

scientists to animal care technicians to lay animal welfarists. It provides an informative overview of everything to do with our relationship with animals and how we use them. The entries are somewhat superficial from a welfare scientist's perspective, but will serve as a useful adjunct to any researcher's work. The book is both highly readable and comprehensive, making it an ideal starting point for those investigating or wishing to learn more about particular topics. It is a compact text which attempts to cover as much about the subject as possible in around 400 pages. By necessity, the topics, though wide-ranging, are somewhat brief in their explanation but this is unavoidable given the limited space. Having said that, the reader is directed to publications for further reading at the end of each entry. The book cannot be relied upon to give in-depth explanations or detailed accounts of any given topic – but then that is not its aim. Indeed, Marc Bekoff clearly states in the introduction, 'each entry and the summary or resources should be viewed... rather like kindling wood that can be used to ignite larger fires.' That is exactly how this book works.

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Consulta de Difusión Veterinaria: Etología Aplicada a la Clínica Veterinaria

Consulta de Difusión Veterinaria – Special Issue, Volume 6(51) on 'Ethology in Veterinary Practice' (1998). *Consulta de Difusión Veterinaria*: Castellon. 52pp. Paperback. (Spanish text, English abstracts). Obtainable from the publishers, C/ Obispo Climent 7, 12001 Castellon, Spain (ISSN 1135-0598). Price £6.00.

Traditionally, the veterinary tools used to solve patients' problems have been pharmacology, surgery and changes in management. It is only in recent years that ethology has acquired an important role in veterinary medicine. It has proved to be a very important area of knowledge from which veterinarians can greatly benefit by learning more about their patients and by integrating it as an element of therapy. This special issue of the journal *Consulta de Difusión Veterinaria* represents an interesting effort to provide veterinary clinicians with relevant, up-to-date information about the study and treatment of small animal behavioural problems. It contains five articles, some of which are translations of research work previously published elsewhere.

A compilation like this has advantages and disadvantages. One of the advantages is that it is a very direct way of presenting concise information about a particular topic. One disadvantage, however, is that literal translation of scientific work sometimes makes it difficult to digest a complex text, because the interpretation or use of words differs from one language to another (this is a problem with the first article in particular). In addition, and this is more a risk than a disadvantage, there is the danger of taking these articles as *the only* way in which such problems can be approached (this is especially important when talking about the therapy for a specific disorder). However, as long as it is kept in mind that this is only part of the information available about the topic, this is no longer a problem. In my opinion, all the articles are relevant to animal welfare because of the inextricable relation of the former with animal behaviour.

The first article, 'Social behaviour of wolves and dogs: differences and similarities', by Feddersen-Petersen, is especially useful for understanding what effects domestication has had on dogs' social behaviour, and why dogs need human contact so much, not just in terms of food and exercise, but in terms of genuine care as individuals. Given that the discussion is

the most interesting part for veterinary clinicians, this article would perhaps have been more attractive to read if the methodological details had been left out or shortened.

'Fear-motivated aggression in dogs', by Galac and Knol, was taken from an article published in *Animal Welfare* in 1997 (pp 9-15). It is a very clear and applied article. It contains data from a 3-year study and is particularly useful for the clinician who wants to learn more about the topic or needs precise advice on how to deal with a dog with this condition. The authors give helpful information about the diagnosis and therapy alternatives for this disorder. A negative point, however, is their opinion that the dogs' welfare *did not seem to be affected* – for which they give no proper basis or report any attempt to use an objective method to determine this. These sorts of judgements are always dangerous.

The third article by Dehasse, 'Separation anxiety: a multimodal analysis', explains the importance of basing the diagnosis of this disorder on the symptoms rather than on pre-defined models of anxiety. The reason for this is that such models differ greatly not only in their semantics, but even in the prognosis of the disorder. A review of the different possible treatments is made. As in the previous article, behavioural treatment is one of them. The problem in both cases is that this kind of treatment seems to be used with the sole purpose of solving to owners' problems, while some of the recommendations seem to overlook the welfare of the patient animal. Advice such as 'being indifferent to the demands of attention by the dog before going out of the house' or 'totally suppressing the greeting when coming back' *might* result in a decrease of separation anxiety in the long term. However, the distress that these measures could cause to an animal which is already anxious because it suffers from over-attachment to its owner should not be dismissed without further consideration. The issue of whether a behavioural treatment will affect an animal's welfare should always be one of the first concerns borne in mind when recommending a therapy.

The next topic in the compilation is, 'Problems of urinary marking in the cat', by Fatjó and Manteca. This is a very precise article in which the most important point in terms of animal welfare is the explanation of the cat's marking behaviour, and the asseveration that this is a completely normal behaviour. As the authors point out, explaining this to the owners can help them to better understand their pets' needs, and make them more patient and co-operative with the treatment. It gives a thorough account of the currently available treatments and their efficacy.

The last article (by Overall) deals with 'Pharmacologic treatments for behavioural problems'. It is very wise to put this article in the end. It reaffirms the message of the author, who emphasizes right from the start, that drugs are not the first-choice therapy for behavioural problems. She stresses the importance of fully understanding the origin and context of the behavioural problem and of using drugs only after having an accurate diagnostic and treatment plan. This should use the pharmacological approach only as part of an integrative therapy. Furthermore, pharmacological treatment should never be used as a tool to make the diagnosis. The author emphasizes all these points, which are very relevant in terms of animal welfare, since they were common mistakes of the early days of veterinary medicine and the study of behavioural problems. Nevertheless, as this article clearly demonstrates in its very thorough account of the drugs available for the therapy of behavioural disorders, the current state of knowledge completely excludes any justification for such mistakes being repeated.

The role of animal behaviour and animal welfare as scientific tools to solve applied problems in the medicine of small animals is a fast-growing practice. Initiatives like this special issue of *Consulta* are essential to keep veterinary clinicians well informed about

different ways of dealing with behavioural problems in pets. Furthermore, creating more awareness in veterinarians about these topics will encourage communication and feedback between them and behavioural scientists.

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Domestic Animal Behavior for Veterinarians and Animal Scientists, 3rd edition

K A Houpt (1998). Manson Publishing Ltd: London. 495pp. Hardback. Obtainable from the publishers, 73 Corringham Rd, London NW11 7DL, UK (ISBN 1874545960). Price £29.95.

A veterinarian has written this book and, as the order of disciplines in the title reveals, it is primarily aimed at other veterinarians, dealing in some detail with veterinary practice's strengths – the clinical relevance of behaviour and the identification and treatment of behavioural problems. Although the emphasis is on the companion animal species of dogs, cats and horses, there is sufficient coverage of pigs, cattle and sheep to keep the farm animal scientist's interest and make the book a worthwhile addition to their library. The chapters are arranged by topic, each with a general introduction followed by an overview of that topic, species by species. Some may prefer to have chapters arranged by species, with a topic by topic overview, but the organization of this book allows the reader to draw parallels in behaviour across species.

The first chapter addresses communication, covering vision, audition and olfaction. It details the relative acuity of domestic animals and then describes the ways in which animals use these senses for inter-individual communication. What becomes obvious is that whereas we may have a good interpretation of visual signals and the role of pheromones, our knowledge of vocal communication is less than complete. Decoding the information that the vocal signals of many species convey is surely a priority if we are to gain a full understanding of animal behaviour. It is probable that such knowledge will also help us in the assessment of an animal's welfare.

The second chapter deals with aggression and social structure, a very important topic with the trend in farming to move towards group-housing at all stages of the life cycle. This chapter discusses the categories of aggression and their biological bases and then describes normal and abnormal aggression in each species, together with treatment where applicable. The third chapter covers activity and sleeping patterns and their relationship with high frequency, ultradian, circadian, infradian and annual rhythms. The next two chapters address sexual behaviour and maternal behaviour, again in relation to their internal and external control, together with a useful catalogue of clinical problems which occur in all species.

There are two chapters on the development of behaviour and on learning, which offer a useful introduction to an increasingly popular area of study, and then there is a somewhat isolated chapter on ingestive behaviour. This probes deeper into a specific behaviour than any of the others covered in the book, but is on a topic in which the author is an expert. The final chapter encompasses miscellaneous behavioural disorders not covered under any of the previous headings and is mainly dog- and horse-based. Appendices then cover separation anxiety and examples of questionnaires for owners with dogs, cats and horses presenting behavioural problems.