

Book Reviews

The Behavioural Biology of Dogs

Edited by P Jensen (2007). Published by CAB International, Wallingford, Oxfordshire OX10 8DE, UK. 288 pp Paperback (ISBN 978-1-84593-1872). £35.00.

Much of what we know about the behaviour of 'man's best friend' comes from two very distinct approaches. Many of those who have written about the behaviour of dogs have had an interest in its applications, be they veterinarians specialising in behavioural 'problems', dog trainers, or welfare scientists. Another thread has been inspired by the astonishing behavioural and morphological diversity of dog breeds, including the pioneering work of Scott and Fuller and continuing to this day as genomics begins to shed new light on the origins of such diversity and, indeed, the origins of the domestic dog itself. This collection of essays edited by Per Jensen incorporates contributions from both approaches and, thus, gives a flavour of just how diverse the literature can be, although complete newcomers to companion animal behaviour might do well to start with his more basic text, *The Ethology of Domestic Animals* before getting to grips with some of the chapters. The previous 'state-of-the-art' volume on dog behaviour, James Serpell's *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*, although now over a decade old, is still also worth examining: its minimal overlap with *The Behavioural Biology of Dogs* is exemplified by the very few chapters in the latter book that reference the former.

The first three chapters cover the origins of the dog and its breeds; the reader might do well to start with the third of these, by Carles Vilà and Jennifer Leonard, since this gives an excellent overview of the current consensus of the evolution of the dog from the wolf, as well as its subsequent diversification into the many types and breeds we know today.

The core of the book is, perhaps, its second section, on the biology and behaviour of dogs. Per Jensen himself examines the ethological approach, providing a very useful introduction into the mechanisms that are likely to underlie much of dog behaviour. He takes, as his starting point, Tinbergen's four questions which historically define this approach, but focuses largely on two: proximate causation and ontogeny. Any application of Tinbergen's other two questions, concerning function and evolution, quickly comes up against the problem of defining what dog behaviour is for, a much easier question to answer for a wild animal (the simple answer is reproductive success) than for a species with a very long history of domestication. Yet these questions may eventually need to be answered if we are to fully understand the early co-evolution of man and dog. Other chapters in this section outline the disciplines of sensory physiology, behavioural genetics and learning,

although because of the patchy nature of the dog-specific literature in each of these areas, all make extensive reference to studies of other mammals. Given the many misunderstandings of learning theory that abound in the craft of dog training, Pamela Reid's chapter on learning is a particularly welcome and well-structured account. It is a pity that the chapter by Dorit Feddersen Petersen on social behaviour is so short, since this is a crucial area for the understanding of social relationships, not only between dogs, but also with humans, since the mechanisms evolved by wolves for social cognition, within their own species, have presumably formed the basis for the mechanisms whereby dogs are able to integrate their activities with those of man, so effectively.

This, perhaps the dog's crowning achievement, is the topic of the third section of the book; the dog in its human-created environment. Luigi Boitani and his colleagues in Rome give an excellent overview of the dogs that occupy a variety of niches alongside, rather than with, man. Kenth Svartberg places the originally pragmatic world of temperament testing into a scientific context; among the many useful points he makes is to highlight the distinction between traits that describe individual differences in motivation, and those that distinguish between behavioural strategies, which are often confounded in existing tests. Another relatively new area of science, the cognitive ethology of dogs, is well summarised by Ádám Miklósi, one of its pioneers.

The final part of the book, covering the behavioural problems of dogs, covers both the important interface between disease and behaviour, and also the practice of treating the behaviour 'problems' presented to practitioners by owners. Over the past decade, the latter has developed extensively, and really demands more coverage than it is given here; Roger Mugford seems sceptical of the attempts that have been made to come up with an agreed classification for the behavioural disorders of dogs, preferring to treat each case as unique, and placing considerable emphasis on the use of commercial products such as 'pheromones', electronic collars, harnesses and toys.

Students of dogs, and applied behaviour in general, will find much to interest them in this book. Despite the increasing popularity of other companion animals, especially cats, in Western countries, the dog still fulfils such a variety of roles in human society that it will be ubiquitous for the foreseeable future. It is particularly encouraging that this book has been able to highlight several new areas of research, including molecular genetics and social cognition, which show great promise in helping us gain a deeper understanding of man's first animal companion.

John Bradshaw,

University of Bristol, UK