

The final part of the book is titled 'Bioethics in practice'. This is perhaps a little misleading as, to its credit, a great deal of the rest of the book is about bioethics in practice. However, few readers are likely to be confused. This part of the book looks at risk (including risk assessment, risk management and risk communication), the Precautionary Principle (including a useful section on international differences in interpreting the Precautionary Principle – PP to Mepham), trust, politics (which I rather wish I had read many years ago!), the public understanding of science and a final chapter that looks at the ethical issues that confront scientists and others engaged in the practice of science.

The book is accompanied by regular student updates on Oxford University Press's website and there is a Password-protected section for lecturers who adopt the book. Even without these features, £21.99 seems good value for a book of this length and quality.

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### **Bovine Surgery and Lameness, 2nd Edition**

AD Weaver, G St Jean and A Steiner (2005). Published by Blackwell Publishing Ltd, Oxford OX4 2DQ, UK. 269 pp Paperback (ISBN 1 4051 2382 6). Price £32.50.

This book is a welcome update in the field of bovine surgery and lameness and provides a practical and pragmatic approach to the subject area. On the back cover, apart from welcoming the two new authors, it states: "Special attention is given to issues relating to perioperative analgesia and animal welfare, food safety, and drug dosages". It seemed reasonable, therefore, to expect some welfare directed comment and concern.

The layout is in seven chapters, each concentrating on a specific area and each chapter is easily described and supported with clear diagrams and tables helping the clinician make his/her decision on materials, approach and supportive treatments and to realise the potential problems each technique may bring to bear.

In the preface to the 1985 edition Weaver writes: "Animal welfare considerations are becoming increasingly important in many countries... Responsibility rests with the veterinarian". In the preface to the second edition: "More emphasis is placed on animal welfare, for example, in suggestions for perioperative analgesia and anti-inflammatory medication... each veterinarian has his or her own preferences". Thus the overall aim has been to provide a handy reference book and a valuable and practical tool in daily practice.

The last part has been achieved and all cattle practices and mixed practices would benefit from having this book in their library. It will see frequent use. That alone might improve welfare through improved technique, better asepsis and sterility and sensible use of prophylactic antimicrobials as well as good anaesthetic and analgesic routines.

The introductory chapter and the two chapters on abdominal surgery and lameness occupy most of the print, comprising 178 out of 258 pages of text. A quick search on welfare and pain and behaviour in the index reveals one solitary mention for welfare on page 54. In the text this is mentioned in passing. However, chapter one deals extensively with assessment, premedication, sedation, anaesthesia and other drug therapies; the impact of which must be to lift the standard of bovine surgery and thereby enhance welfare. This theme is continued through until the final chapter on lameness.

Lameness is arguably the major welfare problem that faces the livestock industry from broiler chickens through to sheep production. The cattle industry recognises this problem and it is a depressing and unpalatable fact that the prevalence of lameness in dairy cattle remains at levels approaching 20%. This means that there has actually been an increase in the incidence of lameness over the last 25 years. It is telling that the chapter is broken down into subheadings of Incidence, Economic Importance and Terminology to introduce the subject but no separate consideration is made of the welfare implications or the effects of lameness. The check-lists for herd problems are a useful aide-memoire and most should already be included in the dairy veterinary herd health plan for the farm.

Does the fact that there is no specific consideration of welfare detract from this book? No, the scope of the book is more limited to the subject matter of the title and is true to its purpose. It will enhance welfare by improving understanding and technique rather than by facing the problems head-on.

The appendices round this useful volume off by providing references for further information along with useful contacts for instruments, supplies and professional bodies/associations. The authors have achieved their aims for this book but were perhaps overambitious in including the words "Special attention is given to issues relating to... animal welfare" on the jacket.

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### **Responsible Marine Aquaculture**

Edited by RR Stickney and JP McVey (2002). Published by CABI Publishing, Wallingford, Oxon, Oxford OX10 8DE, UK. 391 pp Hardback (ISBN 0 85199 604 3). Price £65.00.

This is a very timely and thoughtful book. It addresses most of the areas of genuine or pressure-group manufactured concern with regard to Marine Aquaculture which are currently aired in the technical or general media. Since aquaculture is the world's fastest growing food production sector, this is going to make it required reading across a very wide spectrum of interests. The final chapter, by Tiersch and Hargreaves, on sensible responses to environmental advocacy, should give food for thought to many media editors, not least those of previously highly respected peer-reviewed journals which have been less than exacting

in their attitude to critical anti-aquaculture research in recent years.

Thus this book addresses, reasonably and honestly, the sustainability challenge presented by aquaculture, its potential role in removing pressures on endangered species and indeed in reconstituting such populations, and the environmental effects, real and imagined, of different aquacultures.

What is missing, however, (and this may be due in some part to the fact that the book is primarily of North American origin) is that there is no chapter on Fish Welfare in the context of Marine Aquaculture, nor indeed any reference to the subject.

Fish have for too long been below the welfare horizon, or should it be the surface? They are vertebrates, with all of their nervous and receptor mechanisms associated with pain reception. However, their inability to vocalise and lack of facial muscles of expression, coupled with a living environment that appears alien to the casual observer, prevent them being adopted as a cause for concern as readily as terrestrial species. There is also the very long standing tradition in the capture fisheries sector of handling living fish, on capture, in ways that would be unacceptable for food species on land. In addition, there is a lack of understanding among the consuming population not only concerning the delicacy of their osmotic balance, but also their vulnerability to gravitational pressures out of water and the extreme delicacy of their skin. These all lead to a generalised lack of awareness of their needs.

The advent of fish farming, however, has begun to allow this very unsatisfactory situation to be redressed. Already in some major farming countries, humane slaughter, proper stocking densities and environmental controls apply. It is likely that this movement will be extended as the consumer begins to realise that fish is not just a commodity.

Whether the introduction of such welfare constraints to marine aquaculture will extend gradually to the hunter gatherer sector is difficult to foretell and it seems unlikely at present. However, as the controls on catch quotas increase and the supplies of wild caught fish continue to fall, capture fisheries will inevitably make less of a contribution to human diets.

This book, published at the beginning of the 21st century, addresses all of the considerations which are currently seen by consumers and advocacy bodies as being requirements for *Responsible Marine Aquaculture*. I am sure that it will not require a further hundred years for the need for welfare responsibilities within mariculture to also take their place in the portfolio of areas of concern, but it is important that this is realised sooner rather than later.

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### **Wildlife: Oil Spill Response**

Wildlife Information Network (2006). Issued by Wildpro<sup>®</sup> Multimedia, Wildlife Information Network (WIN), East Midland Zoological Society, Twycross, Warwickshire CV9 3PX, UK. Price £29.95. *Wildlife: Oil Response* is available to members of WIN on CD-ROM and via the Web-based encyclopaedia. For further information contact [info@wildlifeinformation.org](mailto:info@wildlifeinformation.org).

I'll start with a disclaimer of sorts. This isn't an easy item to review. Firstly, because it's a CD-ROM which lacks the linear nature of a textbook, it can't really be read in the same way as a book. Its strengths lie more in the accessibility of all the information contained within it; in any order, and by a variety of routes.

And *Oil Spill Response* uses that to generally good effect. Hypertext links allow one to navigate through the disc, exploring topics in more detail, and simply clicking onto related links and references. Moving backwards and forwards (and sideways) is simple, and saving or printing documents can be done as required, helping to overcome one of the difficulties of reading large amounts of text on computer screens, and improving the portability of the resource.

And, secondly, at least for the first year after purchase, one gets rather more than *Oil Spill Response*. WIN have produced a number of other CD-ROMs during the last few years, on predominantly wildlife topics, and the purchase of one is effectively a year-long subscription to the whole online library, with information updated constantly. Therefore one also has access to such diverse topics as 'West Nile Virus', 'Pain management in Ruminants' and 'Waterfowl: Health and Management' amongst others. Depending on one's particular interests, this online database may be the very reason for subscribing, or merely a bonus feature.

To return to a review of this specific volume, a resource on the subject of oil spills can be used as either (or both) a reference for general study of such a disaster, or as a field manual for dealing with one.

As regards the former, the format of a CD-ROM is ideal. It is possible to look up information quickly and easily, reading around the topic, and cross-referencing to other areas of related interest is practically automatic. This is particularly useful for such a multifactorial catastrophe as an oil-spill. Veterinary, as well as ornithological, conservation, health and safety, logistical and legal aspects need to be considered.

*Oil Spill Response* is very good at including all these issues within the text relating to a particular topic, but not so useful if one is looking at the broader picture. For example, the ethics and legality of wildlife rehabilitation are referred to in the text, but take some digging to find. In contrast, human health and safety considerations are neatly accessible from the title page. This illustrates one area where the full potential of such a format is not utilised; it would be a rela-