

seemingly overwhelming amount of published material that they might possibly consult. One of the duties of writers of textbooks should be to guide students as to why this or that could and/or should be consulted, and what might be considered as back-up material that might be looked at later if the need arises.

In the first edition, the references to material quoted in each chapter was placed at the end of each chapter. In the new edition they have been incorporated into the composite References section at the end of the book. This is a welcomed change. The items identified in the various Further reading lists should, perhaps, have all been included in the References section. It would also have increased the value of the References if, after each reference in the list, there was an indication of the page or pages of the book on which it was mentioned. Also welcome are the many improved figures and the colour-plate maps.

This important, well-written and up-to-date textbook will continue to have a key role to play in many diploma and degree courses in the agricultural/animal welfare/veterinary higher education field. Its clear writing and focused contents also make it of value to some further education projects and to the progressive farmer.

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Knowing Your Horse: A Guide to Equine Learning, Training and Behaviour

E Lethbridge (2009). Published by Blackwell Publishing 9600 Garsington Road, Oxford OX24 2DQ, UK. 208 pp Paperback (ISBN 978-1-4051-9164-7). Price £19.99, €24.90.

Emma Lethbridge has used her training and background to bridge the gap between scientific theory and applied horsemanship in her recently published book: *Knowing Your Horse: A Guide to Equine Learning, Training and Behaviour*. A passion for horses often seems to block any consideration of how emerging scientific knowledge might link into horsemanship but, in this book, the author has channelled her passion into producing a guide that is based on scientific theory but written in a way that is accessible to those without a scientific background. Emma Lethbridge's vocation to improve equine welfare has led her to combine a scientific career with a professional background in applied horsemanship. She is currently undertaking her PhD in psychology at Lincoln University but also works with animal owners to develop long-term solutions to behavioural issues in a wide range of companion species but specialising in horses and dogs.

The book provides clear explanations of the basic survival motivations behind horses' behaviour, breaking down myths of higher intelligence that are sometimes used in an attempt to rationalise abuse. The unequivocal message to the reader is that the human handling the horse is the leader/instigator and the horse is the reactor, not the other way round. Having laid the responsibility of higher intelligence upon the handler, the book provides a toolkit of ideas

and methods to support this mindset. There is a gradual introduction of key information throughout the book to ensure it is not initially overwhelming. An immense amount of thought has gone into structuring the book to explain learning and training theories in an applied format whilst continually developing the readers' knowledge. I think many readers of this book will finish the book with a clear plan of how to apply its contents to their own horsemanship and an unconscious depth of understanding of the psychology behind animal behaviour.

The author does not shy away from controversial subjects, such as punishment: these topics are covered with the same factual, unbiased approach as the rest of the book. There is clearly no agenda to promote a particular training technique; the motivation behind the book is clearly to provide knowledge so that whatever techniques are applied by the reader are adopted on the basis of informed decisions.

The book attempts to address the varying levels of readers' background knowledge by supporting complex topics with case studies that bring the examples to life. The layout of the book allows readers to be selective in whether they focus on case studies, scientific theory or suggestions on how readers may progress their own application of the book by the systemic use of dedicated presentation styles through all chapters. The style of this book is likely to engender broad appeal but, whilst it is able to provide a sound insight into the topic, it has not been written in such a way as to provide a scientific foundation for higher education students. However, this is addressed, in part, by the provision of references to core scientific papers and the list of recommended further reading provided at the end of the book. Whether the reader is looking for a single book to provide an accessible guide to the principles behind equine learning or a stepping stone into animal behaviour science, this book is essential reading.

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Wildlife Damage Control: Principles for the Management of Damage by Vertebrate Pests

J Hone (2007), Published by CABI, Wallingford, Oxon OX10 8DE, UK. 192 pp Hardback (ISBN 978-1-84593-245-9). Price £37.50, US\$75.00, €60.00.

Wildlife comes into conflict with human and other interests in many different ways around the world. These conflicts can occur in a variety of contexts, including biodiversity, production threats to agricultural, forestry and fishery industries, and human and animal health. Approaches to resolving conflicts can be discovered independently for each context and each species. Alternatively, the best solutions can be found through understanding common general principles in the assessment and effective management of wildlife conflicts. This book is essential reading for anyone who wishes to gain insights into such common principles. It offers a rounded synthesis of the key literature regarding wildlife impacts and their management and offers a guiding framework for assessing and managing these impacts. This it

does admirably. However, it does not explicitly address animal welfare as an issue to be considered in developing wildlife management approaches. After developing a general framework in the introductory chapter, the author then takes us through the process of assessing wildlife impacts by describing 'Patterns and processes in wildlife damage'. This is followed by an overview of the principles of managing these impacts by describing 'Generalities in controlling wildlife damage'. The principles established in these opening chapters are then applied to the contexts of 'Biodiversity conservation', 'Production', 'Human and animal health' and 'Recreation'. Each of these chapters comes with useful worked examples that illustrate the application of the underlying principles to specific problems, including a delightful illustration of the unintended consequences of wildlife control via a Beatrix Potter story. The overall approach is to use mathematical and statistical tools and models to illustrate relationships, for instance, between wildlife abundance, control effort and damage levels. Some general prior understanding of these techniques would thus benefit the reader, although they are clearly explained throughout and a useful introductory mathematics section is provided as an appendix. The target audience is students and scientists in the fields of wildlife management, environmental science and natural resource management. It will also be of interest for wildlife managers charged with control of wildlife damage in the broadest senses.

Overall, the book successfully illustrates how science-based wildlife management has moved on from simply the control of wildlife considered to be over abundant, generally with lethal techniques, to address instead the control of the damage that wildlife cause to human and other interests. However, the underlying philosophy still has its roots in the age of pest control. The author defines pests as species that have undesirable effects and thus "wildlife can at times be considered pests". However, reference to pests throughout the text offers up many potential criticisms due to the difficulty of reaching a common understanding of when an effect is undesirable and its mitigation thus necessary or justified. Wildlife conflicts often involve a plethora of stakeholders and perspectives; typically involving those with economic interests to protect, some for whom biodiversity is a key concern, and others who regard animal welfare to be a priority. This volume would have lost none of its strengths by merely alluding to the word pest as part of the history and evolution of the underpinning science rather than explicitly stating that it deals with "pest aspects of wildlife". The message is in the title, namely wildlife damage control, and no other terms or justifications are necessary.

The framework developed and illustrated by the author shows with clarity and insight how the field has moved on from the time when Charles Elton, one of the founders of modern population and community ecology, described the

aims of the Oxford Bureau of Animal Population from 1939 to 1947 as being firstly, "achieving technical improvements in the means of rodent and rabbit destruction" and, secondly, "working out a general policy of control aimed at the greatest destruction with the least cost and labour". Instead, today, we discuss damage control and conflict resolution, rather than pest destruction, by using methods that are effective but, at the same time, try to reduce negative unintended consequences in terms of both animal welfare and the wider environment. This book, in particular, helps reveal how understanding the costs and benefits of damage control can be enhanced through simple economic principles, such as diminishing returns and marginal responses, including ways of dealing with uncertainty. Nevertheless, the author acknowledges that, while these simple economic concepts may be particularly useful in activities such as agriculture and forestry, in other fields, such as conservation of biodiversity, people may use value judgments with no specific economic basis, they simply want to protect or enhance biodiversity at some level from local to global. Similarly, simple economics may not be the basis of evaluating the value of wildlife control to protect human health. Indeed, we need to go further than the author suggests and add animal welfare into these equations. So, a whole range of different currencies can come into play on both sides of the cost/benefit evaluation and we still do not have very good conversion principles. For instance, how many markedly inhumane rat deaths from rodenticide use, as unintended welfare consequences and costs of damage control, are equivalent to a given consequential benefit derived from such use, such as improved island biodiversity or reduced human health risks? This book, unfortunately, does not help us here. Nevertheless, this is an area where we might expect real progress in the future, especially through developing objective measures of such welfare costs. Indeed, attaining objective bases for cost/benefit assessments is going to be increasingly needed to justify many wildlife management practices, particularly lethal population control, against the background of increased concern regarding animal welfare and the environment. The way forward, as clearly illustrated by this volume, is to ensure that management is rooted in sound ecological and economic principles, offering better value for stakeholders of wildlife management issues but with better and much more transparent justification from animal welfare and environmental perspectives. This book is a major step forward but there is still some way to go to realising these ambitions and animal welfare issues need be at the core of future improvements in our understanding.

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