choice, cooperative behaviors, group defense, and the role of the vomeronasal system· discussions of the current implications of climate change and other anthropogenic factors for mammals. Maintaining the accessible, readable style for which Feldhamer and his coauthors are well known, this new edition of Mammalogy is the authoritative textbook on this amazingly diverse class of vertebrates.

· · · · · . The hind limbs of true seals are permanently reoriented caudally to function in sculling. ... Evolutionary history of bats: fossils, molecules, and morphology. ... Functional anatomy of the vertebrates: an evolutionary perspective . "