

From the use of echolocation in bats to long-distance migration in salmon, animals exhibit an intriguing array of different behaviors. But how are all these behaviors controlled? *Behavioral Neurobiology* introduces the fascinating field of neuroethology - the study of the neurobiological processes underlying animal behavior.

Written in a lively, easy-to-read style, this is both an authoritative and accessible introduction to the subject, assuming no prior knowledge of animal behavior or neuroethology. It uses a comparative zoological approach which emphasizes common ideas, giving you a thorough understanding of the principal concepts of behavioral neurobiology without an overwhelming amount of detail. It also examines many of the major discoveries that have helped to unravel this intricate subject, and introduces you to the researchers behind them, along with their key experiments. Now in its third edition, *Behavioral Neurobiology* has been comprehensively updated to reflect the fast-moving development of neuroethology.

New to this edition

New topics added and existing topics expanded:

- Development of bird song
- Adaptations of insects to counteract bat echolocation
- Neural mechanisms of escape swimming in toad tadpoles
- Formation of joint auditory-visual maps during development
- Sensory mechanisms and neural correlates of magnetoreception
- Place cells and formation of cognitive maps
- Possible functions of adult neurogenesis in hippocampus

New learning features to support the text:

- 'Key Concepts' list at the start of each chapter helps to introduce and ground each topic
- 'Bigger Picture' section at the end of each chapter links that chapter's content to the wider field of research and application
- Short-answer questions at the end of each chapter enable you to test your knowledge and understanding



'A milestone in the neuroethological literature.'

From Jörg-Peter Ewert's review of the previous edition in *Integrative and Comparative Biology*

'This book fills a need that is unmet by other modern neuroscience textbooks. By taking a historical perspective on neuroethological approaches to the nervous system, Zupanc brings foundational principles to life.'

Dr. Bruce Carlson, Washington University in St. Louis

'The chapters are detailed and comprehensive. The author is a very accomplished communicator and the text reads beautifully.'

Dr. David Wilcockson, Aberystwyth University



online resources

www.oup.com/uk/zupanc3e

For students:

- Multiple choice questions for each chapter
- Links to useful websites
- Interview with the author

For lecturers:

- Journal Club material for each chapter
- Figures from the book, available to download
- Answers to all the questions in the book

OXFORD
UNIVERSITY PRESS

ISBN 978-0-19-873872-5



9 780198 738725

www.oup.com