

and practices implemented on both public and private lands are analysed. The book includes chapters dealing specifically with man and wildlife, principles of wildlife biology, endangered species, species management, environmental impact assessment, socioeconomic issues, management approaches, legislation, and jurisdiction. The authors recognise the immense challenges that wildlife biologists must overcome in society as the spokespeople for wildlife, the custodians of a variety of public interests, and as key elements in the decision-making process regarding land use. The authors also stress that in order to effectively meet this demanding role, basic knowledge of wildlife species and their biological requirements, as well as consummate skill in people management, are required.

This third edition updates the 1992 version and includes new chapters on Native American land claims and rights, wildlife resources, and the effects of parasites and diseases on wildlife populations (mainly a list of diseases with brief descriptions). The organisation of the book is unusual in terms of how the chapters are linked together, and the overall impression is of a collection of subjects rather than a logical conceptual framework. This point is relevant, since the title of the book refers to the philosophy and practice of wildlife management. However, although the structure and organisation of the book is not the best, the authors have achieved a very precise and enjoyable account of the main ideas and examples.

The authors approach the philosophy of wildlife management by using examples combined with detailed descriptions about legislation, organisations and policies developed in North America and in some cases elsewhere. The inclusion of a chapter dedicated to environmental impact assessment provides a good introduction to the principles regarding assessing impact, but in this case with little description of examples.

The contribution of this book to the progress of wildlife management, conservation and animal welfare science is almost nonexistent. The brief mentions of animal behaviour in chapter three (describing some of the biological bases for and approaches to management), and of humane trapping in chapter nine, are not thorough enough for this book to be considered a contribution that will bridge the gap between wildlife management and animal welfare science. This is, however, a good introductory book for those who wish to know more about wildlife management practice in North America.

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Equine Dentistry

Edited by G J Baker and J Easley (1999). Published by W B Saunders, an imprint of Harcourt Brace and Company Ltd, 24–28 Oval Road, London NW1 7DX, UK. Distributed by Harcourt Publishers Ltd, Foots Cray High Street, Sidcup, Kent DA14 5HP, UK. 271 pp. Hardback (ISBN 0 7020 23922). Price £63.95.

Few could argue that the well-being of horses is seriously compromised in the face of neglected oral health. During much of the twentieth century, the veterinary profession had little to be proud of in relation to the prevention and management of equine dental diseases in terms of education and clinical practice. There seemed little appetite for the physical tedium of rasping the teeth of endless rows of horses, and the subject fell into decay. The reviewer has a vivid and yet typical recollection of life as an assistant in equine practice 30 years ago, and specifically of a request from a senior partner to vaccinate 40 horses in a livery yard “and while you are there can you ‘do’ the teeth”. Approximately three hours was allowed for this dual assignment and a single blunt rusty rasp was made available!

The publication of a standard text on equine dentistry could not have been more timely because the veterinary profession began to rediscover the subject during the last decade of the second millennium with what amounted to fundamentalist fervour. To some extent, the renewed interest at the general practice level has been driven by the perceived infringement of unqualified equine dental technicians — ‘horse dentists’ — onto the territory of the veterinary surgeon. A vacuum had existed both in North America and in Europe which had been partly filled by the itinerant ‘horse dentists’ with varying degrees of technical expertise but often precious little knowledge of oral pathology in the species. Conversely, the appliance of science to equine dentistry had concurrently begun to take off. For example, during the last two years of the millennium, more articles were published on dental topics in the *Equine Veterinary Journal/Equine Veterinary Education* than had appeared in the entire previous history of these journals.

Horses have evolved as highly specialised grazing animals whose only defences against predators are good eyesight, speed in retreat and the ability to kick. The anatomy of the head reflects these requirements as it is shaped to accommodate eyes to provide a wide field of vision and the equipment with which toprehend and masticate an herbivorous diet. In natural conditions horses spend up to 10 hours per day grazing, but stabled horses, particularly those engaged in athletic sports, are often fed large quantities of concentrated low-fibre rations which may compromise digestion as a whole and dental function in particular. Poor oral health, and specifically dental disease, has a major detrimental influence on the well-being of both domesticated and feral horses, and frequently compromises the longevity of individual members of the species. Some dental disorders, most typically periodontitis, are extremely painful to horses. Thus, there are compelling reasons why veterinary surgeons in clinical practice should seek to improve their understanding of dental diseases and also their techniques for intra-oral diagnosis and treatment.

Equine Dentistry is a multi-authored book bringing together a group of leading lights in the field. The result is an authoritative, well-illustrated and clearly presented volume. Coloured page margins help to navigate the reader through the four major sections — morphology of teeth; dental disease and pathology; diagnosis of dental disorders; and treatment of dental diseases. The individual chapters are followed by a comprehensive list of references for those who wish to pursue a topic further, but these are not always accurately cited. A solid foundation is laid with descriptions of the gross and ultrastructural anatomy of equine teeth followed by a review of masticatory function. The chapter on aging by dentition is detailed and even highlights differences which exist in the rate of attrition of the incisor teeth between breeds. The casual reader might be tempted to overlook the conclusion that the technique of aging by dentition can, at best, provide no more than an informed guess at the age of an individual horse and that malpractice litigation can arise when a dogmatic approach is taken and when the age of a horse is given without qualification.

The section on dental disease and pathology follows the traditional headings of disorders of development and eruption; abnormalities of wear; gingival and periodontal disorders; dental decay and endodontic disease; oral trauma; and oral and dental neoplasia. The reviewer has some sympathy with the authors of the latter two chapters because it is difficult to present a subject in a logical fashion when no two clinical presentations are the same and when cases of oral neoplasia are so rare that reports in the literature almost invariably consist of descriptions of single afflicted horses. It does not help that the terminology of odontogenic neoplasia is impossibly complicated.

There are major strengths in this book and for many readers the sections dealing with the 'hands on' aspects of dental and oral diagnosis, instrumentation and routine preventative dentistry will be particularly appealing. The importance of a detailed oral examination is justifiably emphasised whether it be for a routine pre-purchase evaluation or for the investigation of a dysphagic patient, and the virtues of charting the findings onto a standard report form for continuous assessment are duly noted. The illustrations in the chapter on dental imaging have reproduced surprisingly well but it is a shame that the orientation of the pictures is not consistent and that established conventions have not always been applied (ie nose to the left for lateral projections, nose to the top of the page for ventro-dorsal views). Thank goodness that we have moved on from the days of the single rusty rasp and there is an abundance of good advice in *Equine Dentistry* on the equipment required both for routine maintenance procedures, such as attention to enamel points and hooks, and for more advanced procedures such as the extraction of cheek teeth. The extraction of an equine molar or premolar tooth is always a formidable undertaking with the potential for major short- and long-term complications. Quite rightly, the authors recommend that, when required, it is preferable to attempt forceps extraction of a cheek tooth in the standing horse under sedation, and so there are detailed descriptions of techniques which were first introduced over a century ago and which have been revived and refined. One of the few weak areas in this otherwise excellent text is the account of the techniques for surgical extraction of cheek teeth. For most readers, these are procedures which are not frequently required in everyday practice and they are best avoided by the inexperienced. The recommendation to use buccotomy for the extraction of the fourth and fifth upper cheek teeth is bizarre because it takes no account of the near certainty that the buccal branches of the facial nerve will be disrupted during the approach, of the limited access which arises through the thick masseter muscle, and of the deep masseteric vasculature.

It has been stated above that equine dentistry is a rapidly expanding field of clinical scientific endeavour and the editing authors have the humility to recognise this in their preface to *Equine Dentistry* by describing their offering as a 'work in progress'. Established concepts are constantly being brought into question but there is not yet any reason for major revision of the content. The primary stated objective of the editors of *Equine Dentistry* is to enhance the care and consideration of horses — not the veterinary profession or clinical science, but horses. Let us raise our glasses to that, because there are many valuable lessons available through this fine text which can make huge contributions to the quality of life and length of life of our equine patients.

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