

Extensively revised, the third edition of this introduction to neuroethology – the neuronal basis of animal behaviour – is written for zoology, biology and psychology students. It focuses on the roles of individual nerve cells in behaviour, from simple startle responses to complex behaviours, such as route learning by rats and singing by crickets and by birds. The text begins by examining the relationship between brains and behaviour and shows how study of specialised behaviours reveals neuronal mechanisms that control behaviour. Information processing by nerve cells is introduced using specific examples, and how the roles of neurons in behaviour are established is described for a predator-prey interaction, toads versus cockroaches. Much new material is included in chapters: on vision by insects, which describes sensory filtering; on hunting by owls and bats, which describes sensory maps; and on rhythmical movements including swimming and flying.

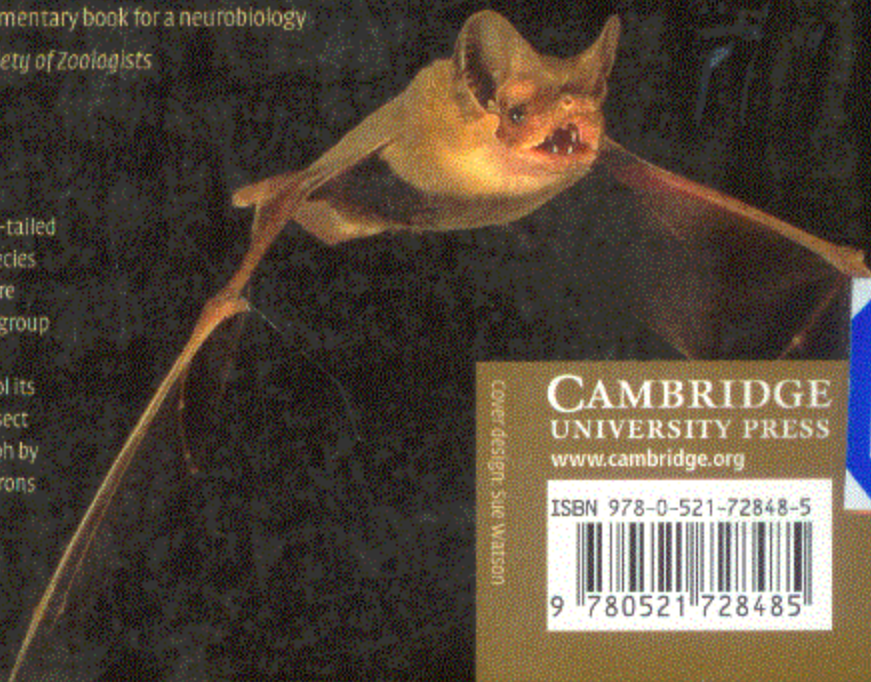
From reviews of the previous editions:

"The strengths of the book lie in its ability to stimulate those interested in neurobiology and provide, through clear examples, an excellent introduction to the field of neuroethology."

Thomas H. J. Burne, The Association for the Study of Animal Behaviour

"In a nutshell, it provides a very comprehensive picture of what we know of neural systems and behaviour, and it does so in a concise, easy-to-read format that students will love... an excellent supplementary book for a neurobiology course." *Bulletin of the Canadian Society of Zoologists*

COVER ILLUSTRATION: the Brazilian free-tailed bat, *Tadarida brasiliensis*, in flight. This species uses echolocation to navigate and to capture flying insects. The smaller picture shows a group of nerve cells in an insect brain; these are motion-sensitive cells that help a fly control its flight course. Both bat echolocation and insect vision are topics in the book. Bat photograph by Nickolay Hristov, Brown University; fly neurons picture based on Cuntz *et al.*, 2006 (PNAS, **104**, 10230).



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