Animal Physiology, Second Edition

Richard W. Hill, Gordon A. Wyse, Margaret Anderson
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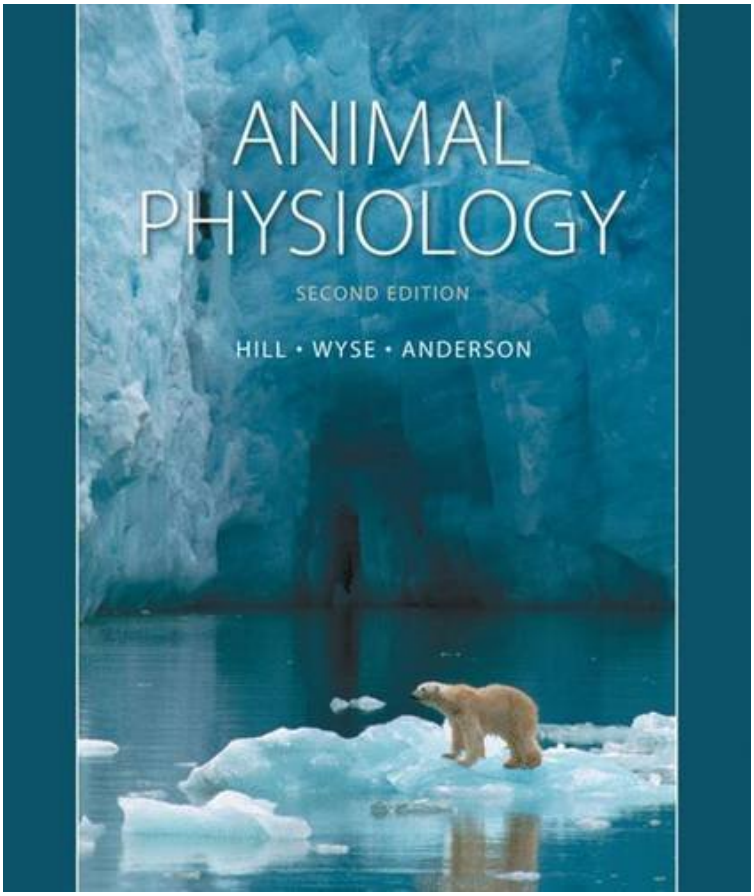

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Richard W. Hill, Gordon A. Wyse, Margaret Anderson : Animal Physiology, Second Edition before purchasing it in order to gage whether or not it would be worth my time, and all praised Animal Physiology, Second Edition:

2 of 2 people found the following review helpful. Very detailed physiology resource, very similar content to the 3rd Edition but with different chapter organizationBy Grace OI used this textbook for a graduate school-level comparative physiology course, which actually asked for the 3rd edition. It served my purposes quite well for the course, especially considering the professor didn't really change his lectures or exams to fit the 3rd edition. Comparing it to the 3rd edition that some of my classmates had, the information contained in the chapters was extremely similar. However, if your professor assigns exact page numbers for reading, you should check with someone with the 3rd editions. Some of the chapters have been switched around, merged, etc., so page numbers between the editions are not homologous.The only problem I ever had with this textbook was that the concepts could sometimes have been much more concisely described, and could almost always have been tied more clearly to examples in nature.1 of 1 people found the following review helpful. Best textboot I've ever readBy MannyI bought this book for a physiological ecology class last year. The professor was the best I've had and covered more material in 15 weeks than most do in a year, and we still didn't get through this entire book. Though incredibly information dense, Hill's Animal Physiology is easy and fun

to read and packed full of helpful pictures and diagrams. It covers nearly everything, often times in significant detail, yet still finds a way to explain things so that anyone with a little biology background can understand it. Everyone in biology should have this book. I'm currently re-reading various chapters relevent to my current studies and am amazed at how much I'm picking up from going through it a second time. It really is that good. For ~$100, this is a bargain.1 of 1 people found the following review helpful. Great book, full of details and drawingsBy E. RaslichThis was a great textbook. I'm glad I purchased it, but just wish I could have gotten the 3rd edition. I don't think most of the information is outdated in the second, but my personality always wants to get the latest and greatest when it's brand new. Richard Hill is a great lecture and prefers to teach through stories and tell how the researchers discovered things in the field of physiology and his textbook represents that well. Expect to learn from myriad examples that will stick with you.

Animal Physiology presents all the branches of modern animal physiology with a strong emphasis on integration of physiological knowledge, ecology, and evolutionary biology. Integration extends from molecules to organ systems and from one physiological discipline to another. The book takes an entirely fresh approach to each topic. Its full-color illustrations include many novel, visually effective features to help students learn. Each of the 24 main chapters starts with a brief animal example to engage student interest and demonstrate the value of the material that will be learned. The book includes five additional, briefer At Work chapters that apply students newfound physiological knowledge to curiosity-provoking and important topics, including diving by marine mammals, the mechanisms of navigation, and muscle plasticity in use and disuse. The book is committed to a comparative approach throughout. Whereas mammalian physiology is consistently treated in depth, emphasis is also given to the other vertebrate groups, arthropods, molluscs, and as appropriate additional invertebrates. Concepts and integrative themes are emphasized while giving students the specifics they need. The whole animal is the principal focus of this book. The pages are filled with information on everything from knockout mice and enzyme chemistry to traditional organ physiology, phylogenetic analysis, and applications to human affairs. Always, the central organizing principle for the array of topics presented is to understand whole animals in the environments where they live. Concepts from chemistry, physics, and mathematics are explained so the book will be accessible to science students at the sophomore or higher level. Complex principles are developed clearly and carefully, to help students understand important concepts in sufficient depth without being overwhelmed. Pedagogical aids include embedded summaries throughout chapters, study questions, partially annotated reference lists, an extensive glossary, appendices, and an upgraded index. For all three authors, teaching physiology to undergraduate students has been a lifelong priority. The opening four chapters provide background material on physiological basics, cell molecular concepts, genomics, transport of solutes and water, ecology, and evolutionary biology. The remaining chapters are organized into five sections: * Food, Energy, and Temperature * Integrating Systems * Movement and Muscle * Oxygen, Carbon Dioxide, and Internal Transport * Water, Salts, and Excretion

The authors have done a great job of outlining the major issues important for understanding metabolism in a variety of animals (invertebrate and vertebrate) and environmental stresses. They make excellent use of figures and balloon captions that capture the reader's attention. There are also several nice examples from the current and classic literature that will appeal to many students. --Grant McClelland, McMaster University (on Chapter 7)About the AuthorRICHARD W. HILL is Professor in the Department of Zoology at Michigan State University, USA and a frequent Guest Investigator at Woods Hole Oceanographic Institution. His research interests include: temperature regulation and energetics in birds and mammals, especially neonates; and marine sulphur physiology, especially in the contexts of biogeochemistry and animal--algal symbioses. GORDON A. WYSE is Professor of Biology and Associate Dean for Academic Affairs, College of Natural Sciences and Mathematics, at the University of Massachusetts, Amherst, USA. His research uses caterpillars and Limulus as model organisms to explore the neural circuits and neurotransmitters underlying feeding behaviour and other behaviour patterns. MARGARET ANDERSON is Professor of Biological Sciences and Director of the Programme in Neuroscience at Smith College, USA. Her research interests include the functional properties of excitable cells.