

*The Management of Enclosed and Domesticated Deer*. John Fletcher, editor. Springer Nature, Cham, Switzerland. 2022, 447 pages, DOI <https://doi.org/10.1007/978-3-031-05386-3>. Price £89.99 (hardback). See also <https://link.springer.com/book/10.1007/978-3-031-05386-3>

This substantial book has been brought together by John Fletcher as the editor. It draws on his extensive experience gained from decades of working in (red) deer farming and advising people on how to run a deer farm for venison and on breeding red deer. He has worked with many people with interests in enclosed deer from across the world and this is reflected in the extensive list of international authors. He helped to establish the British Veterinary Deer Society (VDS- now called the British Deer Veterinary Association) and the British Deer Farms Association – now the British Deer Farms & Parks Association. He has written several books about deer including *Gardens of Earthly Delight – the history of deer parks* (2011).

In his extensive introductory chapter John explains that he wants to publicise the ways in which deer are farmed and to let the reader decide for themselves whether farmed deer are truly domesticated. Furthermore, he seeks to raise awareness of the diversity of husbandry systems applied to enclosed deer across the world, to improve the welfare of these deer and especially, if it is at least partly effective, in preventing deer being treated as vermin. The book does not aim to cover deer species managed in zoological collections. The book has the subtitle “International Husbandry Systems and Diseases” which neatly covers the intended aim.

This book will be of interest and valuable for veterinary surgeons, deer park managers, deer farmers and students of agriculture and veterinary science.

The book is divided into six parts which cover New Zealand, Europe (Austria, Belgium, France, Hungary, Latvia, the Netherlands, Poland, Slovakia, Spain, Switzerland and the UK), North America (including elk farms), the Russian Federation, China and Part six is about reindeer (in Fennoscandia).

The authors include Sergey Aliskerov, Paul Audenaerde, Julianna Bokor, Michael Bringans, Bartłomiej Dmuchowski, Bruce Friedel, Peter Green, Juergen Laban, Colin Mackintosh, Janos Nagy, Ingebjørg Helena Nymo, Dainis Paeglitis, Tony Pearse, Jaroslav Pokorádi, Jan Åge Riseth, Javier Sánchez Romano, Alan Sneddon, Callum Thomson, Ian Thorleifson, Morten Tryland and Murray Woodbury.

Part 1 of the book is devoted to the large, successful and innovative deer industry based in New Zealand and three chapters provide a highly detailed appraisal of the importance of velvet; farm management and diseases of farmed red and wapiti deer.

With particular reference to the situation in the UK, Part 2 has chapters entitled as follows “Husbandry Systems for Farmed Red Deer in Britain” (Alan Sneddon); “Managing a Traditional English Deer Park: A First-Hand Account” (Callum Thomson); “Management, Diseases and Treatment of Deer in UK Deer Parks” and “Alternatives to Culling in Deer Parks” (both by Peter Green).

From a disease perspective the first two Parts include detailed descriptions of bovine tuberculosis, Johne’s disease (paratuberculosis), yersiniosis, leptospirosis (New Zealand), fusobacteriosis, clostridial diseases, Malignant Catarrhal Fever, parapox (ecthyma/orf), parasites including

lungworm, gastrointestinal nematodes and liver fluke; ticks, cryptosporidiosis and trace element deficiencies (copper and selenium). In New Zealand there is facial eczema and the brain worm *Elaphostrongylus*. In British park deer, in addition to those given above, particular conditions discussed include winter die-off syndrome, capture myopathy, ruminal acidosis and feed station death, also pasteurellosis. Many of these conditions are touched upon in subsequent chapters for deer kept in other countries.

The chapters in Parts 3-5 include substantial detailed coverage of the management of enclosed deer in Hungary, North America and Russia; including a detailed account of elk farming and coverage of the manipulation of breeding, including embryo transfer, in white tailed and mule deer.

Part 6 and the chapter on reindeer builds on and refers to the substantial textbook edited by Morten Tryland and Susan Kutz (2018) *Reindeer and Caribou: Health and Disease*. CRC Press, Boca Raton, FL, USA. <https://doi.org/10.1201/9780429489617>. The chapter herein covers a variety of diseases associated with feeding, including grass accumulation, ruminal acidosis, diarrhoea, ruminal tympani and wet belly. A variety of diseases have threatened reindeer in the past and may do in the future – particularly where there are increased densities of deer which are being put under stress. These diseases may include infectious keratoconjunctivitis, parapox, necrobacillosis and pasteurellosis. Changes in climate may increase the risks for anthrax, arthropod borne disease and the brain worm *Elaphostrongylus*. The most significant new and emerging condition that threatens reindeer in Fennoscandia is chronic wasting disease (CWD).

Each chapter starts with a short abstract and keywords; there are references at the end of the chapter and these are limited to extensive in number. There does not appear to be an index – so each chapter is an independent entry. If the reader wanted to explore the topic of, say, farming for antler velvet, they would need to peruse the chapters covering this topic for China, New Zealand, North America (for red and elk), Russia and Spain. Alternatively, one could use a search tool when viewing the whole book online.

The book is well-illustrated with numerous photographs and diagrams. A few of the images could have been given a more detailed legend to help the reader appreciate what is being illustrated.

This book will be a major standard reference point for future publications about enclosed deer for many years. The international coverage – in depth and breadth of the chapters - should make this a popular book for readers across the deer world for some time to come. My congratulations to the editor and the many authors for sharing their enthusiasm and knowledge about deer.

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