

There are many statements in the book that are controversial: it is the opinion of the reviewer that the recommendation if a cow is found flat out and blown up first thing in the morning, she should be rolled over on to her back and then on to her brisket, is a recipe for death by inhalation.

Some of the traditional medicaments recommended may well raise the eyebrows of the medicine licensing authorities, although this form of treatment should not be depreciated. If the current rate of loss of medicine licences continues there will be many occasions when we will need to resort to the so-called traditional remedies and perhaps this book may then be useful after all. While on the subject of medicines one cannot condone the use of dry cow intramammary preparations for the treatment of New Forest eye particularly as there is no shortage of specific eye creams and ointments.

It is difficult to see the market for this book. If one is looking for an informative illustrated book on cattle diseases there is much better value to be found on the bookshop shelves.

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Captive Invertebrates: A Guide to Their Biology and Husbandry

Fredric L Frye (1992). Krieger Publishing Company: Malabar, Florida. 160pp. Hardback. Obtainable from the publishers, PO Box 9542, Melbourne, FL 32902-9542, USA (ISBN 0 89464 555 2) Price US\$29.50.

In 1713 Alexander Pope wrote '*I cannot but believe a very good use might be made of the Fancy which children have for Birds and Insects.*'

The study of insects, spiders and other invertebrates has long been a popular and absorbing pastime in a number of countries, especially those in Britain. Interest in these animals has been largely prompted by curiosity and a desire to learn more about their natural history but those involved have often also made substantial and long-lasting contributions to science.

In the Introduction to the book Dr Frye describes his own childhood fascination for invertebrates. He points out that, despite some negative attitudes, many people share this enthusiasm. Insects and other invertebrates are popular in zoos and are likely to feature more in collections in future. Attention is also drawn to the role played by these animals in research and the enormous contribution made by some of them, such as bees, to human health and welfare. Dr Frye's own philosophy in so far as maintaining invertebrates in captivity as 'pets' or for private study is concerned is spelt out clearly: he advises against it. However, if they *are* to be kept, it is imperative that they are cared for properly.

The book consists of eight chapters, dealing in turn with Caging; Arachnids; Chilopods and Diplopods; Insects; Crustaceans; Pulmonates; Turbellarians, and Culture of Prey Species. Each group of animals is then considered under such headings as housing, nutrition, water, reproduction and medical disorders. There are excellent colour photographs of many species.

The body of the text is supplemented by an Appendix which comprises a list of Commercial Sources of Some Living Invertebrates (all based in the USA), a comprehensive Glossary of terms, several pages of Suggested Reading (European as well as North American), an Index of Scientific Names, Species of Arachnids Currently Available in the Pet Trade and a General Subject Index.

This volume is attractively produced, with a strong, hard cover, and is well written. It contains much useful information, some of it derived from published literature but most stemming from the author's own practical experience. The word 'welfare' does not feature in the Index and the only direct reference in the text that the reviewer could locate was in the Introduction, where Dr Frye states that *'The animal welfare movement has sharpened awareness that higher animals may not be necessary... for some areas of biomedical research or the teaching of biology. Today, invertebrates are taking their place in some of these activities'*. The sceptic who believes that all animals deserve consideration and compassion, whether or not they are blessed with a backbone, may argue that this volume will promote the exploitation of invertebrates: in that case, however, it will also encourage a sympathetic approach to these animals and stimulate awareness of the need to cater for their requirements in captivity. What the book lacks in terms of advice on humane techniques for handling, anaesthesia and euthanasia is, in the reviewer's opinion, very much balanced by its insistence on high standards of care. As such it will play an important part in promoting a sensitivity to those species that comprise 98 per cent of the animal kingdom but which are so often ignored or denigrated in discussion and debate on welfare issues.

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Now at
Volcano Veterinary Centre
Rwanda

Fourth European Symposium on Poultry Welfare Edinburgh, September 18th-21st 1993
Edited by C J Savory and B O Hughes (1993). UFAW: South Mimms. 318pp. Paperback. Obtainable from the publishers, 8 Hamilton Close, South Mimms, Potters Bar, Herts EN6 3QD, UK (ISBN 0 900767 83 9) Price £10 including postage.

This proceedings volume contains forty-one papers, nineteen of which are listed as 'Free Papers', and the text of twenty-two posters presented at the symposium. The papers are categorized into the following sections: Basic Biology and Welfare; Welfare Criteria in Alternative Housing Systems; Welfare of Turkeys, Waterfowl and Other Species, and finally Welfare of Broiler Stock. The topics presented in the Basic Biology and Welfare section are widespread, suggesting that this section is something of a catch-all, containing those papers which do not easily fall into the other categories. Also, the papers appear somewhat specialized for a 'basic' section. Topics covered include early experience and adaption (of Muscovy ducks); stereotyped pecking behaviour; light perception and 'visual ecology'; hypothalamic regulation of fluid balance, and voluntary regulation of food intake.

The Welfare Criteria in Alternative Housing Systems section contains papers on behaviour as an indicator of welfare in various systems; health of laying hens in alternative systems in practice; experimental studies on the health of laying hens in relation to housing systems; air