

Book Reviews

Domestic Animal Behaviour and Welfare, Fifth Edition

DM Broom and AF Fraser (2015). Published by CABI, Nosworthy Way, Wallingford, Oxon OX10 8DE, UK. 456 pages Paperback (ISBN 97817806445636) Price £39.95, €55.00, US\$75.00/Hardback (ISBN 9781780645391) Price £85.00, €110.00, US\$160.00.

Fans of previous versions of Broom and Fraser's classic text will not be disappointed with this edition. It delivers the same extensive overview of key topics in the behaviour and welfare of domestic animals as previous editions. Many of the chapters include recent material, and new chapters have been added. Buyers of this edition also get access to the book's e-version on VitalSource®, whose interactive platform allows highlighting and note-taking, and online sharing of the same.

The text is organised into seven sections with between two and 11 chapters in each section. This structure works well to break down into digestible chunks the two huge and related areas of behaviour and welfare. Section 1 considers various aspects of the ethics of animal use and their history, and introduces selected welfare concepts and approaches to welfare assessment as well as some welfare-relevant aspects of animal behaviour and how to measure them. Section 2 covers four relevant fundamental topics, namely (i) cognition, learning and behavioural development, (ii) motivation, (iii) evolution and optimality and (iv) welfare assessment. The following three sections describe different aspects of the normal behaviour of domestic animals, such as locomotion, social behaviour and early and parental behaviour. The book finishes with two large sections on selected welfare topics, such as handling and transport or different abnormal behaviours and on the welfare of various types of domestic animals including fish, working equids and other draught animals. Given the vast coverage of the book, it is to the authors' credit that it succeeds nonetheless in engaging the reader throughout. This is achieved through extensive use of examples and anecdotes. In addition, it is written in a clear, authoritative and easily accessible style. The book's ambitiously broad reach has meant that the authors had to be selective in the material they can include. Such selection is necessarily subjective and has had a couple of consequences. One is that the text relies heavily on examples, definitions and concepts from the authors' own work. The other is that the reader can be left wondering about the criteria for selection and emphasis of different topics. Just to illustrate: I would have indulged in further exploration of the consequences of evolution, optimality and domestication for domestic animals but would have offered less, say, on motivation — also a subjective choice. My mental wishlist for future editions would therefore include some further clarification of what guided the authors' selection of topics and their relative weightings.

Broom and Fraser's book has, over its lifetime, collated so much information on such a wide range of topics in domestic animal behaviour and welfare that it will continue to work very well for any student of animal welfare as both a way into the field of domestic animal behaviour and welfare, and as an invaluable source of animal examples.

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Comfortable Quarters for Laboratory Animals, Tenth Edition

Edited by C Liss, K Litwak, D Tilford and V Reinhardt (2015). Published by Animal Welfare Institute, 900 Pennsylvania Avenue SE, Washington DC 20003, USA. 239 pages (ISBN 978-0938414797) Paperback, E-Book. Free to download.

Comfortable Quarters for Laboratory Animals has just reached its 10th edition. The multi-author, edited book is a valuable resource on housing and caring for some of the most commonly kept laboratory species. The book is published by the Animal Welfare Institute and is available as a free download for individuals working in research institutions.

Comfortable Quarters for Laboratory Animals is organised into 14 species-specific chapters, each written by individual authors with expertise in the specific species, followed by two chapters covering the human-animal bond and extraneous variables. The general structure of the species-specific chapters is to first introduce the natural history and basic behaviour of the species followed by discussion of the various refinements which may improve their welfare in the laboratory. I like the focus on the natural behaviour of the animals in the wild as it serves to emphasise how far laboratory conditions often deviate from this and, as some chapters point out, how this can compromise some of the Five Freedoms — most obviously the freedom to express natural behaviour. More importantly, knowledge of the animals' ecology and ethology promotes the development of refinements which better meet their needs. Although it might seem obvious that carers and researchers should be familiar with the behaviour and natural history of the animals with which they work, it has recently been shown that many biomedical researchers are shockingly unaware of the basic biology and behaviour of their subjects, often not knowing the most basic features of their biology, such as whether they are nocturnal or diurnal, live in groups or are solitary etc (Hendrie & Pickles 2011). As such, *Comfortable Quarters for Laboratory Animals* can serve as a useful introduction to the behaviour and ecology of their chosen species for both researchers and animal care staff. There are some inconsistencies between chapters, likely as a result of the different backgrounds and locations of the authors, some chapters include a great deal of specific detail