

history, the power struggles, and some of the contributing factors providing communities with rights, as well as some of the factors impeding successes. With no surprises, capacity and corruption issues loom large, the latter being driven by financial and political interests in mining and industrial fishing extraction.

In the beginning of the book Marschke takes us through a review of natural resource governance in Cambodia and some general resource governance for social science theory. Now I'll admit I am both biased by, and enamoured with, quantitative data. So I could do without the 'As Nietzsche notes, "one should not wish to divest existence of its rich ambiguity."' In fact I could do without the word rich in all social science unless it is describing wealthy people, and I like Nietzsche, he was funny. But Marschke's effort is not quantitative, so while I struggled with the first few chapters and the focus on social theory, qualitative approach and the political ecology, I found the case study in Koh Sralao absorbing.

In taking us into the households of six different families, Marschke paints a great picture of what has happened in the community over time with respect to the state, importance and management of the fishery upon which the community depends. While many people came to the area to work in the marijuana fields, they stayed and adapted their livelihood strategies once the government shut this option down. The case study here reiterates much of what the world learned from Elinor Ostrom and colleagues, that local natural resource governance requires strong leaders, and long-term relationships with technical and political allies (and some national publicity helps too).

This is not a story where everything turns out rosy. This story is ongoing and both the local resource management committee and local fishers are struggling to overcome impediments at local, regional and national levels. Marschke deftly points out that fisheries are hard to manage under the best of conditions. We can look to the salmon, lobster and cod fisheries of the north Atlantic and numbly nod in agreement. In Koh Sralao people are dealing with industrial trawlers, mining companies, increasing food prices, vested political interests and extreme poverty. Yet, by focusing on goals that are cost-effective, non-political, and where success is easy to demonstrate, the local resource governance committees have made some headway towards more effective management of the resource upon which their livelihoods depend—despite the catch 22s.

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**Reintroduction Biology: Integrating Science and Management** edited by John G. Ewen, Doug P. Armstrong, Kevin A. Parker and Philip J. Seddon (2012), xxv + 499 pp., Wiley-Blackwell, Oxford, UK. ISBN 9781444355833 (pbk), USD 69.95/GBP 45.00.

This book contributes a great deal to the growing field of reintroduction biology, a field that, as emphasized throughout the book, is growing at a rapid rate and will continue to do so with the ever-increasing human population and pressures such as climate change. As presented in the summary chapter of this book, the authors have attempted to compile a 'state-of-the-art for reintroduction practice', which is exactly what has been provided. The book provides a useful, one-stop, up-to-date tool for all reintroduction practitioners that are likely to be involved in reintroduction and translocation programmes.

The first chapter provides a detailed outline of translocations, including a brief history of animal movement, and also clearly defines the terminology surrounding the variety of translocation types. There are detailed summaries of each of seven types of translocation for non-conservation purposes, including useful working examples. The chapter then presents a detailed description of conservation translocations, again with working examples for both population restoration and conservation introductions, and finally a description of the growing importance for collaboration of a range of stakeholders, for fulfilling translocation objectives.

The second chapter provides a collection of case studies of a range of conservation activities in New Zealand and Mauritius that have assisted in the recovery of a number of species and in ecological restoration projects. The chapter includes descriptions of management initiatives that have been developed in both countries over a number of years by personnel from diverse backgrounds. What is particularly useful in this chapter are the tables that present clear outlines of problems encountered and the management solution and outcome. Innovative management approaches are clearly discussed in the latter half of this chapter, along with working examples.

The third chapter examines the problem of habitat suitability in release site selection by initially discussing eight consequences for reintroductions that the authors propose should be considered to adequately address the suitability of a release site. Chapter four initially details the need for a multidisciplinary approach to the translocation process and the value of previous research and science in the approach to translocations. The chapter then explores a range of factors associated with stress that affect the success of a translocation

and the need for practitioners to understand these factors.

The fifth chapter reviews the extent to which post-release dispersal has been examined in translocations and the problems associated with dispersal. Various critical factors for managing the dispersal of reintroduced individuals are discussed and finally the integration of dispersal and habitat selection behaviour into the pre-release phase are discussed, including a number of useful working examples.

Chapters six, seven and eight provide a framework for reintroductions and deal with management problems. In chapter six an overview of population models for reintroduction programmes, including a comprehensive review of population models in the literature and their application to management, leads into a discussion on the future use of population models to enhance reintroduction programmes. Chapter seven introduces the concept of structured decision making and adaptive management (discussed in detail in chapter eight) and the importance of monitoring programmes in reintroduction. The chapter explores the role of monitoring in the decision-making process and the main purposes of monitoring in adaptive management, which include making state-dependent decisions, assessing reintroduction success, learning, and developing or refining models for the reintroduction programme. Chapter eight reviews the concept of adaptive management and its application to reintroduction programmes for their improvement. The chapter includes a review of literature on adaptive management and then the introduction of a seven-step adaptive management cycle, including working examples, to explain each step. This chapter describes the role of Bayesian methods in the re-evaluation of parameters and the suitability of Bayesian analyses for incorporating information from multiple sources as it becomes available over time. The role of monitoring in adaptive management, with useful examples, is also discussed.

Chapters nine and ten focus on animal health and disease risk. Chapter nine provides a summary of health and parasite consideration in reintroduction programmes and includes a discussion on the benefits of vaccinations, pre-release screening of wildlife, the use of quarantine prior to release and the importance of obtaining information relating to animal health for the duration of the reintroduction monitoring period. The chapter concludes with four key areas where improvements to disease and parasite management could occur in future translocations. Chapter ten provides a discussion on disease risk analysis methods and how these are applied to translocations of wild animals.

This includes a brief discussion on the origin of disease risk analysis for domestic animals and the difficulties faced in the application of these methods to wild animal translocations.

The final three chapters discuss genetics in reintroductions, including the theory of inbreeding and genetic drift for conservation (chapter 11), a review of genetic patterns and how this has influenced reintroduction success (chapter 12), and the management

issues faced when considering genetic issues in reintroduction programmes (chapter 13). Chapter 13 includes the definition of key terms that are used in the measurement of genetic variation and outlines a number of genetic issues faced in reintroduction programmes and how these can be addressed. All three chapters emphasize the need for long-term strategies to maintain genetic diversity in reintroduced populations.

The book is rounded off with a concise summary chapter to outline what the intentions of the book are and to challenge the readers to improve and develop the concepts and principles presented in the book so that the overall success rate of reintroduction programmes can be improved.

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