Essentials of Animal Behaviour

Essentials of Animal Behaviour is a well set out book suitable for general, introductory animal behaviour courses. However, veterinary, agricultural and animal science students would find the scarcity of references to companion and agricultural animals disappointing. These are the students who often end up dealing with and advising on animal behaviour, and who should understand basic principles.

The book is easy to read and each chapter has clear main point headings, and a good glossary of terminology. I would have liked to see a comprehensive reference list as many interesting experiments and concepts are cited by the name of the scientist but with no date in the text. Some of the diagrams have the full reference in the legend, but others do not. Students should be able to access original sources easily. There is, however, a list of suggested further reading which gives useful books and the date and source of some of the work.

Chapter 1 is an excellent introduction to questions about animal behaviour, the history and development of modern studies of animal behaviour, and the conflict over nature versus nurture. The first few chapters cover motor patterns of animals, their form and what is known of their control, together with special senses and how these are influenced by various stimuli to produce behaviour. The following chapters deal with causation, development, evolution and function.

Motivation is discussed in Chapter 4 and interesting examples are used to answer the questions, “How does the tendency to behave in a particular way fluctuate over time?” and “How does an animal decide which of many possible behaviour patterns it will perform?” Historic views and their inadequacies are discussed before current views are presented. This encourages students to think about the concepts. It was good to see a short section raising the issue of motivation and animal welfare, and mention of our responsibilities towards our pets, laboratory, farm and zoo animals.

Criticism of the view that learning is the only environmental influence is backed up by experimental work described in Chapter 5 (Development). The book presents the concept that natural selection has determined how development should take place in the normal environment of each species, whereas in another environment it may be quite different. The interaction between genetics and the environment resulting in behaviour is well described using case histories to show the crucial role of genetics and environment in development.

The evolution of behaviour (Chapter 6) is examined using some interesting studies of displays, rituals and similarities in behavioural adaptation in unrelated species such as the Kittiwake and the Galapagos swallow-tailed gull.

Chapter 7 answers the ‘why?’ questions, and explores experiments which test ideas about function. A section on selfish genes gives a history of the current interest in behaviour and evolutionary theory; this leads to a discussion of altruism and strategies of reproduction. Adoption of strategies which give the best benefits and a brief description of game theory are clearly put forward.

The last two chapters (Chapters 8 and 9) pull together the earlier chapters with a fascinating discussion of communication and social organization. In both these chapters
interesting examples are used to illustrate the theoretical concepts discussed in the earlier chapters.

*Essentials of Animal Behaviour* covers the basic concepts of animal behaviour in an interesting, easy-to-read format with excellent figures illustrating many of the experimental data. It also encourages students to think through questions and arrive at plausible conclusions.

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