

indicators, person responsible, etc.) by using an example from a mining tenements plan (pp. 188–189).

The book is well researched with almost 500 references including many highly regarded experts in the field of ecology, zoology and so forth. A minor blemish in the formatting on page 155 and a

grammatical error on page 195 are the only true errors found in this book. Thompson and Thompson's *Terrestrial Vertebrate Fauna Assessments for Ecological Impact Assessment* makes a valuable contribution toward establishing the missing links between vertebrate fauna surveys and EcIAs.

At the End of the River: The Coorong and Lower Lakes

Paton, David Cleland (2010)
ATF Press and Australian Theological Forum,
Hindmarsh, SA
AUD\$49.95
ISBN 9781921511660

ROGER L CROOME¹

THIS is a marvelous text (29 cm × 23 cm, 247 pp) on the Coorong and other waters at the mouth of the Murray River in South Australia, their social and environmental values, and the problems which beset them. The Coorong itself is an unusual 110 kilometre long but narrow lagoon, running southeast along the coast from the Murray mouth. Authored principally by Associate Professor David Paton of the University of Adelaide, the text also contains vignettes by 22 other contributors. Its ten chapters are illustrated by 150 colour photographs (no less than 35 photographers contributed) and 35 or so delightful sketches. Almost 300 references are included, plus 50 tables and diagrams.

Paton packs a lot into his introductory chapter — An Ecologist's Perspective — explaining the Coorong's woes, and how over-allocation of Murray River water to human use has increased salinities within the system, but importantly not beyond the point of redemption if environmental flows can be provided. He states his aims in writing the text are to introduce readers to the ecology of the area, to make current knowledge more accessible, to illustrate the interaction between scientific knowledge and management actions, and generally create more interest in the system. "Ultimately, the book is about growing the awareness that there are significant impacts of failing to live sustainably. If environmental flows are not re-instated, one of the casualties could be the Coorong and Lower Lakes".

The subsequent text then moves inland from the sea, beginning with the ocean beach (wave action, sand movement, vehicle impact, birds, cockles, fishing). The dune area separating the Coorong from the sea is the Younghusband Peninsula, and it is the subject of Chapter 3 (formation, historical accounts, early settlers, concerns for the vegetation — all nicely illustrated) and Chapter 4 (plant ecology, surviving mammals, and much on birds).

The Coorong Lagoons are next and are given four chapters. Much detail is given on hydrology, salinity, structure of the Murray mouth and its current-day dredging, local drainage schemes, fish/fishing, aquatic vegetation and invertebrates, with by far the largest chapter going to waterbirds and their use of the Coorong, which received Ramsar listing on 1 November 1985 after being earlier "ranked amongst the top ten sites in Australia for six migratory waders and five Australian waders". Australian shorebirds also abounded. Detailed bird numbers are given for recent years, showing declines in some species, but reaffirming that the Coorong still meets "the waterbird criteria for listing as a Wetland of International Importance under the Ramsar Convention". This leads to a comment that recent suggestions that the Coorong is dead or dying are misleading, but that nevertheless the areas of highest salinity are in need of remediation.

The penultimate chapter concerns the Lower Lakes, the impact of the barrages built across their lower extremities in 1940, the impact of carp since 1970, and of water level decreases in recent years due to diminished flows within the Murray River system. The topical issues of opening the barrages to allow sea water into the Lower Lakes, and of acid sulfate soil amelioration, are both addressed.

The final chapter, on the future of the Coorong and Lower Lakes, comprises some 7,500 words and begins "The future of the Coorong is in our hands". While the author does not know the amount of water required to properly sustain the environment of the area, current volumes are assessed as grossly inadequate. Engineering solutions are detailed, both historical and present-day, and the impacts of climate change discussed. The final section of the chapter is again "The future of the Coorong is in our hands", with a plea by the author for a water allocation to the Coorong which would, as a matter of hydrological course, also secure the environmental amenity of the Lower Lakes.

This is a must-read book for anyone interested in the aquatic systems of the Murray River, in conflicts involving competing uses of water, and in conservation in general.

One potential criticism concerns the lack of detailed information and stories relating to the Ngarrindjeri people, the traditional owners of the

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area. However, the author comments on this relatively early in his work, saying it was not included “largely from respect”, encouraging a separate text on the subject, while thanking the traditional owners for allowing his trespass on both their place and culture.

At the End of the River / The Coorong and Lower Lakes is well prepared, easy to read, and beautifully illustrated. While it is patently “from the heart” it is

also scientifically accurate, with much supporting documentation. Paton and his contributors are to be congratulated for preparing a text suitable for broad readership, and it is only to be hoped that it both reinforces and expands our current thinking with respect to the more equitable sharing of the waters of the Murray system between urban, rural and environmental needs. It certainly paints a wonderful picture of the Coorong.

Contested Country: Local and Regional Natural Resources Management in Australia

Lane, Marcus B., Robinson, Cathy & Taylor, Bruce. (eds), (2009)
CSIRO Publishing, Collingwood VIC 3066, Australia, 264pp.
AUD\$79.95 Paperback
ISBN 9780643095861

LAI MING (Christie)

I was attracted by the book title at first glance. “Contested Country” is such powerful description to one of the major challenges in the field of natural resources management (NRM) where conflicts emerge between stakeholders over the valuation and utilization of natural resources. In fact, this is also the site where asymmetrical power relations are embedded. Although this volume focuses mainly on the Australian context, its significance has great implications for both local and international practice of NRM policy implementation. As the editors point out in the introduction, it is open to question whether the current regional NRM approach is realistic in addressing the environmental crisis and achieving biodiversity conservation. Therefore, this book is very ambitious in its effort to critically analyse the efficiency of the regional and community-approach of NRM which has been largely implemented since the mid-1990s. Apart from this, what the future holds for NRM is another key theme tackled in this volume by contributors.

The book is structured into four main parts. In the first section *Policy, promises and practices of regional resource management and governance*, a historical development of natural resources management in Australia is provided. Since the late 1980s Australian governments have developed Landcare programmes that highlighted the local partnership approach of NRM. In mid-1996, the government implemented the Natural Heritage Trust (NHT) and until 2008 it operated as a “Caring for our Country” programme under the federal Labor government. Contributors clearly point out that either NHT or later care programmes — the ideas of “regionalism”, “rescaling”,

“governance” and “community participation” — are the core principles of this NRM approach. However, the discussion in this section indicates that the concept of governance is merely rhetorical and unrealistic because the state-sponsored policy/funding guidelines have indeed diminished local involvement in policy making. When the environmental policy planning is constrained by these guidelines or expert planning, contributors argue that the practice of NHT is just “under the shadow of hierarchical authorities, another top-down policy”.

In the second section *Community engagement, local participation and regional capacity*, the contributors critically analyse another core element of the contemporary NRM approach — community. Through a rich evaluation of the levels of community engagement in various NRM projects in Australia, studies demonstrate that local voices are often excluded in policy planning. Contributors argue that lack of capacity is one of the major barriers for local involvement. For example, Compton, Prager and Beeton in their article “Landcare bowling alone: finding a future in the “fourth” phase”, point out that to achieve real governance, better local capacity building both in human and financial resources is needed. They state that “if community-based management is to be scaled up to the regional level with greater responsibilities, accountability and the expectation of generating self-sufficient regions, then regional group members must possess organizational, social and ecological knowledge as well as well developed learning capacities” (p. 140). This section provides a detailed evaluation of the practice of Landcare programmes and their efficiency. These case study-based studies also find that aging population limits local participation because of physical and financial constraints while most young people do not have the same level of engagement in local conservation as older people do. Authors urge that in order to continue Landcare programmes, there is an urgent need for strengthening and building networks/ stronger social capital.

In the third section *Learning and adapting from regional and national experiences* and the fourth section