

of story-telling. Tables, charts and pictures have been effectively used to illustrate and support research ideas and findings.

The scope of this book is to introduce readers to the evolution of zoo and to raise awareness on the factors affecting the change in environmental policies and thereby conserving zoos and their animals. The author mentions — "This book is fundamentally oriented towards 'problems'". Hence, the main objective is to raise awareness on the shortcomings of zoos in the managerial and policy level to attain conservational aims.

The book is inspired by "The Noah's Ark Syndrome" by C. F. H. Jenkins (1977) where he ends with the chapter "What of the Future". Mazur ends with similar chapter but with a note that the zoo evolution will advance in right direction if zoo professionals devote sufficient attention to how their social, political and organizational settings shape

the identity of their institution. This clearly shows that necessary amendments need to be made in formulating policies influencing the management of zoos and conservation of animals within.

Summary

Mazur has incorporated various aspects: management, education, research, conservation, recreation and economical aspects of zoos. The reader is enlightened with what goes behind the recreational face of zoos. The book ends realistically by questioning the relevance of "ark" metaphor. Amidst the problems in zoo management and conservation, the author does provide solutions within for what we can do to better the condition.

The book is definitely a good read and I recommend it for the reasons discussed above.

The Negative Effects of Wildlife Tourism on Wildlife

Green, R. and Higginbottom, K. 2001.
CRC Sustainable Tourism, Gold Coast.
Pp. 205, ISBN 1-876685-31-X.
Price AUD \$55.00.

GRAHAM R. FULTON¹

THIS report is one of 23 in the Wildlife Tourism's Report Series, Edited by Dr Karen Higginbottom and targeted to industry, government users, and tourism researchers. Dr Green is both a research ecologist and an ecotour operator, with research interests in frugivorous seed dispersal and habitat modification. Dr Higginbottom is a lecturer at Griffith University where she teaches wildlife management, vertebrate biology, and nature based tourism.

This technical report is primarily developed from the literature and is concerned with effects on wildlife, but in conjunction with the needs of the tourism industry. It provides guidelines to develop the tourism industry without spoiling the resource on which it is based. It aims to identify priority research areas, and promote ways that negative effects can be mitigated. It is principally structured around 12 questions asked of key informants from government conservation agencies and juxtaposed with an extensive literature review. The report is broken down into chapters and sections, though principally into two dominant chapters discussing negative impacts on wildlife related to human activity, and its management. Throughout the report, the discussion of management generally focuses on the management of visitors and operators. A final section on recommendations rounds out the report along with a wide-ranging 31-page bibliography.

Many of the negative effects presented are generalizations, which cannot exactly relate to specific situations. If they are to be used as guidelines, they may be either too cautious or may underestimate impacts. For example, bird-watching may attract predators to nesting birds. In eastern Australia Pied Currawongs *Strepera graculina* may be quite quick to utilize this type of clue to depredate a bird's nest, but outside their range, other predators may miss the clue completely. However, the authors acknowledge this and argue for more research and greater monitoring. Monitoring is introduced and canvassed in several parts of the report and is discussed in highly relevant detail in the management chapter. This is a particular strength of report. It is presented in enough detail to guide the reader in

quantitative monitoring. Stakeholder involvement is also put forward, but alas, it is only briefly outlined.

There appeared to be an over-representation of bird examples. However, this might simply reflect a dominance rather than a bias in the literature. A short but interesting passage on the often forgotten invertebrates is included. However, I would have liked to have seen more on marine crustaceans taken for food from the tidal zone. The authors have discussed the debate surrounding supplemental feeding of wildlife highlighting that this is a contentious issue and one that merits more research. Industry self-regulation is suggested in response to the perceived shortcomings of government regulations, and is discussed in some depth interwoven with potential positive outcomes of education. The benefits of educating tourists are reiterated throughout the text usually through examining trade offs between costs and benefits.

The Passenger Pigeon *Ectopistes migratorius* was given as an example of a species hunted to extinction. They were not, their extinction is related to habitat loss (Bucher 1992). Hunting is considered in the report but is given limited space, probably because it would be difficult to find a political will to pursue trophy hunting for kangaroos etc., in Australia.

Towards the end of the report (page 169) a recommendation is made for a forum where conservation and animal issues can be simultaneously considered. I strongly support this recommendation and direct readers to Fulton and Ford (2001) where a similar proposal is made.

At first glance, I noticed that this report is more than twice as thick as another report in the series the "Positive effects of wildlife tourism on wildlife". Happily, I have found out that this does not reflect a tragic situation in Australian wildlife caused by tourism. It reflects that there is a great deal of published knowledge reviewed by this report, which makes it a valuable general reference on "The negative effects of wildlife tourism on wildlife".

REFERENCES

- Bucher, E. H., 1992. The causes of extinction of the Passenger Pigeon. Pp. 1-36 in Current Ornithology, Volume 9 ed by D. M. Power. Plenum Press, New York.
- Fulton, G. R. and Ford, H. A., 2001. The conflict between animal welfare and conservation. *Pac. Cons. Biol.* 7: 152-53.

¹School of Natural Sciences, Edith Cowan University, Joondalup, Western Australia, Australia 6027.