

tive ability and even patience, self-restraint and trust. A general reader, however, may not be aware that many animals co-operate when finding food, and use different techniques according to the situation, including some species of fish (in the case of yellowtails [*Seriola lalandei*] it has been reported that specific roles are taken on during hunting, just as with dolphins). The realisation that the abilities demonstrated by dolphins are perhaps not so unique could well affect someone's views.

Despite these reservations, this remains an interesting read which raises some important issues regarding the way we view other species. Certainly, we should think carefully about how we treat animals we see as being intelligent and apply ethical and humane treatment not just to dolphins but also to other species that we affect directly or indirectly.

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Introduction to Veterinary and Comparative Forensic Medicine

JE Cooper and ME Cooper (2007). Published by Blackwell Publishing, Abingdon, Oxford OX14 4YN, UK. 415 pp Hardback (ISBN 978-1-4051-1101-0). Price £59.99.

The authors' motivation to write this book, as revealed in the preface, came from their awareness of how badly veterinarians need to have easily-accessible information regarding "the principles and practice of forensic science and its applicability to work with animals". It is clear that the authors kept this objective in mind and achieved their goal with the publication of *Introduction to Veterinary and Comparative Forensic Medicine*.

The authors, JE Cooper and ME Cooper, are both from the UK. This well-travelled and internationally-renowned couple definitely make the perfect team to produce a book on veterinary forensic science. John is a veterinary surgeon and a recognised expert in the wide international arena of comparative medicine, wildlife and exotic pets, and forensic science. Margaret is a lawyer, dedicated to the field of conservation and animal-related issues and how these relate to the law. Their lifetime experience and dedication to work on forensics and wildlife is reflected in the pages of this text.

This book is directed primarily at veterinarians and I would also strongly recommend it to veterinary students as it will make them aware of their potential role, later in life, if ever called upon to give evidence on investigations on cases of crime, animal welfare and abuse or cruelty. *Introduction to Veterinary and Comparative Forensic Medicine* will also appeal to the non-specialist, including anyone with an interest in animal welfare. The uncomplicated language, with rare use of technical jargon, the easy flow of text, the short sections and the synthesis of information in tables and figures — adding clarity to the interrelation of concepts — make this book easily comprehensible.

The information in the book is biased, to a certain extent, towards examples and situations pertinent to the UK. For

example, there are references to UK insurance rules, the Guide to Professional Conduct of the Royal College of Veterinary Surgeons and UK laws. However, international references and examples are not missing. Indeed, plenty of discussion is dedicated to particular situations, cultures, ways of thinking and attitudes towards animals in many parts of the world. The efforts to appeal to international readers are reflected in the unusual feature of including tables with examples of different meanings, spellings and medical terminology in UK/European and American English.

The book is well constructed and clearly printed. The front cover has an elegant design of earth-tone coloured photographs that clearly imply detective and forensic work. The general outline includes 13 chapters organised into parts A (Introduction), B (Welfare and conservation) and C (Methodology). Seven appendices constitute part D, a collection of various types of information and case studies. Black and white photographs, mostly 50 mm by 70 mm, are numerous and fulfil the purpose of adorning the pages. Many of them, however, are not really necessary or informative. Several photographs are shown twice, in black and white in the text and then again, the same photograph, in colour plates. These colour plates are more selective and include 48 good quality and informative photographs. A few cartoons, which are really good fun, are also included in the text. Of great value is the comprehensive list of international references, which is extremely up-to-date and also includes items published centuries ago. It contains nearly 1,000 publications and certainly provides the reader with the necessary tools to find information on a variety of topics related to forensic medicine and animal welfare. The index of the book is complete and well organised.

In part A, the authors introduce and define forensic medicine. Multidisciplinary aspects and the varied applications, including non-legal aspects, are addressed. Chapter 1 deals mostly with human forensics, while chapter 2 delivers a mixture of concepts and features that reveal the wide spectrum of applications of forensic medicine including, environmental, conservation and animal welfare. UFAW is mentioned (p 45) as one of the first organisations to study the welfare implications of the approach of different religions to animals.

Animal welfare remains in focus throughout the book and a section explains animal welfare legislation in general terms (pp 51–53). Furthermore, the start of chapter 3, on animal law, quotes: "No man shall exercise any Tyranny or Cruelty towards any brute Creature which are usuallie kept for man's use", from The Bodie of Liberties, Massachusetts Bay Colony, 1641.

Part B consists of two chapters dealing with animal welfare and conservation, and wildlife crime. The animal welfare chapter defines and elaborates upon the subjects of pain and stress and, briefly, the terms fear, shock and suffering. It also addresses in general terms: the difficulties of determining what constitutes unnecessary suffering, public attitudes towards animals, attitudes to animal welfare, investigation of welfare cases, welfare of wildlife and of animals kept and

used in different situations, eg sports, entertainment, exotic animals in captivity, shelters, etc. There is an interesting section on sentience in amphibians, reptiles, fish and invertebrates. Finally, methods of euthanasia are discussed and summarised in table form. The authors recommend the UFAW series as: “perhaps the best reference material” for “current thinking concerning welfare”.

Part C, on methodology, provides lists of methods and background information, such as regulations on euthanasia. Elaborating on the applications of these methods appears to be beyond the scope of this book. The animal welfare implications are once again addressed here. For instance, the chapter on clinical examination (chapter 6) includes sections on euthanasia, abuse of animals, sexual assaults, starvation, obesity, neglect, injuries and wounds and transportation. This part of the book also provides more detail about clinical work, pathology and post mortem examinations, and applications of various disciplines, such as forensic entomology, paleopathology, forensic odontology, and others. Different types of laboratory investigations are discussed. A table presents a comprehensive list of techniques/methods. Other topics in this section include site visits, fieldwork, record keeping, collation and analysis, storage, labelling and presentation of material. The chapter on ‘Serving as an expert and appearing in court’ (12), is clearly and concisely written, and is particularly useful for veterinarians as it fills a common gap in veterinary education. It also provides good advice on preparing to act as a veterinary expert witness. Abundant further reading for each subject in the text is provided.

Part D contributes practical help as it presents a collection of suggested formats of submission forms, certificates, expert witness reports, and other paperwork which all serve as documents in court. Although these are to be taken as examples mostly suitable to the UK, they provide suggestions and guidelines for other situations and countries. In line with the style of the rest of the book, comprehensive lists of societies, organisations, useful addresses, publications and sources of information are presented. There is also a glossary list which will be of particular interest to non-veterinarians. An appendix (D) shows 11 case studies as examples of applied forensic medicine and includes equipment lists and a table with a simple list of English and scientific names of several animal species. The code of practice of The Council for the Registration of Forensic Practitioners is reproduced in an appendix. Finally, a list of references and further reading is provided.

This volume is a pleasure to read. The layout is clear and consistent throughout all the chapters. Additional help is included via the glossary, the list of abbreviations and definitions. Tables and figures summarise and classify information. Some topics, though, are repeated under the various chapters and some figures are slightly oversimplified and may not be necessary as the contents are explained in the text.

Readers of *Introduction to Veterinary and Comparative Forensic Medicine* are provided with a profound insight into the general aspects and diversity of disciplines

involved in forensic medicine. This book provides general knowledge, guidelines, comments and simplified explanations of the various techniques involved but without elaborating on them in detail. It appears not to be the aim of this book to report any new data or provide specialised or detailed information on particular disciplines. Instead, plenty of references show the reader where to find further information on specific topics. This book not only informs but also stimulates thinking as it presents concepts from all points of view. In this way, it also helps widen the understanding of different cultures. This book serves the purpose of providing a comprehensive overview and, indeed, an excellent introduction to veterinary and comparative forensic medicine.

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Manual of Animal Technology

Edited by S Barnett (2007). Published by Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK. 440 pp Paperback (ISBN 978-06-3205-593-7). Price £49.50, €82.00.

The objective of writing a manual covering topics of importance to technical staff in laboratory animal facilities is good and worthwhile. It is a pity, however, that this book seems to have had such a long gestation period as the majority of the references are outdated (some seem to be updated only up to 1995). Up-to-date topics such as environmental enrichment and the revised CoE appendix A are hardly mentioned. Some chapters are overloaded with information that is overly specialised while others are lacking important items; the result being that contents come across as unbalanced.

The book contains 42 chapters and one appendix. Chapter 1 deals with the supply and production of protected animals and describes different breeding systems and record keeping.

Chapters 2–13 are the chapters on specific species: mouse, rat, hamster, Guinea pig, rabbit, ferret, cat, dog, marmoset, old world primates (with focus on *Cynomolgus* spp and Rhesus macaques), zebrafish and *Xenopus* spp. Unfortunately, pictures of handling and sexing (useful for the target group) are missing. The information is inconsistent, eg it is mentioned that rats can develop stereotypies when individually housed but, in the following chapter, the same case is not made for mice despite the fact that mice show stereotypies more frequently. In the Guinea pig chapter it is advised to cover the top cages in the rack to protect albino animals from excess light but this should apply to all albino animals such as mice and rats.

The warning for damage to the ear due to fighting, thereby making ear punching invalid for identification, is mentioned only in the rat chapter whereas mice fight even more than rats.

The chapters on marmosets and old world primates are fine, mentioning the importance of training animals to co-operate in procedures and the need for environmental enrichment.

It is refreshing to see that attention has been paid to zebrafish as their usage is steadily on the increase. The