

BOOK REVIEW

Ahuahu: A Conservation Journey in Aotearoa New Zealand

David Towns

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Those lucky enough to have set foot on a remote, predator-free island have experienced the indigenous wildlife of Aotearoa New Zealand in a state close to how it was meant to be. Those living in Aotearoa today have only experienced a diminished, depauperate version of the landscape, which has been irreversibly modified by humans and the non-native species they brought to this land. David Towns's *Ahuahu: a conservation journey in Aotearoa New Zealand* provides a vivid and informative window into the field of island restoration, as a means of repairing and recreating, in as far as possible, the unique ecosystems that once thrived across Aotearoa New Zealand.

David Towns is a conservationist and educator who has been at the forefront of the island restoration movement in Aotearoa New Zealand for the past 40 years. This book is a personal memoir detailing the triumphs, challenges, and lessons learned throughout his career. The narrative centres on the Mercury Islands archipelago, located 8 km off the northeastern coast of the Coromandel Peninsula of Te Ika-a-Māui (the North Island). The story of

Ahuahu, or Great Mercury Island, serves as an insightful case study of island restoration projects in Aotearoa New Zealand, particularly regarding the battle against invasive mammalian pests. However, the book's scope is broader than the title suggests. While Ahuahu and the other Mercury Islands provide a narrative focal point, they serve to introduce the wider role of offshore islands in the story of species conservation in Aotearoa. The breadth of material covered includes topics one might encounter at a university-level introduction to conservation biology – island ecology and biogeography, invasion biology, restoration ecology, conservation genetics, and the wide-ranging impacts of human presence in island ecosystems. Beyond the expected ecological themes, the latter chapters explore themes of conservation ethics and sociocultural approaches to environmental management.

The early chapters set the scene by providing a broad historical account of key events in Aotearoa's geological, evolutionary, and ecological history – leading up to the catastrophic human-led

introductions of non-native species with the arrival of the first Polynesian peoples. While establishing the rationale for conservation efforts, these chapters provide fascinating insight into the island biodiversity of Aotearoa – including the ecological role of seabirds, reptiles and large invertebrates in island ecosystems. While these topics have been discussed elsewhere (e.g. Markwell 1999; Bellingham *et al.* 2010), the interwoven narrative of firsthand involvement gives a unique and personal perspective on the subject matter.

The book goes on to recount the technological and logistical challenges over the 25 years leading up to Ahuahu being declared pest-free in 2016. The developments in techniques and technologies for ground and aerial methods to control invasive mammals exemplify what established Aotearoa New Zealand as a world leader in pest eradication on islands. Towns discusses the methods and tools for monitoring the effectiveness of such efforts, and the governance and organisational processes required for success. This provides an inspiring example of scientific problem solving – adapting to the various challenges of pest control operations on islands of different sizes and landscapes, pest profiles and stages of ecological degradation. Comparing Ahuahu with other case studies, such as Raoul Island in the Kermadec archipelago and Korapuki, one of the smaller islands in the Mercury archipelago, sheds light on some key factors that influence the fate of island restoration projects – oceanic versus continental islands, complexity of biological communities, stage of recolonisation, and legacy effects of previous management. Also discussed are the technological advancements in the field of conservation genetics, which have aided our understanding of managing small populations, improving systematics, species identification and the ability to apply a forensic lens to invasion biology. The implications for a few key species, including kākāpō (*Strigops habroptilus*), kakarua or Chatham Islands black robin (*Petroica traversi*) and tuatara (*Sphenodon punctatus*), are outlined.

The final third of the book switches focus from the scientific aspects of conservation to the sociocultural aspects. It also tackles the cultural and ethical issues – including the controversy surrounding the kiore or Polynesian rat (*Rattus exulans*) being considered sacred to some iwi (indigenous tribes). The complexities of involving communities in decision-making and understanding their motives and values to remove impediments to conservation action are key themes. All this is framed within the context of Te Tiriti o Waitangi – The Treaty of Waitangi, and its relevance to the use and protection of natural resources in Aotearoa, and our evolving understanding of how it should be interpreted and applied.

As a former senior scientist for the Department of Conservation and a key figure in pest eradication projects, Towns' scientific background brings a wealth of knowledge to the subject matter. Much has changed over the 40 years covered by the author's experience. As such, the timeline provides a fascinating historical account of the development of ideas in conservation biology, which was but a fledgling discipline when the author took his first steps on Ahuahu.

The book is distinctly Aotearoa-focussed, allowing the author to explore the intricacies and nuance of sociocultural issues in this country. While some connections with international examples are provided, placing island restoration in Aotearoa within the broader academic discourse, as in Craig *et al.* (2000) or Towns *et al.* (2019), is not the key intention of the book. In my opinion, a key triumph of this book is how the author has integrated and acknowledged the importance of indigenous knowledge and values. The contribution of Māori to conservation in Aotearoa is emphasised throughout, and values such as kaitiakitanga (guardianship) and rangatiratanga (Māori self-determination, autonomy over culture, community and resources; also see Palmer *et al.* 2020) are woven throughout the narrative. This important sociocultural aspect of island conservation has not always been properly acknowledged in the academic literature or has failed to empower or embody indigenous aspirations fully (Roberts *et al.* 1995). The tone of *Ahuahu* aligns with the growing emphasis on biculturalism and more holistic approaches to environmental management in New Zealand – integrating Mātauranga Māori (Māori knowledge) and tikanga (customs) to ensure cultural values align with ecological priorities.

Some readers might find the element of personal reflection detracts from the scientific focus, but I considered this a highlight of the book. Well-informed and well-referenced assertions, supported by data and fieldwork throughout, provide scholarly rigour, blended with historical interest and cultural context. And a dose of whimsy is thrown in for good measure, in the form of quaint historical excerpts and poetic quotes. The first-hand narrative style provides a storytelling quality and exudes a sense of deep personal connection to the Mercury Islands, making this a more engaging read than an impersonal, purely academic text.

The structure and layout of the book, and the clear and evocative way that information is presented, shows that a skilled and passionate educator has written this book. Visually, the book is excellent, with high-quality images and figures throughout that complement the text and further engage the reader with the subject matter. These include stunning photographs of native wildlife, annotated maps showing the locations of islands

and ecosanctuaries throughout Aotearoa, graphs or tables summarising scientific content, charming historical artworks, and models or diagrams explaining concepts. Furthermore, using callout boxes to clarify concepts ensures the text can go into biological and scientific depth, yet it remains accessible to readers who are unfamiliar with the technical concepts (e.g. stable isotope analysis, social network analysis, etc.) Given the usefulness of these callout boxes and the various tables and figures, a table of contents listing these would have aided the utility as a reference text, as I found myself searching for bits of information that I had previously read and wanted to revisit.

Minor editorial quibbles aside, this book is written in a style that will delight a wide-ranging audience, from impassioned amateur naturalists to seasoned professionals seeking a general overview or fresh perspective on island restoration. For students or newcomers to the field of ecology, conservation and related disciplines, this book provides a treasure trove of concepts, tools, and references, without being impenetrably jargony or technical. It will connect you with the subject much more intimately than a more academic text would, providing a more holistic overview of island restoration in Aotearoa. The *conservation journey* alluded to in the title, is a fitting description – I appreciated that it was not simply a reporting of the findings, but the description of the fieldwork and the author's personal involvement in it, with all pitfalls encountered along the way. Despite the grim realities of past ecological devastation, the book's tone remains optimistic. This optimism extends to the immense task of reversing ecological ills but also in the convergence of Māori and Western

views to chart the course of conservation action going forward.

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