

sound advice on transportation (eg conditioning, transport containers, social groupings, feeding and watering, post-move monitoring), much of which stems from the authors' research on the welfare implications of transport and re-housing.

The order Primates is diverse, so it is difficult to produce a handbook that covers all species or genera. However, given the number of common marmosets used in UK laboratories, and the number of callitrichids (marmosets and tamarins) and apes kept in zoological collections worldwide, it is an omission for this book not to include more information on the behaviour, husbandry and welfare of these primates. Also, for those working in a zoo setting, information on important issues is missing. A book truly aimed at the zoological community should include issues such as the management of genetic diversity, surplus animals (particularly males), mixed-species exhibits, the influence of visitors and legislation relevant to zoos (eg Zoo Licensing Act 1981; Council Directive 1999/22/EC; Department of the Environment, Transport and the Regions Secretary of State's Standards of Modern Zoo Practice 2000)

On the whole, this book is a good single source of useful information on primate husbandry with clear relevance to animal welfare. The authors are to be congratulated on producing a resource that complements the existing literature, stimulates discussion and encourages progression in primate husbandry towards a better future for primates. I recommend this book to all who have responsibility for the husbandry and welfare of captive primates, including managers of research facilities and zoos, veterinarians, scientific investigators and animal care staff. However, despite the promotional information on the back cover, the book should not be regarded as a completely comprehensive guide to the practicalities, issues and precise methodologies related to good husbandry and management of primates.

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Laboratory Animal Medicine: Principles and Procedures

M Sirois (2004). Published by Elsevier Mosby, 11830 Westline Industrial Drive, St Louis, Missouri 63146, USA. 320 pp Paperback (ISBN 0 3230 1944 7). Price £23.99.

This book comes in a good handy size and would fit nicely on a facility's bookshelf or work bench. The book is targeted at veterinary technicians and laboratory animal technicians. There is wealth of hands-on information and the author is obviously a very experienced veterinary technician.

The book is divided into three sections. The first section gives a very worthwhile overview of the background relating to working with research animals. The emphasis is North American, but the brief synopsis of the moral and ethical positions is precise, to the point, and conveys a sense of the complex social and ethical environment in which animal based research is performed. There are very concise and clear descriptions of the various environmental factors that need to be controlled and the type of caging material used, although the references to wire-mesh floors could do with some qualitative comment on the acceptability of them within current animal welfare standards.

The second section deals with common laboratory species individually: rats, mice, rabbits, gerbils, hamsters, ferrets, NHPs (non-human primates) and non-traditional species (eg chinchillas, woodchucks, armadillos). The format is very useful for a student as it gives the study objectives at the start of the chapter and revision questions at the end. However, the sections on safety and the control of environments make only a passing comment on the problems associated with laboratory animal allergy, and with the current concerns about safety in the work place I would have expected some more discussion about the benefits of working with filtered air systems, such as individually ventilated racks and systems, which reduce exposure to animal allergens.

This section also has many references to the treatment and handling of pet animals in veterinary clinics, but I am not sure if this is useful because the two target audiences, veterinary technicians and laboratory animal technicians, are very different, with different treatment requirements. The husbandry aspirations of the animal carers also have a different emphasis. Although the welfare of each individual animal is always important, the treatment options in a veterinary clinic are different from those in a laboratory setting. For example, it would be unusual for clinician to euthanase an animal showing pinworms in a veterinary clinic, but this would be a serious consideration if this condition was diagnosed in a specific pathogen-free barrier unit.

Laboratory animal medicine, while respecting all welfare aspects relating to the individual animal, is concerned with 'herd health' and the impact of the individual on the group, whereas companion animal medicine has a different perspective, relating to the social interaction of the individual animal within a human framework.

There is also information on diseases for each species, but very little attention is drawn to the fact that by and large

these diseases are not seen on a regular basis in modern facilities. Diagnosis of these diseases would normally be the remit of the facility veterinarian. Although the zoonotic potential of these diseases is mentioned in passing, a section on the concept of zoonotic diseases would have been more useful. Furthermore, an introduction to health monitoring schemes would have added considerably to the usefulness of the book, as many of the health monitoring programmes will be run by veterinary technicians and laboratory animal technicians under the direction of the veterinarian.

I am not a great fan of black and white photographs; however, they can be very effective if they are clear. Although obtaining good photographs of individual diseases can be difficult, there is very little excuse for poor quality 'set piece' photographs, such as the one of a mouse being 'scruffed' on page 95. However, many of the photographs are excellent and show important husbandry issues, such as the de-gloving injury that is common when gerbils are handled badly. In modern laboratory animal husbandry, it has become customary to expect animals to be handled with gloves, both for hygienic purposes and, mostly, as an additional safeguard to prevent contamination of specific pathogen-free animals within a barrier environment; photographs should reflect this practice. Within the book there is an inconsistent approach to the practice of handling animals with gloves. Some of the standard procedures mentioned, such as toe clipping for blood sampling and identification, would not be regarded as standard within Europe. Husbandry specifications differ between Europe and the US, so for a European reader some of the references to cage sizes etc should be cross checked against European Guidelines.

The third section concentrates on learning programmes for handling and performing common procedures. These are very useful exercises, but other than handling exercises, they are effectively practicing procedures on living animals, which would not be permissible within the UK except under a project licence. But within these constraints they are a useful aid to teaching handling and techniques, and use a common check list to ensure training had been achieved.

In conclusion this is a very useful addition to a library, but I would not have considered it my first choice of book in this subject area.

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Do Animals Have Rights?

A Hills (2005). Published by Icon Books Ltd, The Old Dairy, Brook Road, Thriplow, Cambridge SG8 7RG, UK. 256 pp Paperback (ISBN 1 84046 623 5). Price £7.99.

Despite its title, this book deals with more than the philosophical question of whether animals are holders of rights. In an accessible language and a manageable format, the author addresses the question of how humans ought to treat other animals. The author is a lecturer in philosophy at Bristol University, and her own position in the animal ethics debate is made clear in the introduction; she defends a

moderate view (p 2) and argues for a moral status for all sentient animals (p 4).

The book has three different sections. The first two sections, 'Animal Minds' and 'All Animals are Equal...?', deal with the fundamental questions of which aspects qualify for which type of moral consideration, and to what extent we know whether non-human animals possess these qualities. The third part, 'How Should we Treat Animals?', is an attempt to bring the ethical position arrived at in the previous chapters to practical decision-making. The author uses four examples: factory-farming, fox-hunting, animal-based research and friendship with animals.

The first chapter, 'Animal Rights in all Times', starts with a brief overview of how animals and humans lived together in ancient time, and then sketches the development of the view on animals in the western world, from ancient Greek thinking, through Christian dogmas, to the Darwinian revolution. The author also gives an overview of the legal status of animals. The view on animals as essentially property is contrasted with two alternative views: the Buddhist wheel of life and Singer's arguments about equal consideration of interests.

The second chapter, 'Animal Minds', goes from René Descartes to Don Broom in a very clear reasoning about whether non-human animals have subjective experiences. This question is addressed from both the biological viewpoint (discussing the existing evidence and the strength of the evidence that animals feel pain/fear/distress) and from the ethical viewpoint (how should we act facing differing amounts of evidence of sentience in different animals). Up until this point, the lack of references, which certainly makes the reading easier, has not been troublesome. When a coherent chain of logical reasoning is presented to justify the conclusions, it matters less that the author was not the first to arrive at these conclusions. But the statement that the "best guide to animal distress is how well the animal is coping with the environment" really requires a reference to Broom — it is neither an undisputable fact nor a consensus conclusion of a reasoning presented in the text.

The fourth chapter, 'Can They Reason?', takes us into the realm of experimental psychology. Again, the philosophical discussion of what it is to have a belief is exemplary in its clarity and logic. However, when addressing issues of animal learning, the author's limited background knowledge becomes apparent. A minor inconsistency is in the reference to a rat, which will continue to bar-press for food even when the reward schedule is changed so that food is no longer delivered when the bar is pressed (p 52). This is not because the rat "has reacted instinctively" — over time it will learn that the response it had first learned (to press the bar for food) no longer produces the desirable food reward. (And a human being with acknowledged high cognitive capacity will react rather similarly; if the bus has arrived at your bus stop about 7.45 every morning for the last year you will probably stay looking for the bus until well after 8.00 before assuming that the driver is on strike and that you'd better