It quickly becomes apparent that there is a major and controversial difference in the approach to the subject of treatment of birds compared to that of mammals. Whereas the reader is advised to seek the assistance of a vet for pain control in the majority of mammal casualties, exactly the reverse is suggested for birds. The justification for this approach is based on the controversial opinion that as birds register little or no discomfort on having skin wounds sutured or fractures manipulated, they feel no pain and therefore need no analgesia - indeed that the use of analgesia/anaesthesia often creates unnecessary risk. Released from the requirement for anaesthesia or analgesia, largely the domain of the veterinarian because of the drugs involved, the lay rehabilitator is free to move into the area of wound closure and fracture fixation in fully conscious birds. I am sure there are many authorities concerned for the welfare of all birds, wild and domestic, who will disagree with this approach to avian pain sensation. A bird is no less capable of feeling pain or distress in the hands of a rehabilitator simply because he/she has the long-term interest of the bird at heart. Nor is the rehabilitator's concern for the eventual well-being of the bird an excuse for unacceptable behaviour during treatment. Although a book of practical instruction such as this is perhaps not the place for a true scientific assessment of the welfare implications of the techniques described, I feel the Wildlife Hospital Trust should address this subject satisfactorily before encouraging these techniques to become common practice. The sound practical value of this book can only be considered within the context of these welfare implications.

Ian Robinson Veterinary Manager RSPCA Norfolk Wildlife Hospital

## Handbook of Pentobarbital Euthanasia

Tim Greyhavens (1989). The Humane Society of the Willamette Valley: Salem, Oregon. 126 pp. Obtainable from the publishers, 4246 Turner Road SE, Salem OR 97302, USA. Price US\$8.50.

It is well recognized that an unpleasant but necessary duty of the many pet rescue centers around the world is mass euthanasia of unwanted animals. This book is written for those who have to carry out this task. It advocates the use of pentobarbital (in the UK called pentobarbitone) as the best technique and goes on to describe its use in some detail. The publication provides comprehensive instruction in the use of pentobarbital for euthanasia of animals, concentrating primarily on dogs and cats. It is aimed at non-veterinarians working in pounds and shelters in the USA.

The book is divided into short clearly labelled chapters. The first covers the concept of euthanasia and provides an excellent introduction to the tenor of the book. This is followed by a short chapter on the basic pharmacology and use of pentobarbital. The necessary space and equipment are then described in some detail. Criteria for selection of the appropriate site of injection are covered, followed by techniques of physical and chemical restraint. The various techniques of injection are then given in detail and the publication concludes with a useful chapter on likely problems, and how to handle them,

Animal Welfare 1992, 1: 300-308

as well as the final steps of ensuring that death has occurred. A comprehensive set of appendices is included for other species, sources of pentobarbital and US federal and local state law as it applies to the use of the drug.

Throughout the book there emanates a respect and care for the animals that have to be destroyed. This is most commendable in a publication offering such thorough practical advice on a necessary but unpleasant activity.

The book offers extremely detailed practical instruction on the entire procedure of euthanasia of small animals and can be considered most valuable reading for any technician involved in the inevitable mass euthanasia required in dog and cat homes.

Inevitably the book is not without its drawbacks. For the purist the short sections covering anatomy, physiology and pharmacology lack accuracy although are probably adequate for the purpose of this book. An unacceptable fault, however, is the consistent specification of dosage in millilitres for all drugs mentioned, with no reference to the concentration of the solution. This use of 'mls' occurs even when use of pentobarbital powder to be made up in solution is being discussed. This aspect is a significant drawback to the use of the book in countries outside the USA as there is no indication of the concentration of any of the commercial solutions referred to.

The section on physical restraint is comprehensive and clearly demonstrates practical experience. However, the section on chemical restraint describes a system that obviously works in one dog shelter but does not give any indication of the range of techniques that could be used.

As its title implies, the book is entirely about the use of pentobarbital for euthanasia, and only briefly discusses the pros and cons of different forms of euthanasia. Within this restriction it is a useful text but it should not be considered an overview of euthanasia techniques for animals. An additional consequence of the restriction to pentobarbital is the rather misleading, albeit brief, mention of euthanasia of large animal species. Pentobarbital euthanasia is undoubtedly more appropriate to smaller species, and, although some of the problems of euthanasia of horses and large farm species are covered, this section gives a woefully inadequate description for the reader with no veterinary experience. It is inappropriate as the companion to such detailed description of the techniques used in dogs and cats.

In summary, this book can be recommended as good reading for lay staff who are expected to learn and perform euthanasia of dogs, cats and small exotic pets. It is essential to appreciate that it is written for the American market, as much of the detail about the legalities of handling pentobarbital as well as about the commercially available solutions and their suppliers is inapplicable for other countries. In spite of this, the overall respect for animals which pervades the book makes it an excellent introduction to the subject for anyone involved in mass euthanasia of dogs and cats.

P M Taylor Animal Health Trust Newmarket

Animal Welfare 1992, 1: 300-308