

- of equine protease inhibitor. *Animal Genetics* 25: 363–364
12. Juneja R K, Gahne B, Sandberg K 1978 Genetic polymorphism of the Vitamin D binding protein and other post-albumin protein in horse serum. *Animal Blood Groups and Biochemical Genetics* 9: 29–36
 13. Luikart G, Allendorf F W, Cornuit J M, Sherwin W B 1998 Distortion of allele frequency distributions provides a test for recent population bottlenecks. *Journal of Heredity* 89: 238–247
 14. Nei M 1978 Estimation of average heterozygosity and genetic distance from a small number of individuals. *Genetics* 89: 583–590
 15. Nei M, Tajima F, Tateno Y 1983 Accuracy of estimated phylogenetic trees from molecular data. *Journal of Molecular Evolution* 19: 153–170
 16. Pollitt C C, Bell T K 1980 Protease inhibitor system in horses. Classification and detection of a new allele. *Animal Blood Groups and Biochemical Genetics* 11: 235–244
 17. Rogers J S 1972 Measures of genetic similarity and genetic distance. *Studies in Genetics VII. University of Texas Publication* 7213: 145–153
 18. Rutherford M C, Westfall R H 1986 Biomes of South Africa – an objective categorization. *Memoirs of the Botanical Survey of South Africa* No. 54. Government Printer, Pretoria
 19. Sandberg K 1974 Blood typing of horses: current status and application to the identification problems. In *Proceedings of the 1st World Congress of Genetics Applied to Livestock Production, Madrid, 7–11 October 1974*: 253–265
 20. Stormont C, Suzuki Y 1964 Genetic polymorphism of blood groups in horses. *Genetics* 50: 915–929
 21. Stormont C, Suzuki Y, Rhode E A 1964 Serology of horse blood groups. *Cornell Veterinarian* 54: 439–452
 22. Van der Merwe F J 1984 *Notes on a herd of wild horses in the Namib Desert*. Department of Agriculture, South Africa

Book review — Boekresensie

A guide to canine and feline orthopaedic surgery (4th edition)

H R Denny and S J Butterworth

2000. Blackwell Science, Oxford, 634 pp., hardcover. £55.00. ISBN 0 632 05103 5.

The first edition of this book was published in 1980 and comprised 184 pages. Subsequent editions have been expanded over the years, and the 4th edition now comprises 634 pages. The consistently stated aim of all 4 editions was to provide students and practitioners with a rapid reference guide to small animal orthopaedic surgery, including the recent advances in the field. In this edition, the authors also suggest that the book should allow veterinary practitioners to diagnose and treat most orthopaedic and spinal problems encountered in general practice, and provide a 'sound basis' for postgraduate students. It is with these aims in mind that this book was reviewed.

The first, general section comprises chapters on topics germane to the later chapters (for example, fracture healing, bone grafts and osteochondrosis). The following 2 sections cover joint disease and fracture management, and provide the background information and principles required to diagnose and treat specific conditions. The 3 sections that follow deal with these conditions by region, namely, the skull and spine, the fore- and the hind limbs. The last section covers a variety of miscellaneous conditions, including bone neoplasia, myopathies and non-nutritional bone diseases.

In general, the text is clear and concise, well-indexed and cross-referenced. The content, although often appropriate to the book's stated aims, often lacks balance. For example, the section on total hip replacement (a technically difficult procedure, generally not the province of an average (private) practitioner) is 6 pages long and quite detailed. On the other hand, there are important topics that are dealt with rather superficially. Examples include the pathogenesis of osteochondrosis and osteoarthritis, the initial evaluation/assessment of the fracture patient, the anatomy and assessment of the peripheral nervous system pertaining to the limbs, the biomechanics of spinal fractures, the description of sacral fractures, and the technique and limitations of cerclage wire. There is also scant information regarding the post-operative management and support of patients, especially regarding the important issues of analgesia, antimicrobial therapy and physical therapy.

In the chapter on osteochondrosis, the authors intimate that ununited medial epicondyle of the humerus and fragmentation of the caudal glenoid rim are 'common or well-recognised' manifestations of osteochondrosis. The former is certainly not common in South Africa, and attributing the development of both of these conditions to osteochondrosis is rather controversial. The authors offer no information or recommendations regarding screening tests and breeding practices to reduce the incidence of this condition, for example those provided by the International Elbow Working Group, and now well established in Europe.

The 3 regional sections are generally well written, succinct and accurate, and provide the reader with the necessary theoretical information to understand the conditions mentioned. The authors show clear preference for certain procedures, which, given their accumulated experience, will be of great value to practitioners. The authors also provide useful hints, often omitted from standard surgical texts, which may significantly simplify a procedure. Many of the chapters start with a list of differential diagnoses or conditions that provide a reference system for easy access to the rest of the chapter. I believe that these should have been page-referenced as an additional aid for the reader to negotiate the text.

The chapter on the skull is particularly disappointing. There is no information on the biomechanics of mandibular fractures, especially related to their relative stability. These principles, as well as the relevant anatomy of the region, could easily have been illustrated. There is also no information on the differences in the nature of fractures in the dog and cat. There is little advice offered on decision-making, for example, the role of teeth within the fracture line or the most appropriate treatment for various fracture patterns. Some of the most commonly-performed techniques, for example interfragmentary wiring and tape muzzling, are poorly or inadequately described and illustrated. Some of the described techniques are generally recognised as poor, or at the least controversial. These include transramal (transmandibular) pinning and lag screw techniques, and the extraction of teeth to correct malocclusion. There is no mention of specific post-operative complications associated with fracture repair in this region and scant information on the often-difficult after-care of these patients.

There are a number of errors in the terminology that detract from the scientific accuracy of an otherwise well-written text. These include 'Vaulkmann' canal (Volkman's canal), 'Howship' lacuna (Howship's lacuna), 'Mitchel' trephine (Michelle trephine), 'conjugal' ligament (intercapital ligament) and 'horizontal and vertical ramus' (body/corpus and ramus) of the mandible. There are also a few factually incorrect statements, for example that dermoid 'cyst' (sinus) is an 'infolding of skin'.

My greatest reservation regarding this book is, however, related to the quality of the illustrations and photographs and the often inadequate or confusing annotations. Unfortunately the majority of these are poor; some are so poor that they cannot be interpreted at all (Figs 13.2, 13.21, 15.5, 19.4, 22.3, 24.8), while others are confusing/misleading (Figs 1.3, 9.1, 26.6, 28.1). Some illustrations are drawn so amateurishly that they are almost cartoon-like in character (Figs 16.7, 19.2). With the availability of first-class illustrators and computer-generated graphics, this deficiency is unacceptable. The success of surgical textbooks hinges on the quality of their illustrations, as the surgery 'message' is usually a visual one. If one considers the number of surgical textbooks with truly excellent illustrations, this book measures up very poorly.

The book is well referenced, although there are a number of references from the 1960's and 1970's that could probably have been replaced by more up to date work. It is unfortunate that the authors used few review articles as references in the suggested reading sections, as these are particularly useful to the busy practitioner.

In conclusion, *A guide to canine and feline orthopaedic surgery* sets out to cover a massive field in veterinary practice and I believe that it is partially successful. I do not, however, believe that it has convincingly accomplished its aim of providing practitioners with the information to 'treat most orthopaedic and spinal problems', as the illustrations and descriptions of surgical approaches are often inadequate. Most practitioners would require additional texts on anatomy and surgical approaches. If I were a practitioner in the market for a surgical guide, this would not be my first choice.

N E Lambrechts
Faculty of Veterinary Science
University of Pretoria