

The first edition of *Man & Mouse* was well timed, coming between the two Government White Papers on the subject – the first a consultation document and the second a distillation taking account of those consultations. This second edition is also well timed, appearing when it is much needed not only to bring the relevant facts up to date but also to take into account all the experience which has been gained as a result of the implementation of the *Animals (Scientific Procedures) Act 1986*, together with developments in ‘alternative’ methods, developments which have been given added stimulus by the requirement under the Act to use alternatives whenever possible. In addition, the opportunity has been taken to add new evidence on the benefit of animal experimentation in connection with poliomyelitis, tuberculosis and tetanus and to examine the complex subject of toxicology to great effect.

The book does not shirk the ethical and philosophical questions, and has a message of encouragement – the hope of fresh advances in alternatives to animal experiments, together with the very important point that improvements in measuring the body’s responses to events means that there is good reason to hope that animal experiments may all be reduced in severity until the pain and suffering involved are no worse than the ordinary ups and downs in the life of a domestic pet.

Man & Mouse is a wealth of hard information and informed debate and covers the nature of the argument; the question of the definition of animals and discrimination between them; the nature of experimentation, including fundamental or strategic research as distinct from applied research; the ethical questions; the pattern of discovery; pain and suffering; alternatives; the arguments surrounding applicability of results obtained in animals to humans; toxicity testing and risk assessment, and striking the right balance in determining the extent and control of animal experimentation. It is backed by a series of interesting and informative appendices and a good bibliography.

There is no doubt in this reviewer’s mind that the excellent reputation of the first edition of *Man & Mouse* is maintained and enhanced by the second edition and that it should be compulsory reading for anybody concerned with this subject – and that means all of us. It is regretted that shortly after the publication of this book, the author, Professor Sir William Paton, died.

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Management Guidelines for the Welfare of Zoo Animals: Tapirs

Amanda R Lee (1993). The Federation of Zoological Gardens of Great Britain and Ireland: London. 51pp. Paperback. Obtainable from the publishers, Zoological Gardens, Regent’s Park, London NW1 4RY, UK (ISSN 0963 1712) Price £18.

This is the fourth of a series of guidelines produced through the initiative and auspices of the Federation of Zoological Gardens. It is written by Amanda Lee and follows the same format as the previous three; this layout, in fact, could now become a standard for European husbandry guidelines and is therefore, in itself, an important innovation.

The four species of the genus *Tapirus* are covered under this format, which is divided into three Sections: 1) Biology and Field Data; 2) Management in Captivity; 3) References.

I decided that the best way to review this document was as its use was intended. As a Curator of Animals, I am constantly asked by keeping staff to provide them with more information on the species with which they are working. This can involve giving out copies of papers, some of which are more than daunting to read and may contain just one or two important sections. I have often wished that there was one nice suitable synopsis of the literature and husbandry protocols for the species that I could hand out, and that would also contain references for further reading. Do these guidelines fulfil this need? My overall view is that they do and I will illustrate how by working progressively through the sections.

The first chapters, on phylogeny, taxonomy and morphology, are concise summaries from the literature; they are most useful and relevant to keepers, curators and directors keeping or intending to keep members of the genus. The remaining chapters in Section 1 cover zoogeography and ecology, diet and feeding, reproduction and general behaviour.

Section 2 is the major section, covering management in captivity. This is a comprehensive review, taken in most cases from the literature, of types of enclosure and requirements for maintenance of tapirs; husbandry problems, and suitable captive environments. All aspects pertaining to enclosure design and related husbandry are well covered. Then follow dietary details. This is always a difficult section to write as some captive diets range from the extreme of being scientifically formulated to an almost frightening degree, to being based on years of what may or may not be dietary folklore! However, the Section copes with these problems well, providing dietary advice, backed up with relevant comments. Chapters on breeding, group structure and mixed exhibits cover all aspects on which a tapir manager would require information. I particularly liked the example of a giant anteater that caused a rectal prolapse in a tapir, by probing the tapir's anus with its snout! Lesson: watch out for this when mixing these two species! The portions on hand-rearing and milk composition are especially useful and give very good details.

We are also kept updated on not only husbandry management but also species management programmes, and full details are given of co-ordinators and stud-book keepers in the various international geographical regions. This is very pertinent; managed breeding programmes and grass-root husbandry must go hand in hand for captive management of species to progress. Other relevant aspects such as transportation, veterinary problems and legislation are well covered.

The list of references is comprehensive and extremely useful. The one criticism of this volume might be that the majority of the examples are taken from literature, although there are many 'pers comms'. Much is known by those working with the species that has not been published and may therefore be missing from the guidelines. However, any possible omission is noted in the Foreword and it is stated that a husbandry questionnaire is being developed in conjunction with the guidelines project, and that this will be used to assess various aspects of husbandry. This leads on to another strength of the guidelines: they are loose-leaf and designed to be updated from time to time as new information becomes available. They are also incredibly good value for money and to anyone involved with or even remotely interested in tapirs, they are an essential purchase.

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