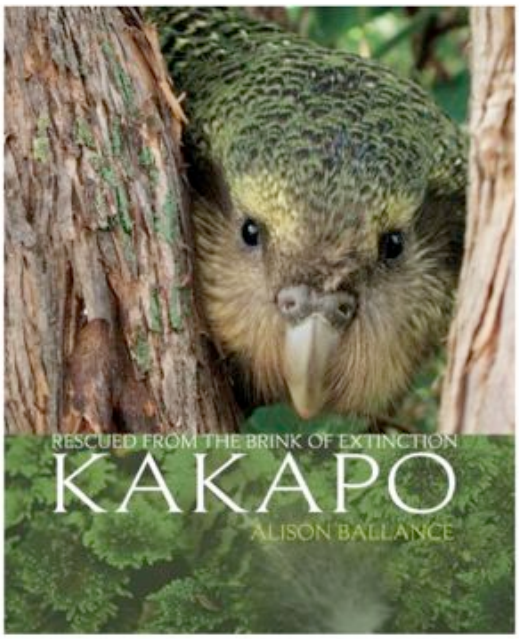
Kakapo: Rescued from the Brink of Extinction. By Alison Ballance. Nelson, NZ: Craig Potton Publishing, 2010. 200 pp. Cloth $49.95

Winner of the 2011 Royal Society of New Zealand Science Book Prize



'Kakapo: Another act of Brinkmanship'

New Zealand-Aotearoa's long history of geographical and evolutionary isolation with its consequential endemism, followed by the rapid human-induced extinctions brought of the past 800 years is now all too well understood. An absence of mammals, bizarre evolutionary 'surrogates' and, perhaps a statement about local resilience in a planetary context, the impact of new species on its ecosystems – all this is part of the Department of Conservation (DOC)'s 'received' version.

What is still only poorly discerned is how much the efforts of DOC and its associates in the prodigious recovery operations that have become a feature of endangered native bird survival over the past few decades, is an expression of our culture. The black robin, the takahe, little spotted, great and brown kiwi, kōkako, stitchbird, saddleback and mohua, among others, have, to varying degrees, each been perilously and famously close to extinction, but all have been 'hauled back from the brink'. Rightly, New Zealanders collectively bask in the success of these dizzying missions, that often take decades of work and multiple, painstaking strategies to make a difference.

These achievements may be characterised in terms of Western medicine. We in the West have come to be comforted by the fact of the medical 'Golden Hour'. This is, of course, the window that emergency services need at a serious road accident or similar event in order to ensure that the critically injured can be helicoptered in to emergency theatre for a personally and statistically satisfactory outcome.

It is an artefact of a culture instantaneous, if not adrenergic in almost everything, from the Insinkerator to roll-out turf. It should therefore come as no surprise that a great deal of our natural science has been funded to perform inside an emergency envelope that is akin to the Golden Hour. This attitude has shifted somewhat within DOC in recent times, although its eternal restructuring and re-budgeting leaves the matter of less alarmist, more proactive, action still in question.

My point here, however, is not to appear cynical about the wonder or the sheer heroism and stoic ingenuity of what is being done for endangered species. On the contrary, it is their work (and DOC's PR machine) that has literarily held the line, preventing further loss of species on the post-colonial watch. But the credibility gap between what recovery plans tell our society about the danger we put other species in, and the self-serving nonsense on the environment spouted by, not least, our newly reinstated Prime Minister, are deeply concerning.

Allison Ballance's *Kakapo: Rescued from the Brink of Extinction* is what we have come to expect from this skilful science communicator with many articles, publications, films and radio programmes to her credit. Among her books is at least one previous work that deals directly with the kakapo. The bird has been the subject of intense, heart-stopping and widely-publicised efforts to kick-start its reproductivity since 1989, largely, but not exclusively, on Te Ahou / Codfish Island, off Stewart Island.

The kakapo, once widely distributed across the archipelago, has become the poster-child of bird recovery programmes in New Zealand. By the 1880s it was confined to the fastness of deep forest usually far from humans and most introduced predators. Favoured with the physiognomy of a feline, such is its distinctiveness, it is not easily summed up. Genetically, it is a parrot, but flightless, yet a mean tree-climber and nocturnal besides. Since parrots are relative new-comers to evolution, it had to have flown here in the past 12-25 million years, long after New Zealand separated from Australia. It is also a heavy-weight, and one of the strong possibilities thrown up by science is that it evolved here from a smaller ancestor into a momma whose optimal breeding weight we now know is between 1.7 and two kilograms. Males can attain three kilos. How its size may have been part of an adaptation may yet be learnt from the unfolding research on its magnificent predator, the not-so-long extinct Haast's eagle. But this is a matter on which the science jury, Ballance tells us, is still out.

At the heart of the kakapo story are the seed masting years, those climate-dependent seasons when native trees come into especially heavy seeding. Where predators, especially rats and mustelids are not controlled, these are times when Nature's ability to enhance native bird life is cruelly stymied by an upsurge in its destroyers. On places like predator-free Codfish, 26 months following the masting, the ripe fruit of the rimu is what enhances the kakapo's breeding. What is now understood, however, is that while it may stimulate better male breeding, females who pack on too much weight may not have such success in fertility.

But the profile of kakapo thus far described is but the beginning of its exceptionality. Its sexual rituals rival those of Trobriand Islanders. Kakapo are nothing if not territorial, and are the only parrots who engage in a lek system of courtship. Like peacocks, this involves elaborate displays of tail-feathers by males, and other ritual. The males dig their own tracks, connected to dust bowls in which, after inflating themselves like footballs, booming and chings (metallic sounds) are generated in order to attract the females. Sex may follow.

Ballance has visited Codfish over a number of breeding periods, observing and working with volunteers and scientists who in the season put in huge hours, often in demanding physical conditions, to monitor, measure, sexually stimulate males and supplementary feed. Necessarily, such work is often at night. The telemetry and the investigation into the subtle interactions between the ecology and the optimal breeding conditions that enable fertilisation, healthy eggs and successful chicks has enabled increasingly better understanding, as Ballance describes. Such knowledge has meant better outcomes. In 1989, two years after it was created, the best numbers that departmental research could find were 40 birds in total, only a quarter of which were female. Twenty tough and testing years later, close to that figure, a total of 33 chicks, were fledged from 27 nests in one season, thereby increasing the population from 91 to 124 birds.

We all applaud the success; what we have yet to take seriously as a society, or in government, is to begin to recognise that the way we live is putting more and more species, terrestrial, aquatic or freshwater, in a position where they, too, must be rescued from the brink. But this was not the purpose—not directly, anyway—of this book, which is not oriented towards either politics nor the question of project sponsorship.

This is a highly readable and lucid work, which would serve as a useful introduction and case study for students from high school level upwards as to the plight of New Zealand's iconic species and the subtle learnings that science can glean to ensure their survival. Its explanations are clear, it is well indexed, the photographs are explicit to the text and the production is up to Craig Potton's usual high standard.

David Young is a New Zealand writer. His latest book is *Coast* (2011). Other works include *Woven by Water: Histories from the Whanganui River*; *Faces of the River*; *Our Islands Our Selves*; *A history of conservation in New* Zealand; *Whio*, and *Saving the endangered blue duck.* He received a Stout Research Fellowship (Victoria U. Wellington) and a Creative New Zealand – Fulbright residency to the University of Hawai'i. He lectures on sustainability, environmental management, and history.

Visiting Scotland to research this novel—which is based on a Scottish grandfather he never knew—David Carnegie Young arrived at St Cyrus in the North East Mearns. Here was a coastline with resonances of the shifting estuary, dune country and rich birdlife from the coastal landscape of his childhood at Turakina, New Zealand, 18,000 kilometres away. The story spins from there, exploring how a coastal environment might heal the after effects of trauma experienced by those who fought in war.