

REVIEW: HOCHSTETTER'S AUCKLAND DIARY

22 DECEMBER 1858 – 5 MARCH 1859

By Sascha Nolden and Bruce W.

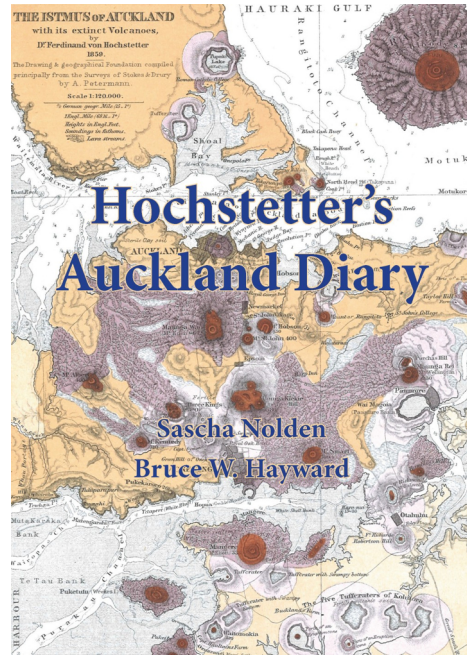
Hayward

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Review by: David J. Lowe

With a strong interest in geoscience history, I was pleased to be asked to review this book. However, I harboured some misgivings: what is the point of reading a diary from so long ago, albeit by a truly exceptional pioneering geologist, who spent a few months in Auckland and its environs 165 years ago? Would I actually get beyond the first few pages? The answer was 'absolutely'. I greatly enjoyed reading the book, and did so in its entirety, over two evenings, from cover to cover. The book encompasses far more than diary entries: the authors document and explain important background details about Hochstetter's trip *in toto* to New Zealand, surveys and publications relating to Auckland more generally are provided, Hochstetter's views on the Auckland volcanoes and those of the South Auckland field are described (along with a table of the volcanoes he identified in Auckland), Hochstetter's report on the Drury/Hunua coalfield is presented, as is his colourful geological map of upper-central North Island, and so on. The book adds detail to the broader biography of Johnston and Nolden (2011)¹.

The actual diary section, entitled "Hochstetter's Auckland Diary: an annotated English translation", runs from p. 41 to p. 160. The translation is flawless and fluent, testament to Nolden's great skills and (undoubtedly) relentless hard work, and a delight to read (I spotted only one trivial error in the entire 120



'diary' pages: 'to' was written rather than 'too'). One gains an enhanced sense of Hochstetter the person through his direct communication with the reader. Although writing these diaries at a time of intense social and cultural change in New Zealand, a settler-colonial rhetoric is barely evident, if at all. The relationships Hochstetter forged and nurtured with local Māori were shared at moments throughout his diaries. It is poignant that Hochstetter's travels took place only a handful of years before the New Zealand wars (e.g. see O'Malley, 2019²).

Another reason I appreciated the book was that Hochstetter covers a very wide range of topics (as befits the first survey of its kind), matching my own wide-ranging interests (and likely the broad interests of many others in the society) that extend beyond my specialties. Many early geological bulletins in New Zealand are similarly wide ranging in their coverage

and, consequently, always interesting in some way. The purpose of the diary, the first of a series of five Hochstetter wrote during his stay in New Zealand, is summarised on p. 17 as follows:

"This diary provides an insight into the physical and social state of Auckland at the time. Capturing the journeys among the fascinating and diverse range of eruption points and explorations of the natural history of the area [w]hile at the same time witnessing Hochstetter's meetings and interactions with people at all levels of society. In fact, about 100 people are mentioned or otherwise made reference to in these pages. Apart from people, an important feature this primary document records are the place names or toponyms, which Hochstetter actively records and collects on his journeys of exploration, with the aim of capturing and preserving these on his maps."

Another highlight of the book is the myriad of photographs and sketches throughout, reproduced at high quality. Not just relating to Hochstetter and Auckland, they also depict various people and locations beyond Auckland, including more than 30 'extra' photographs alongside the biographical and geographical indexes provided near the end of the book (which contains 120 figures in total). The sketches show Hochstetter's efficient field style, my favourite being Sketch 9 (p. 99), a rather minimalist view of a flax leaf. Quite a few of the figures consist of more elaborate sketches often showing stratigraphy or nascent maps. Figure 110 (p. 184) comprises an 1859 sketch of Waikato's Mt Karioi (near Whāingaroa Raglan) by Augustus Koch. Knowing that local geologist Oliver McLeod was putting the finishing touches to his forthcoming bulletin and map on Karioi volcano, I alerted him to the image, which was new to me. Oliver had not seen the sketch either and contacted Nolden who provided a high-resolution image from the Hochstetter Collection, and the sketch now forms Figure 1 in McLeod et al. (forthcoming 2024³).

A critically important part of the book is the extensive set of footnotes (an astonishing 579 in all) that explain or update places, geographical or geological features, or people, noted in the text. These notes are

essential to enable the contemporary reader make sense of the features or places described in the text, many of which were unnamed or potentially misidentified in 1858-59. For example, the first mention (on p. 42) by Hochstetter of "a higher mountain range covered in native forest" on the west coast is identified in Footnote 11 as "Waitakere Ranges (north of the harbour entrance) and Awitū Peninsula (south of the entrance)". The text would definitely be much less satisfying without the footnotes, which must have taken an enormous amount of work (mostly by Hayward) to compile. The only paragraph that I thought might have benefitted possibly from an explanatory footnote (see box, next page) is that on p. 102 as follows:

"The soil here is almost everywhere the fertile soil of the decomposed basalt conglomerate. A peculiarity here are small globules similar to peanuts, which in large numbers cover individual areas on the surface; they seem to be a product of decomposition of the basalt conglomerates, but do not consist of brown limonite, but as it seems to me of a manganese-containing iron ore. Where these balls are found, the soil is said to be less fertile."

The late Michael King (1992)¹⁰ wrote that in reviewing books he examined them from two perspectives (p. 203):

"I try to keep both the writers reviewed and the readers clearly in sight. For the benefit of the reviewed, I ask myself if I am being fair, if I am reviewing the book they actually wrote, and whether the work is good of its kind. On behalf of the readers, I ask does the book do what it sets out to do; if so, why; if not, why not; and – the bottom line – is it worth buying?"

So, for the writers, is the book "good of its kind"? Emphatically, yes – I think it's excellent. As well as being highly readable and chock-full of information and insights and compelling illustrations, the A4-size book is beautifully presented and nicely printed and bound on relatively thick, glossy paper with no "show through" issues. When I showed the book to my wife, Maria, she was greatly taken by the dramatic cover, the

Explanation of Patumāhoe soils: Given the location near Patumāhoe, these soils are very likely derived from weathered Hamilton Ash beds (deposited between ~340,000 years ago and ~100,000 years ago: Lowe, 2019⁴) overlying buried soils on basalt (rather than deriving from basalt) (Orbell, 1974⁵; Hayward, 2017⁶), forming Granular Soils in the New Zealand Soil Classification (Hewitt et al., 2021⁷). The “small globules similar to peanuts” are likely manganese concretions predominantly comprising MnO₂ (typically pyrolusite), as correctly identified by Hochstetter, which are common in the soils of the area (Orbell, 1974⁵). They represent redox reactions chiefly with Mn compounds forming prominent coatings called mangans, as well as concretions, on peds in lower horizons (Lowe, 2010⁸). Much smaller iron oxide nodules (10–50 µm) are also likely to be present throughout the profile, however (Bakker et al., 1996⁹). By the way, the term “limonite” is a discredited name, although it remains widely used as a broad term for describing (unidentified) iron oxide minerals in the field.

famous map of the Auckland Volcanic Field on “The Isthmus [sic] of Auckland” published by Hochstetter (the English versions of which were first published in 1864 and 1865). The book’s production is a credit to the Geoscience Society of New Zealand and its impressive miscellaneous publication series. I make special mention of, and congratulate, “George Hook of Akaroa for editorial input and layout” (p. 188), Matt Sagar, and others, as named in the acknowledgements, for their input to the book’s production.

Acknowledgement

I thank Sebastian J. Lowe for his comments and suggestions that improved the review.

References

- ¹Johnston, M., Nolden, S. (2011). Travels of Hochstetter and Haast in New Zealand 1858-1860. Nikau Press, Nelson. 336 pp.
- ²O'Malley, V. (2019). The New Zealand Wars Ngā Pakanga O Aotearoa. Bridget Williams Books, Auckland. 272 pp.
- ³McLeod, O.E., Briggs, R.M., Conway, C.E., Ishizuka, O. (2024). Geology of Karioi Volcano, Aotearoa New Zealand. Geoscience Society of New Zealand Miscellaneous Publication (in press).
- ⁴Lowe, D.J. (2019). Using soil stratigraphy and tephrochronology to understand the origin, age, and classification of a unique Late Quaternary tephra derived Ultisol in Aotearoa New Zealand. Quaternary 2 (1), 9. <https://doi.org/10.3390/quat2010009>
- ⁵Orbell, G.E. (1974). Soils of government horticultural research areas, Pukekohe, New Zealand. New Zealand Soil Survey Report 20. 15 pp.
- ⁶Hayward, B.W. (with Jamieson, A., Morley, M.S.) (2017). Out of the Ocean, Into the Fire. History in the Rocks, Fossils and Landforms of Auckland, Northland and Coromandel. Geoscience Society of New Zealand Miscellaneous Publication 146. 339 pp. <https://gsnz.org.nz/assets/Uploads/Shop/Products/Out-of-the-Ocean-LowRes-eBook.pdf>
- ⁷Hewitt, A.E., Balks, M.R., Lowe, D.J. (2021). The Soils of Aotearoa New Zealand. Springer, Cham. 332 pp.
- ⁸Lowe, D.J. (2010). Pukekohe silt loam, Pukekohe Hill. In: Lowe, D.J., Neall, V.E., Hedley, M., Clothier, B., Mackay, A. Guidebook for pre-conference North Island, New Zealand ‘Volcanoes to Ocean’ field tour (27–30 July 2010). 19th World Soils Congress, International Union of Soil Sciences, Brisbane. Soil and Earth Sciences Occasional Publication 3, Massey University, Palmerston North, pp. 1.12-1.23 (printed), pp. 53-63 (digital). https://www.researchgate.net/publication/301197715_Pukekohe_silt_loam_Pukekohe_Hill
- ⁹Bakker, L., Lowe, D.J., Jongmans, A.G. (1996). A micromorphological study of pedogenic processes in an evolutionary soil sequence formed on Late Quaternary rhyolitic tephra deposits, North Island, New Zealand. Quaternary International 34-36, 249-261.
- ¹⁰King, M. (1992). Hidden Places – A Memoir in Journalism. Sceptre Books, Auckland. 250 pp.

For the reader, does the book do what it sets out to do, and is it worth buying? Clearly, yes and yes. A limited number of paperback copies are available for purchase (\$40) from the society’s website at <https://gsnz.org.nz/publications-and-webstore/product/170> and it is also available, generously, as a PDF free to download at https://gsnz.org.nz/assets/Uploads/Shop/Products/MP163_HocstettersAucklandDiary/MP163_HochstettersAucklandDiary.pdf

King (1992)¹⁰ also (correctly) noted that “The easiest books to review are those which are very good or very bad of their kind” (p. 203). This book, by two absolute masters in their fields, is of the former type and thus was exceptionally easy to review. ■

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