## **EDITORIAL**

In this issue of Animal Welfare for the first time we have included an Invited Essay. These essays are to be occasional features on contemporary welfare problems; written at the invitation of the editor and refereed. The first is by Trevor Poole, a mammal behaviour zoologist with an active interest in laboratory animal science and welfare, considering the new and controversial subject of transgenic animals. In this fast moving field relatively little thought has been given to the possible suffering which transgenic animals may be enduring for human benefit.

There are two valuable main articles. The first is *Keeping elephants temporarily in paddocks* (Schmid) which addresses the problem of circuses and zoos keeping elephants confined. This paper illustrates the decrease of stereotypic behaviour and the increase of more normal behaviours when the elephants are unshackled and have access to paddocks.

The second main article is *Science*, values and animal welfare (Fraser), which tackles the complex issue of how animal welfare is conceptualized. The author concludes that while welfare can be assessed, science cannot *measure* animal welfare as values form an integral part of how the results are interpreted. Instead it is necessary to separate technical arguments from value-related ones.

There are three short communications. Cage illumination preference tests of gerbils (Van den Broek) indicate that captive gerbils should be given a relatively dark place to shelter. The electrical killing of minke whales is an analysis of unique video footage providing an insight into the Japanese slaughter of whales. As currently practised the secondary killing method of electrocution, both in the application of the electrodes and the voltage used, is not a humane method of slaughter. If the killing of whales is to continue, this area needs immediate attention to update the equipment and procedures used. The third short communication is the effect of different floorings on the comfort behaviour of sheep (Gordon and Cockram).

A technical contribution concludes the list of refereed articles, describing enriched housing for cats being kept singly for nutritional studies (Loveridge *et al*). The specially designed lodges and the procedures of care for the cat, represent a significant improvement from the metabolism cages previously used.

We have two letters in this issue, one from the editor of the companion animal section promoting the 1995 conference in Geneva on human-animal interactions. The second letter continues the lively debate on the infectiveness of bovine tuberculosis and how it may be transmitted from the cow to the badger.

Animal Welfare is receiving an increasing number of papers on a wide range of subjects from international authors. One particular aim is to record welfare related field data that is unique but might not otherwise be published. An excellent example is the whaling paper in this issue, which has used the scant field information available to bring attention to the question of whale welfare. This is the third paper we have published on whaling, and Animal Welfare is to our knowledge the only journal that publishes such data as refereed articles. Other points of controversy in the welfare world may be argued as letters. Our aim is to disseminate knowledge, promote thought and instigate changes to improve the lives of animals.

Roger Ewbank Editor-in-Chief

May 1995

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## THE WELFARE AND MANAGEMENT OF BEARS IN ZOOLOGICAL GARDENS

UFAW Animal Welfare Research Report No 7 by Alison Ames

Currently some two thousand bears are kept in zoos world-wide and a further several thousand are kept in bear farms and parks in Asia. Some species are relatively easy to keep well in captivity, others are not. An investigation carried out by UFAW showed that of the three different species of bears studied (brown bear, polar bear and spectacled bear), the spectacled bear from South America demonstrated the greatest tolerance to captive conditions. This bear showed the least abnormal behaviour: there was little pacing up and down or head swinging. Given the opportunity the bear responds well to attempts to enrich its environment by, for example, increasing its opportunity to find hidden food, play with objects, climb trees, build nests and dens and spend time with other bears. These findings are detailed in the report on *The Welfare and Management of Bears in Zoological Gardens* which contains some 20 recommendations for improving the conditions of bears kept in captivity.

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