

Simon Nathan and Rebecca Priestley: *Finding New Zealand's Scientific Heritage: from Mātauranga Māori to Augustus Hamilton.* *Journal of the Royal Society of New Zealand* 47, no. 2 (March 2017): 1–144.

Much has been written about the three big names of nineteenth-century science in New Zealand—Ferdinand Hochstetter, Julius Haast and James Hector—all of whom were geologists. It is therefore welcome to have a series of essays

published that cover wider scientific disciplines, and provide information on the work of other practitioners who were involved in science to a lesser or greater extent in New Zealand in the nineteenth century. These 21 short essays with appropriate references resulted from a conference on the history of New Zealand science held in Wellington in November 2015 to celebrate the 150th anniversary of the appointment of James Hector as New Zealand's first government scientist.

The essays cover a wide range of topics. The New Zealand Institute (later Royal Society of New Zealand), so important as a focus for New Zealand science, its affiliates and publications are well described. Importantly, the essays also explain the support from government that the Institute received from the many well-educated politicians who were members. Collections and outreach to the public are covered by essays that touch on museums in Otago, Wellington, Hamilton, Hawkes Bay and Auckland, including the involvement of James Hector, T. J. Parker, Thomas Cheeseman, Augustus Hamilton and Walter Mantell. Other individuals who made a precarious living as scientists are dealt with in essays on Henry Suter (palaeontologist), William Grayling (chemist) and Thomas Kirk (botanist).

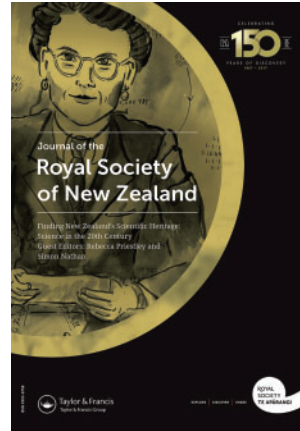
The subjects of astronomical and geophysical observatories, including time keeping, are covered in three essays on the work of James Hector, S. J. Carkeek, Arthur Stock and J. T. Thomson. One essay deals with the effects of the 1848 Wellington earthquake and its later influence on building construction.

Māori involvement in science is also included in two essays; the first on Māori scientific knowledge of the world around them and the second on Māori concerns about conservation of the New Zealand environment based on surveys of nineteenth-century Māori newspapers.

Other contributions cover the visit of the *Challenger* Expedition to New Zealand in 1874; the extent and value for historical research of the Julius Haast collection held in the Alexander Turnbull Library; and the significance of the Oamaru diatomite.

This volume, with its extensive references in each article, is an excellent introduction for the reader who wishes to find out more about aspects of New Zealand's nineteenth-century science.

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Rebecca Priestley and Simon Nathan: *Finding New Zealand's Scientific Heritage: Science in the 20th Century.* *Journal of the Royal Society of New Zealand*, 47, no. 2 (June 2017): 145–217.

To celebrate the sesquicentenary of the Royal Society of New Zealand (originally founded as the New Zealand Institute in 1867), Rebecca Priestley and Simon Nathan have assembled two special issues of the *Journal of the Royal Society of New Zealand*.

The first covers the nineteenth century, and the second—the volume under review—considers the twentieth century. This collection contains eleven short essays with an introduction by the editors. Many of the contributors have been active participants in scientific work in New Zealand. As the editors note, the task of researching and writing the local history of science still falls mainly to scientists, rather than to trained historians.

The introduction is very brief and does not frame or conceptualize the collection as a whole. This is a disappointing way to open such a volume, as readers not familiar with the current state of the history of science in New Zealand, or its conceptual preoccupations, are not given a strong orientation. After this introduction, Kate Hannah's paper offers a robust critique of the continued absence of women from the story of New Zealand science. Hannah demonstrates how the conference that gave rise to this special issue saw only seven women mentioned in the abstracts, whereas 81 individual men were named.

The remaining ten essays cover a range of scientific disciplines and historical approaches. Anthony and Catherine Hodder give a detailed description of the built environment of scientific work in Wellington, including the buildings for the Museum, Colonial Laboratory, and Vaccine Station, all of which had disappeared from both the physical fabric and cultural memory of Wellington by the 1970s. Matthew Henry tells the story of the human-nonhuman assemblage for observing the upper atmosphere in Apia, Western Samoa, made by the American meteorologist Andrew Thompson in the early 1920s. Ross Galbreath gives a brief account of how scientists came to lead and control the Department of Scientific and Industrial Research (DSIR), in contrast to the administrator-led experience of its British progenitor department. Geoff Gregory briefly recounts the history and fortunes of the New Zealand Association of Scientists, noting its initial, excellent growth in membership, its history of interventions into New Zealand scientific and environmental policy, and then its more recent retreat into quiescence. Keith Lewis also surveys the early years of the New Zealand Oceanographic Institute.

There are five papers focused on individual scientists. Simon Nathan details the story of indefatigable geologist, Charles Edward Douglas, and his production of a substantial geological map of Westland. This depiction of the west coast of the South Island was itself lost and found on several occasions. There are three articles whose authors are the children of their subjects. Keith Willett writes on his father Richard, a significant geologist and director of the

New Zealand Geological Survey. Mary Harris discusses her mother, the radiophysicist Elizabeth Alexander, whose story is notable not only for her scientific contribution, but also the social and institutional barriers faced by a woman truly advancing her career in the 1940s. Finally, John Hearnshaw writes on his father Leslie, the first director of the Industrial Psychology Division of DSIR from 1942 to 1947, who strove to improve the conditions of New Zealanders working in factories engaged in war production. Finally, Josephine Reid recounts the life of the astronomer Beatrice Hill Tinsley, especially her battles to achieve a place in the world of university research.

This is a small collection on a range of interesting institutions and individuals. The papers are mostly descriptive, rather than analytical, and none of the contributors exhibit a particular concern to

engage with the larger body of history of science scholarship. One of the striking, if implicit, themes of the collection relates to place and the 'where' of science. Several papers contend that the history of science in New Zealand spills over its geographic boundaries, contributing to territoriality, imperialism, or globalisation, from the careers of Thompson in Apia and Tinsley in the USA, to Alexander in Singapore and Nigeria. While 'heritage' is a keyword in the collection's title, what remains ambiguous are the ways in which the history of New Zealand science can be enrolled—or perhaps even neglected—in moving science or the nation forward into the future.

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