Dave Butler, Tony Lindsay and Janet Hunt

## Paradise Saved: The remarkable story of New Zealand's wildlife sanctuaries and how they are stemming the tide of extinction

Reviewed by Neil Curtis, FRSNZ

Paradise saved, by Dave Butler, Tony Lindsay and Janet Hunt, is a comprehensive account of sanctuaries of various types, established to try to restore New Zealand to the way it was, before humans messed everything up by introducing species with which the native flora and fauna had trouble competing. It describes attempts to re-establish kiwi, kokako, tui, saddleback, and all their associates, in their original habitats. Success is very much dependent on first removing predators; so much of the story is about eliminating possums, rats, mustelids and other undesirables.

Sanctuaries are categorised into their various types: islands, peninsulas, fenced sanctuaries, 'managed' areas, etc, and range in size from Kapiti Island, or the 3400 hectare fenced sanctuary of Maungatautri, to individual farmers looking after a forest remnant on their land, or a local ad hoc group taking care of a gully in their area. The book is largely concerned with local initiatives, rather than the ongoing efforts by the Department of Conservation (DOC) in the public estate, or local governments in their areas. Most sanctuaries focus on our avian friends, but some are concerned with threatened indigenous plants, tuatara, lizards, frogs or even snails.

The history of each sanctuary is reported, with their successes and failures at pest removal and species reintroductions. Most sanctuaries start with a group of local enthusiasts, who are listed and often pictured in the book, who persisted in spite of problems. Successful ventures manage to generate interest by wider groups: regional Authorities, local Governments, Māori with tangata whenua, service organisations, schools, universities, etc. Establishing sanctuaries can be expensive, so financial support by local government, commercial sponsorship or public fund-raising is often critical. The advice and support by an increasingly over-stretched DOC is invaluable, particularly for the reintroduction of species, as is the sharing of knowledge among sanctuaries.

In all cases the first step is reducing predator numbers by poisoning and trapping. In closed sanctuaries the aim is total elimination, in open sanctuaries to reduce numbers to manageable levels. Possums are generally the easiest to remove, rats, mustelids and feral cats more difficult while mice often prove impossible to eliminate. Having cleared an area, constant vigilance is essential to prevent re-infestation. Re-vegetating areas devastated by animal browsing is usually necessary and most sanctuaries have plant nurseries and planting programmes.

Re-introduction of species can be problematical and this history records failures as well as successes. Breeding programmes and the collection and transfer of endangered species often takes coordination among sanctuaries, universities and DOC, and can require years of planning.

Overall, the story reveals that many species have been retrieved from a slide into oblivion, while others remain on the endangered list, so the work of sanctuaries remains ongoing. Much has been learned and methods of pest removal by traps and toxins and of species breeding and reintroduction are steadily improving. Continuing R&D is essential to maintain this progress, though funding of research is always difficult.

In many cases sanctuaries have already repopulated adjacent 'halo' areas, and for example, the 'clonking' of tui is now widespread throughout Wellington and the 'shrieking' of kaka is gradually spreading out from Zealandia. Perhaps one day the citizens of Wellington will be able to complain about the incessant birdcall, as reported in the early days of the settlement.

There have been many gains from the efforts of enthusiasts who started the sanctuary movement, but much remains to be done. It is clear that support by local citizenry with money and particularly their time and effort is critical for success. When dealing with predators many small battles have been won, but the war will continue until we have the predator-free New Zealand envisioned by Sir Paul Callaghan. Even then, we would have to keep a wary eye on the most dangerous invader of all, *Homo sapiens.* The title 'Paradise Saved' perhaps takes an overly optimistic view of the situation and 'Paradise Could Still Be Saved, If We Keep Trying' might be a better description of the current situation.

This book is a mine of information about sanctuaries, a 'must have' for anyone considering establishing a new sanctuary. It describes all significant sanctuaries, with their access details and contact addresses. It lists useful resources. It would be of interest to anyone concerned about enhancing our environment and be a valuable source of 'project material' for schools. It is well produced, with many excellent coloured photographs of places, people and the original, pre-human, inhabitants of these Islands.

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