## Zoos in the 21st Century: Catalysts for Conservation?

Edited by A Zimmermann, M Hatchwell, L Dickie and C West (2007). Published by Cambridge University Press, The Edinburgh Building, Cambridge CB2 8RU, UK. 373 pp Paperback (ISBN 978 0 521 85333 0). £35.00, US\$ 65.00.

This book starts by describing the dramatic effects our increasing consumption habits are having on the planet. It examines what actions need to be taken and what the role of zoos should be, in helping contribute to wildlife conservation. In an interesting approach, the book not only describes the actual scenario, but also moves quickly towards discussing the wide diversity of areas in which zoos can, and should, play an active role in conservation. On one hand, it illustrates the considerable influence zoos have on the general populace through the ability to sensitise the public by introducing conservation dilemmas into the daily decision-making processes of ordinary people. On the other, it shows the manner in which they also influence decision-makers in regulatory and political spheres by showing the scientific results of their research and recommending actions to save species from extinction. The book describes and updates the latest advances in strategies to approach conservation issues. Other topics broadly discussed are in situ and ex situ approaches, emphasising the importance of a more holistic view, thereby making a concerted effort to improve the connection between them; "blurring the boundaries", as the authors put it. An interesting case study presented is the collaboration initiative between Zurich Zoo and Masoala National Park in Madagascar. This is an ongoing exchange from which many lessons can be learnt, as it presents an increasingly typical modern-day scenario, whereby a first-world zoo collaborates closely with a developing country which is a protected area. The discussion focuses on how the strong commitment and long-term relationship which subsequently developed has been mutually beneficial to both stakeholders. The book also dedicates a whole chapter to the rather novel paradigm of conservation medicine where, again, the benefits of a long-term partnership of first world and developing countries' institutions is emphasised. Indeed, collaboration is a topic that is present throughout the book.

On the subject of animal welfare, laying aside brief mentions in the first part of the book, the topic is only touched upon in one chapter: 'The animal rights-conservation debate: can zoos and aquariums play a role?' And, in truth, it is a rather disappointing reference. This is because, as the title rightly points out, emphasis is placed on the differences and conflicts between animal rights and conservation ethics. However, this would seem like a good opportunity to find common ground for conservation and animal welfare scientists: sadly, this is somehow wasted. Despite this criticism, it is not intended to discourage one from reading this book. On the contrary, this is a comprehensive book that presents and discusses many of the challenges that zoo-related conservation science is faced with nowadays. It has the merit of inserting zoos and aquaria into today's reality, linking this to a variety of conservation approaches,

thereby broadening the framework of mainstream conservation textbooks. It not only describes the current situation, but proposes applied strategies to face such challenges, whilst considering the wide diversity of 'zoo sizes', as well as acknowledging the different roles zoos in developed and developing countries can play.

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## Making Lives Easier for Animals in Research Labs: Discussions by the Laboratory Animal Refinement and Enrichment Forum

Edited by V Baumans, C Coke, J Green, E Moreau, D Morton, E Patterson-Kane, A Reinhardt, V Reinhardt and P van Loo (2007). Published by Animal Welfare Institute, PO Box 3650, Washington DC, 20027, USA. 188 pp Paperback (ISBN 0-938414-97-6). Available from viktorannie@yahoo.com.

Viktor Reinhardt, the moderator of the Animal Welfare Institute's Laboratory Animal Refinement and Enrichment Forum (LAREF) has collected the electronic discussions that took place between Forum members over a span of five years (2002–2007) and turned them into this delightful book. Those readers who are LAREF subscribers will recognise many of the discussion topics. Unlike the electronic discussion forum itself, which may have two or three threads running at any given time, the book has been organised into chapters, bringing together the various discussion threads under one topic heading.

Over the five-year period covered by the book, there were some 5,000 comments submitted to the electronic discussion group. Of these, 3,000 were selected for inclusion because they are of practical animal welfare relevance and are based on first-hand experience. The comments have been edited without changing the content, and different comments having the same content were summarised. This approach is not particularly easy for the reader, as it is unclear whether the text belongs to one voice or many. At times the 'voices' in the paragraph appear to be arguing with each other, and yet it is not clear who or how many people are speaking. I would have preferred a different approach, which recognised the number of distinct comments received on any particular topic, and then listed them individually in bullet form. For example, the section on 'Emotionality' on page 19, I remember as a particularly interesting discussion thread that came across my computer screen, one email (one voice) at a time. This gave you the opportunity to weigh the sentiment expressed in each message. On page 19 a line "if I cry due to work-related issues, I just remove myself..." is closely followed by "Are you joking? I cry at work all the time..." and so on, which has the effect of detracting from the information conveyed by the various voices, and practical solutions for addressing how to deal with the distress animal care technicians feel when required to kill animals that they have become attached to.