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Inhabited by Polynesians since the thirteenth century and discovered by Europeans in the seventeenth, New Zealand is a geologically diverse island group where active volcanoes and frequent earthquakes have resulted in a rich variety of rock formations and geothermal activity. In 1859–60, the geologist Ferdinand von Hochstetter (1829–84) was employed by Auckland's government to undertake the first systematic geological survey of the islands, the results of which were first published in German in 1863 and translated into this English version in 1867. Hochstetter describes his travels across New Zealand, his encounters with native people and his scientific observations. He analyses plants, wildlife and fossils, describes mountains, rocks and boiling springs, and evaluates evidence of glaciers and tectonic activity. As a result of Hochstetter's work, several species in New Zealand were named after him. This book remains a valuable resource in the history of Australasian natural science.

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Ro Paora Matulaera. (Paul Marshall.) Maori shief at Kapangas-Coromandel Harbour Prov. Auchland .

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NEW ZEALAND

ITS PHYSICAL GEOGRAPHY, GEOLOGY AND NATURAL HISTORY

WITH SPECIAL REFERENCE

TO THE RESULTS OF GOVERNMENT EXPEDITIONS IN THE PROVINCES OF

AUCKLAND AND NELSON

BY

DR. FERDINAND VON HOCHSTETTER,

Professor of Mineralogy and Geology at the Polytechnic Institution of Vienna, late member of the Austrian Novara-Expedition, President of the J. R. Geographical Society of Vienna, Honorary member of the New Zealand Society at Wellington, and of the Philosophical Institute of Canterbury N. Z. etc. etc.

TRANSLATED FROM THE GERMAN ORIGINAL PUBLISHED IN 1863 BY EDWARD SAUTER, A. M., PRINCIPAL LITTLE ROCK ACADEMY, ARKANSAS. WITH ADDITIONS UP TO 1866 BY THE AUTHOR. ILLUSTRATED WITH TWO MAPS, SEVEN PLATES IN TINTS, TEN LARGE WOODCUTS, PAGE-SIZE, AND NINTY-THREE WOOD ENGRAVINGS IN THE TEXT.

STUTTGART, J. G. COTTA.

1867.

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Preface to the German Edition,

published in 1863.

An Austrian man-of-war, *His Majesty's* frigate *Novara*, conveyed me towards the end of the year 1858 to the shores of New Zealand. In the capacity of geologist, I was a member of the Expedition fitted out under the orders of His Imperial Highness the Archduke Ferdinand Maximilian for a voyage round the world.

By the kind arrangements of the Commander of this Expedition, Vice-Admiral, then Commodore, Baron von Wüllerstorf-Urbair and by the timely preparations of the Colonial Government and the Colonists of New Zealand I was placed in such a position that I could fully devote myself for the space of nine months to the exploration of one of the most remarkable countries of the world, a beautiful country, which Albions enterprising sons, it's occupiers, looking forward to a rich and blooming future, are wont to call "the Great-Britain of the South Sea."

Was it the amiable disposition of the inhabitants? Was it the ties of friendship, that I formed there? Or was it the grandeur and peculiarity of the natural features of a country, appearing in its isolation like a world of its own, that attracted me so strongly? I cannot say; but I still look back with enthusiasm to my stay in the Antipodes.

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On returning to my home in the beginning of the year 1860, it became my duty to work up the rich and copious materials I had brought with me in the shape of observations and collections, and to publish them as one of the results of the Novara-Expedition. A scientific work, accompanied by an atlas with numerous illustrations of newly discovered fossils, with views of the country and geological maps were to comprise the results of my geological researches. In a second work of a more general character I intended to present the results of my observations in a form better suited to the general reader and, in the proposed English translation, more especially accessible to the Colonists of New Zealand.

With heartfelt gratitude I may be allowed to state here, that the Imperial Austrian Government accorded me every assistance necessary to enable me to carry out both designs. While for the publication of the scientific work the Government itself has provided in a most liberal manner, I am indebted to the kindness of Baron von Cotta, for the publication of the Book of Travels in a form worthy to stand side by side with the Narrative of the Novara-Expedition as published in the Imperial Printing Office at Vienna.

By letters and other communications from numerous friends in New Zealand I have been enabled to follow from this hemisphere also, the course of events on those distant islands. Amongst these my friend and former fellow traveller, Dr. Julius Haast, the present Government Geologist of the Province of Canterbury, has contributed most amply to the completion of the present work by the important and interesting information obtained by him during his travels in the Alpine regions of the Southern Island.

Should I have been so fortunate as to have afforded any new information regarding the youngest and most distant colony of the British crown, I venture to hope, that I may at least

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have partly cancelled a debt of gratitude I owe to a nation, from the members of which I have experienced in all parts of the world the most friendly hospitality and the most energetic assistance in my labours.

My own countrymen, on the other hand, I hope will be gratified by my having presented to them for the first time on a larger scale the wonders and peculiarities of a country of which Carl Ritter, our great geographer, said already in 1842 in enthusiastic language, that it seems destined before all other countries to become a mother of civilized nations.

Vienna, December, 1862.

Dr. F. von Hochstetter.

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Preface to the English Edition.

Already when the German original was published, it was my most earnest desire, that this work should also appear in an English edition for the purpose of facilitating its circulation in the Colony and in England. The accomplishment of this wish has now been rendered possible by the intervention of the General Assembly of New Zealand, which, during their session in 1866, voted in a most liberal manner a contribution towards the cost of the English work by the purchase of 500 copies of the same. I trust that I may be allowed to express here my most sincere thanks to the General Assembly and Government of New Zealand, for this farther proof of their kind interest in the undertaking.

The English edition, as now presented, is not a mere translation of the German original. A great portion of the matter in the German work, such as the chapter on the History of the Colonisation, on the Maori-war, on the Maori poetry, and on the statistics of New Zealand, was intended exclusively for German readers, to whom the numerous English works on New Zealand, treating at length upon these subjects, are often inaccessible. In these chapters I could have offered nothing new to the English public. I have therefore entirely omitted them in the English edition, and have instead rewritten and enlarged the chapters on the Physical Geography and Geology. In the

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same way, also, the chapter on the Southern Alps had, in consequence of the discoveries and explorations of the latter years, to be entirely rewritten, and likewise in the other chapters additions up to the year 1866 have been made. Also the sequence of the chapters has been altered in the English edition. Thus, the first part of the book contains now the general matter, whilst the second part, beginning chapter XI, consists of accounts of travels and descriptions of single districts and landscapes on both Islands. A number of the former illustrations have likewise been replaced here by new ones.

In delivering this book into the hands of the English public, I beg to request them not to subject the same to the severest criticism as regards its manner of expression and style, but to be lenient in their judgment, taking into consideration that neither author nor translator have written in their native language. May even the severest critic acknowledge, that the German author and translator, as well as the German publisher, have done their best to render this work as correct as possible. I for my part certainly feel myself greatly indebted to Mr. Edward Sauter, A. M., Principal Little Rock Academy, Arkansas, who, during his stay in Europe in 1865, took the trouble to translate the German original, and to the Publisher for their aid in overcoming all those difficulties, which the publication of an English work in Germany necessarily entails.

Vienna, August, 1867.

Dr. F. von Hochstetter.

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