

A portrait of Sir Julius von Haast, an elderly man with a full, grey beard and mustache, wearing a dark suit jacket, a white shirt, and a dark bow tie. He is looking slightly to the right of the frame.

# Sir Julius von Haast

**Commemorating the bicentenary of the birth  
of the founder of Canterbury Museum**

Proceedings of the Haast Symposium  
hosted by Canterbury Museum  
30 April – 1 May 2022

Edited by Sascha Nolden, George Hook & Simon Nathan

**Canterbury Museum Bulletin No. 11**



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**Front cover image** Sir Julius von Haast by Allan Bowles Cambridge (1847–1911). Canterbury Museum Collection

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## Foreword

**Anthony Wright**

*Director, Canterbury Museum*

Earlier this year Canterbury Museum hosted an online symposium to celebrate the two hundredth birthday of our founder, Sir Julius von Haast, who was born on 1 May 1822 in Bonn, Germany. This special Canterbury Museum *Bulletin* contains selected papers from the symposium that deal with different aspects of Haast's life and achievements. We celebrate Haast as an explorer, natural scientist, Museum director and writer – a nineteenth-century polymath who made an enormous contribution to his adopted home in Waitaha (Canterbury).

Specimens that Haast collected in his travels through Aotearoa New Zealand are the foundation of the Canterbury Museum collection. On 3 December 1867, he opened to the public a display of 7,887 natural history objects in the Canterbury Provincial Council Buildings. A purpose-built Museum opened three years later on our current Rolleston Avenue site. In Haast's lifetime, Canterbury Museum became one of the leading museums in the Southern Hemisphere.

Haast's interests were wide and varied. The first major event held in the new Museum in 1870 was an art exhibition. He was a founding member of the Canterbury Society of Arts and was, by contemporary accounts, an accomplished violinist who enriched the local musical scene.

Haast originally travelled to New Zealand in 1858 to investigate whether the country was suitable for German immigration. Within days, he had met and formed a lifelong friendship with Ferdinand Hochstetter, the geologist on the Austrian *Novara* scientific expedition. Haast travelled with Hochstetter on all his New Zealand journeys. Hochstetter would later become superintendent of the Imperial Natural History Museum in Vienna, Austria, exchanging natural history specimens with his colleague Haast on the other side of the world, New Zealand. We are delighted that there is a continuing association with scholars from Vienna, three of whom have contributed papers to this volume.

In putting the spotlight on Haast's life it is also important to acknowledge that he was a product of his times and of European colonialism. Some of his actions are not as we would do today, particularly in failing to acknowledge tangata whenua and the information that they shared with him. But, bearing that in mind, we hope that this volume is a record of Haast's legacy that will continue to inspire future research.

My special thanks to the team who organised the symposium, the behind-the-scenes team at Canterbury Museum, and those responsible for the production of this landmark *Bulletin*.





## Preface

“Happy 200<sup>th</sup> Birthday Sir Julius!” is what I should have said at the end of my closing remarks on 1 May at the Haast Symposium earlier this year. But at the time my final thoughts for the day were all about how fortunate we were to have had Canterbury Museum hosting us. So, very fittingly, an expression of this gratitude and acknowledgement was the subject of my final words for the event.

The Haast Symposium was a virtual meeting hosted by Canterbury Museum on 30 April and 1 May 2022. The event was a wonderful weekend of sharing and communicating insights across a broad spectrum of Haast scholarship, with papers contributed from both New Zealand and Vienna.

Like the present volume, the symposium opened with words of welcome from the Museum Director, Anthony Wright, who set the scene for a highly engaging conference. The second day of the event featured special words of welcome from Dr Ursula Rack, Honorary Austrian Consul, Christchurch.

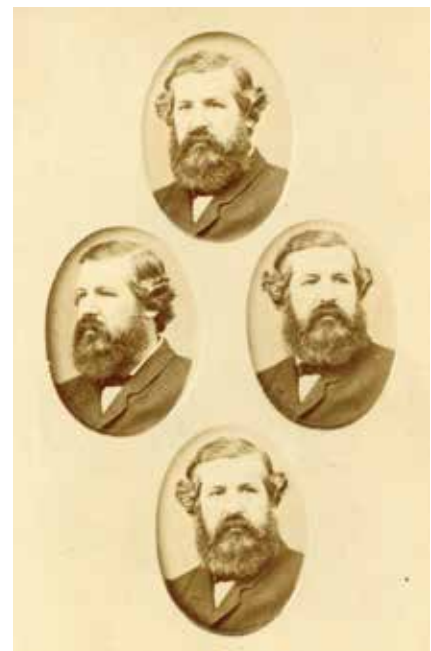
At the heart of the event were the 10 papers presented, four from Austria and six from New Zealand, representing the scholarly contributions of 12 researchers from the Austrian Academy of Sciences, University of Vienna, Natural History Museum Vienna, Canterbury Museum, Otago Museum, University of Canterbury and Alexander Turnbull Library.

I am pleased to be able to present this volume, along with my two esteemed fellow guest editors, Dr Simon Nathan and Dr George Hook. The transition from being part of the organising committee to forming an editorial committee was seamless – a smooth transition from the roles of convenors and contributors to that of editors and authors. Together we have had a stimulating time managing the peer review stage and the initial editorial processing of the contributions published here.

The order of papers largely follows the alphabetical order of the surnames of the lead authors with a couple of exceptions. The two pieces which primarily introduce Haast biographically and photographically have been placed at the beginning. This is to enable the reader to become familiar with the life and work of Haast through reading the short biography, and meeting him face to face in an article that details the photographic portraiture of the subject. And just as a progression of portraits shows the maturing of the subject, so too do the various contributions represent the evolution of his name in line with the relevant biographical period under discussion.

Born Johann Franz Haast in 1822, Haast assumed the name Julius Haast in 1858, became Julius von Haast on being raised to the Austrian nobility in 1875, and having been awarded a KCMG by Queen Victoria in 1886 died Sir Julius von Haast in 1887 (Fig. 1).

In this volume, eight of the 10 papers originally presented at the symposium are published in full, while the two papers presented, but not submitted for publication here, are acknowledged. Dr Paul Scofield’s paper, co-authored with Dr Vanesa De Pietri, on the early fossil exchanges and collections at Canterbury Museum, which represents ongoing research



**Figure 1.** Carte de visite with four medallion vignette portraits of Julius Haast by Daniel Louis Mundy, Christchurch, 1869. Geological Survey of Austria, GSA Signatur A 11637-BM

in progress, is reserved for later publication. The paper by Dr Mathias Harzhauser, along with his two co-authors Dr Stephanie Jovanic-Kruspel and Dr Ursula B Göhlich, on the moa skeletons held at the Natural History Museum Vienna, was very well received by attendees and is likely to be published elsewhere in due course.

As I have a fondness for round numbers and was keen to see this volume comprise 10 papers similar to the number of conference presentations, two further contributions have been included by invitation. Dr Simon Nathan wrote the special biographical introduction to Haast, which really sets the scene by bringing together a succinct summary of what is known about Haast with more or less certainty. Simon has done us all a favour, as the reader is no longer faced with the daunting task of reading over 1,000 pages in the definitive biography by Haast's son Heinrich published in 1948, but now has the advantage of accessing an expertly crafted summary with numerous updates.

The second additional invitation piece is the superb article by Dr George Hook, which was represented in the symposium as a scholarly curated slide show, illustrating a selection of Haast's sketches and paintings of glaciers from his surveys and explorations of the Southern Alps. George obligingly developed this into a full paper, which has already received considerable acclaim from the reviewers.

So, this volume presents the following contributions:

Julia Bradshaw, from Canterbury Museum, looks anew at the history of the exploration of Haast Pass, originally named Tioripātea. This study is highly engaging because of the thoroughness of the arguments and clear conclusions, which should put to rest any doubts on this long debated historical case of exploratory precedence. It is also so beautifully illustrated with fine images of the area that one just wants to go there and experience those amazing views in person.

Dr Rosi Crane, from Otago Museum, contributes the results of her meticulous research into the influence of Haast on, and his relationship with, Otago Museum – another museum prominently featuring moa skeletons and with ambitions to compete in the best traditions of provincial rivalry. This is a story of collaborations and some interdependencies, but also of networking to facilitate acquisitions and exchanges. This resulted in the exponential growth of the Otago collections and the requisite bespoke museum building being constructed in Dunedin to showcase them.

Dr George Hook and his study of a selection of Haast's field drawings, finished watercolours, and their eventual publication as lithographed plates illustrating one of his reports has already been mentioned. George has developed a completely new approach and methodology for analysing artistic representations of landscapes, combining the best of art history, natural sciences and geospatial science. His paper enables the reader to virtually view what Haast may have actually seen during his explorations and to compare this to Haast's artistic renditions in pencil, ink and watercolour on paper, in order to assess their fidelity to nature.

Dr Marianne Klemun, from Vienna University, takes the reader on a journey to the exciting realms of one of the great international world exhibitions held in Imperial Vienna in 1873. This shows how New Zealand challenged the colonial status quo by forging its own identity on this international stage. Her paper features collaborations and networking between old friends Haast and Ferdinand von Hochstetter, along with all the expected hurdles and challenges that come with such an undertaking and the requisite associated bureaucracy. Ultimately, the exhibition contributed to the establishment of solid reputations for both Haast and Hochstetter, and reinforced the longstanding Viennese fascination with New Zealand, stemming from the time of the *Novara* Expedition.

Dr Martin Krenn, from the Natural History Museum Vienna, delves deep into the Imperial state archives to uncover in fascinating detail the journey of Haast to ennoblement, giving him the right to use the title “von”, and being bestowed a hereditary Austrian knighthood. The exceptional circumstances of a naturalised British subject being honoured in this way, and the many steps taken to help fulfil this ambition are interwoven with details of the personal networking and support of friends collaborating at an Antipodean distance, and succeeding against some odds. This contribution answers many questions and presents for the first time the full colour version of the coat of arms especially designed for the Haast family. This incorporates unique heraldic iconography relating to Haast the New Zealand naturalist, representing the important links between New Zealand and Vienna at the most formal level of design elements.

Dr Johannes Mattes, from the Viennese Academy of Sciences, looks at the important role of membership of European scientific and learned societies for the furthering of Haast’s career aspirations and his establishment as a globally recognised scientist. The networking and collaboration, the exchange of information and publications, and the engagement at all levels ensuring reciprocity and elevation in status for all concerned, are central to the themes so expertly untangled and presented to the reader.

As mentioned previously, Dr Simon Nathan contributes the biographical introduction to Haast, drawing on information in the *Oxford Dictionary of National Biography* and the *Dictionary of New Zealand Biography*, but also numerous other sources. He also co-authored a paper with Dr Sascha Nolden on the photographic portraiture of Haast during the final three decades of his life – those years spent in New Zealand. But here we also find Simon’s main paper, presenting his original research into the genesis, production and reception of the monumental biography of Haast, written by his son Heinrich Ferdinand von Haast and published in 1948. This important research sheds new light on the challenges faced by Heinrich in this remarkable authorial and publishing project, which represents more than mere filial piety, such that, as Simon clearly and successfully argues, the term hagiography is a misnomer in this context.

Dr Sascha Nolden, from the Alexander Turnbull Library, contributes an article on the correspondence of Haast that aims to review this important holding of nineteenth-century correspondence, which is part of the larger Sir Julius von Haast Collection at the Alexander Turnbull Library. This collection was successfully nominated for inscription in the New Zealand UNESCO Memory of the World register in 2019. His paper goes on to review editions of letters and other scholarly engagement with the collection to date, and to explore possible future publication of an edition of Haast’s correspondence, which represents a wealth of material for exploring the history of science in New Zealand and beyond.

In closing this editorial preface, it remains for me to most sincerely acknowledge all those who have contributed to the success of the Haast Symposium and the preparation of this volume. This success is due to the tireless efforts of my co-conveners, Julia Bradshaw, Dr Paul Scofield, Dr Simon Nathan and Dr George Hook. I wish to thank them all for joining me on this journey and for sharing my vision to see this project through, especially during uncertain times when flexibility was called for in making decisions with more than the usual share of unknowns.

I wish to acknowledge the scholarly contributions of all of the authors already mentioned and thank them for their positivity and energy, not only leading up to the virtual meeting and presentations, but also during the editorial process and production stages of this publication.

One very important facet of this editorial processing is the key role played by referees who completed the double peer reviews of each of the papers published here. The invaluable constructive comments, critical feedback and editorial suggestions have made an enormous difference to the quality of each and every contribution presented here. This gives me the confidence to present them as authoritative papers certain to feature as key works in the literature on Haast that will be often cited and endure into the future.

The peer reviews were completed by: Dr Tom Darragh of Melbourne, Dr Keith Giles of Auckland, Dr Rodney Grapes of Wellington, Dr Hugh Grenfell of Auckland, Dr Mike Johnston of Nelson, Dr Daphne Lee of Dunedin, Dr Christine Schlott of Leipzig in Germany, Dr Ursula Rack of Christchurch, Dr Ian Speden of Wellington, Dr Oliver Stead of Wellington, Dr Mark Stocker of Christchurch, and David Verran of Auckland, along with Dr Paul Scofield, Julia Bradshaw, Dr Simon Nathan and Dr George Hook. We were fortunate to have additional scholars who offered to assist in this important function, and it is here noted that this was highly appreciated.

I also wish to once more thank Dr Ursula Rack for her warm remarks presented bilingually in German and English at the opening of the second day of the symposium, on Haast's 200<sup>th</sup> birthday, which contributed to ensuring we were able to make our Viennese colleagues welcome during their albeit virtual appearance in New Zealand. As Dr Rack stressed at the time, it is to be hoped that these newly forged or renewed connections may lead to fruitful future collaborations and encounters in the best traditions of Viennese-New Zealand connections.

Finally, I would like to thank staff of Canterbury Museum at all levels: Director Anthony Wright for sharing the vision and lending his support; Senior Curators Julia Bradshaw and Dr Paul Scofield for facilitating and liaising; editorial, media, and technical staff, Vicki Blyth, Jack van Beynen, and Morgane Merien for all of their behind the scenes work. Also special thanks to Richard Bell and Martin Allen from Shuriken Productions.

It therefore gives me great pleasure to present this volume and to have the satisfaction of knowing that Haast scholarship has come so far, and yet the more we know, the more there is to be discovered. Haast is the common leitmotiv for all of these scholarly endeavours. However, there is one other important common factor underpinning this research which is very close to my heart, and that is the significance of unpublished sources. So this volume is also representative of the enduring value and importance of archival documentary heritage collections.

This volume is a celebration of the life and achievements of Sir Julius von Haast, the founder of Canterbury Museum, marking the 200<sup>th</sup> anniversary of his birth.

Sascha Nolden, Wellington, 13 July 2022

## A Short Biography of Sir Julius von Haast

Simon Nathan

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This short biography has been prepared to summarise the life and work of Sir Julius von Haast and to put the papers that follow into context. It has been largely compiled from similar biographical accounts in the *New Zealand Dictionary of Biography* (Maling 1990) and the *Oxford Dictionary of National Biography* (Langer 2004), updated with more recent research, especially by Nolden (2016).

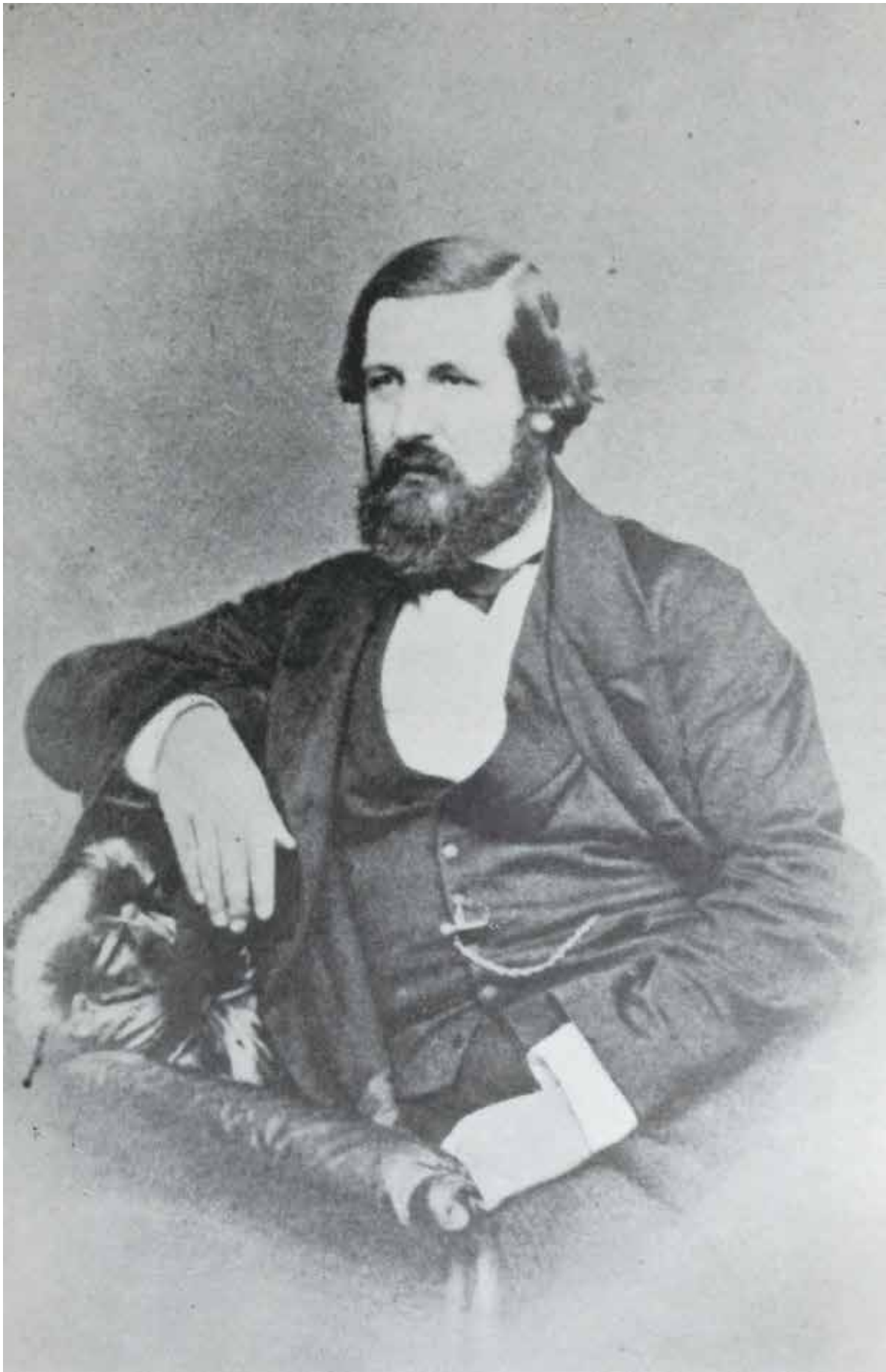
Johann Franz Haast was born in Bonn, Germany, on 1 May 1822, one of nine children of Mathias Haast, tailor and lottery office keeper, and his wife Anna Eva Haast. He attended school in Bonn and at the Höhere Bürgerschule in Cologne, which he left prematurely in 1838 to undertake a 2-year apprenticeship, possibly as a mining technician. The information available on Haast's early life in Germany is incomplete. He recorded that his father wanted him to leave Bonn and sent him to live in Verviers, Belgium. There is no evidence that he ever undertook full-time university study, but it is clear that he acquired a broad knowledge of the natural sciences, especially geology and mineralogy, was fluent in several languages, and had gained skills as an artist and cartographer. In 1844 he moved to Frankfurt am Main and was involved in a variety of commercial occupations, including as a textile seller, a haulage contractor and a bookseller's salesman. On 26 October 1846 he married Antonie Schmitt, daughter of a well-known musician. They had one son, Mathias Robert, born in 1848.

In 1857, Haast was commissioned to translate Charles Hursthouse's *New Zealand: the Britain of the South* into German. The following year he accepted a proposal from English shipowners Willis, Gann & Co to travel to New Zealand and report to them on the prospects for German emigration. Haast reached Auckland on 21 December 1858, the day before the Austrian frigate *Novara* arrived carrying geologist Ferdinand Hochstetter who was invited to undertake a reconnaissance geological survey of Auckland Province. Haast asked if he could join him. Hochstetter, who had limited command of English, was pleased to have a German-speaking companion, who was also a competent English speaker. The two men formed an effective partnership and an enduring friendship over the next 8 months, and Haast rapidly gained experience in geological and topographical mapping.

After the Auckland project was finished, Hochstetter was invited to report on mineral prospects in Nelson Province. The planned work in Nelson was incomplete when Hochstetter had to return to Vienna, and he recommended that Haast finish the survey. This involved the exploration of remote, mountainous country, which was successfully completed by Haast, including the discovery of what was to become New Zealand's largest bituminous coalfield near Westport. Based on the published report of his explorations, Hochstetter arranged for Haast to be awarded the degree of Doctor of Philosophy from the German University of Tübingen.

From the time of his arrival in Auckland, Haast adopted the first name Julius. His wife Antonie, who had stayed in Frankfurt, died in October 1859 and their son was raised by her relations. Haast decided to remain in New Zealand where he could start a new career as a geologist. The photograph of Haast in Figure 1 was taken at about this time. He became a naturalised British subject in February 1861 and joined the Anglican Church. In June 1863 he married Mary Dobson, daughter of Canterbury Provincial Engineer, Edward Dobson, and they were to have four sons and a daughter. His name recorded on the marriage certificate is John Francis Julius Haast.

In late 1860, Haast was asked by the Canterbury Provincial Council to urgently examine the site of a planned railway tunnel between Lyttelton and the Canterbury Plains as the contractor had



**Figure 1.** Julius Haast in about 1863 when he was actively involved in fieldwork and exploration of Canterbury. This image was used as the frontispiece for the 1948 biography written by his son, Heinrich von Haast. Photographer unknown

abandoned the project after striking very hard rock. Haast correctly predicted that this was only a local feature and the tunnel was duly completed within budget. This established his credibility in Canterbury, where he was appointed Provincial Geologist in February 1861 to undertake a geological and topographical survey of the province. Most of the flatter land near the coast had already been surveyed and subdivided for farming, but the steeper country and alpine regions were almost a blank on the map. Over the next 5 years Haast and his assistants systematically explored and traversed all of the eastern catchments of the Southern Alps in the Canterbury Province, mapping mountains, valleys and glaciers. Haast also made significant field sketches of the major glaciers they encountered. The results of this work and subsequent geological surveys were written up as *Geology of the Provinces of Canterbury and Westland*, published in Christchurch in 1879.

The exploring expeditions provided opportunities for Haast to name many previously undescribed topographical features, and he started a system of naming them after well-known scientists and other notables, although in doing so he often ignored established indigenous names. In June 1862, he wrote to Sir William Hooker, the first Director of the Royal Botanic Gardens at Kew 1841–1865, informing him that he had named the Hooker Glacier after him and explaining that he was planning to create “a kind of Pantheon or Walhalla for my illustrious contemporaries”.<sup>1</sup> It was an imaginative vision, but it also provided an opportunity for Haast to initiate correspondence with leading scientists in Britain, Europe and North America. Astutely, as it turned out, he named the Franz Josef Glacier after the Austrian emperor.

Haast was keen to establish scientific institutions based on what he had seen in Europe. He founded the Philosophical Institute of Canterbury (which eventually became the Canterbury branch of the Royal Society of New Zealand) and started to publish the results of his research in the *Transactions of the New Zealand Institute*. He inaugurated a museum based on material he had collected during his explorations, taking advantage of the discovery of a rich store of excellently preserved moa bones at Glenmark, near Christchurch. Haast supervised the excavation of cartloads of moa skeletons, which were transported to Christchurch where he and his assistant reassembled them. Until the 1860s, research on the moa was the closely guarded preserve of the British palaeontologist Richard Owen, but with a copious supply of new material Haast started to publish his own identifications of species. As a consequence, in 1874 Owen rather reluctantly wrote, “I begin to feel that my share in the work of the restoration of the extinct birds of New Zealand is over .... You stand at the head of my successors in that Work [sic], and merit every honour & recompense for your share in the Natural History of your fair islands”.<sup>2</sup> The Glenmark swamp excavations also revealed fragments of a giant bird of prey, which Haast named *Harpagornis moorei*. It has subsequently become known as Haast’s eagle, the largest bird of prey ever known to exist.

Haast started his museum in unoccupied rooms in the Canterbury Provincial Buildings in 1867. He sent moa skeletons, bird skins and other material overseas to major institutions, using them as a way of obtaining valuable material for his own museum by exchange. The development of Canterbury Museum became his passion, and he raised funds for the construction of a fine stone building that was opened in 1870. With an impressive building and collections based on the spectacular moa displays and material imported from European museums, Canterbury outshone other New Zealand museums in the late nineteenth century.

Haast had wide interests in the natural sciences. He regularly collected alpine plants and several species were named after him by William Hooker’s son Joseph Hooker, Director of the Royal Botanic Gardens at Kew 1865–1885. Excavation of early Māori sites carried out under his supervision led to important ethnological papers. He predicted the presence of artesian water beneath the

gravels of the Canterbury Plains and recognised the former widespread extent of glaciation in the Southern Alps. Papers on his New Zealand discoveries were read before the Geological and Zoological Societies in London and the Royal Geographical Society awarded him a gold medal for his explorations.

Bishop Henry John Chitty Harper and Haast played a leading role in the movement to establish Canterbury University College and its affiliation with the University of New Zealand. Haast taught geology and palaeontology, and became its first professor of geology. He also served as a member of the Senate of the University of New Zealand from 1879 until 1887.

An entirely self-made man, Haast was an effective self-publicist which helped him to gain many awards. He was elected a Fellow of the Royal Society of London in 1867. The Emperor of Austria awarded him a hereditary knighthood in 1875, which entitled him to be called von Haast. Appointed New Zealand Commissioner to the Colonial and Indian Exhibition in London, he was knighted by Queen Victoria in 1886. Haast died in Christchurch on 16 August 1887, soon after returning from England. On his gravestone, in the graveyard of the now-demolished Holy Trinity Church, Avonside, his name is recorded as Julius von Haast – the first name he chose for himself, the title ‘von’ he earned from the Austrian Emperor, and the family name ‘Haast’, the only constant name through his life.

Julius von Haast was an extrovert, energetic and enthusiastic in his many interests, including the development of the musical and artistic life of Christchurch. His impetuosity and outspokenness led to public and scientific arguments that could have been avoided, but those disputes do not lessen his achievements. Canterbury Museum is his lasting memorial.

## Endnotes

<sup>1</sup> Letter from Haast to Sir William Hooker, 9 June 1862. Nolden, Nathan, Mildenhall 2013, p 23. Available from: <https://www.gsnz.org.nz/publications-and-webstore/product/94> [accessed 19/07/2022].

<sup>2</sup> Letter from Richard Owen to Haast, 13 October 1874. Haast collection, Alexander Turnbull Library.

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# The Changing Face of Sir Julius von Haast

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Sir Julius von Haast was a prominent personality in late nineteenth-century New Zealand and he was photographed many times. About 25 photographs of him have been identified from the Haast family collection held in the Alexander Turnbull Library and other archival collections, and a checklist of these has been prepared. Unfortunately, several recent publications have used illustrations, supposedly of Haast, that have been misidentified. No images of Haast as a young man have been found. The earliest photograph was taken in 1859, soon after he arrived in New Zealand. Aged 37, Haast is a tall solidly built man with black hair and a beard. Portraits taken over the next 5 years are similar, including one taken with his new bride, Mary Dobson, whom he married in 1863. Work-related photographs show him with the spectacular exhibition of moa skeletons that he organised at Canterbury Museum. He also appears within a group of notables at the opening of the Colonial and Vienna Exhibition in Christchurch in December 1872, when his beard had turned grey. The remaining photographs are of Haast as a much older man, several taken in between 1885 and 1887 when he was Commissioner at the Colinderies Exhibition in London. An oil painting, commissioned by Canterbury Museum, was created by Allan Bowles Cambridge soon after Haast's death, and is based on one of these photographs.

**Keywords:** cabinet cards, Canterbury Museum, carte de visite, Julius von Haast, moa skeletons, nineteenth-century photography, photographic portraiture

## Introduction

Photographs are a powerful window into the past, and we are fortunate that the life of Sir Julius von Haast spanned the development of commercial photography in the nineteenth century. When he was born in 1822 it was largely in an experimental phase, but by the end of his life there were photographers in every town. In those days developing photographic images was a complicated procedure involving chemical processing, so it was mostly done by professionals with a studio and attached darkroom. A visit to the photographer was an important and costly event, generally to obtain portraits of individuals or family groups, which were most often reproduced in carte de visite format (64 x 100 mm) or as larger cabinet cards (110 x 170 mm).

Because Haast was a prominent personality in late nineteenth-century New Zealand, he was photographed many times, particularly in his later years. This paper gives a brief view of some of his activities as revealed by the photographs we have been able to locate. They are arranged chronologically, so Haast is seen gradually ageing as the years pass.

The majority of the photographs of Julius von Haast come from a collection of family documents donated to the Alexander Turnbull Library by his son and biographer, Heinrich von Haast, between 1948, when he published the biography, and 1953, when he died, while further material was deposited posthumously by his widow Mary von Haast (Nolden 2016: 76). Many images were not labelled, and as the collection contained photographs of friends and scientific colleagues, there has been confusion about the identification of the portrayed subjects in some photographs (Nolden 2017). This has led to the incorrect identification of Haast in some publications. In this paper we present two lists. Table 1 lists photographs of Julius von Haast that we are confident have been correctly identified, with information

on the source and date of the photograph, where available. Table 2 lists published photographs of Haast that have been incorrectly identified in published documents.

Although most of the Haast photographs are studio portraits, we are fortunate that the early Canterbury photographer Dr Alfred Barker (Turner 1990) was interested in the Canterbury Museum and scientific matters, and took several photographs that included Haast.

## Photographs in the 1850s and 1860s

Our knowledge of Haast's life before his arrival in New Zealand is incomplete and fragmentary (Nolden 2016), and no photographs from this period have been located. The earliest photograph is a formal portrait taken in 1859 (Fig. 1) and attributed to Bruno Hamel, a professional photographer who accompanied Ferdinand von Hochstetter's party in their exploration of the central North Island in 1859. Haast was then 37, and the image shows him as a tall, solidly built man with black hair and a black beard.

The next photographs that can be confidently dated are a set of four studio portraits (Table 1: 3–6) taken shortly after Haast married Mary Dobson in June 1863. The photographer is not identified, but is inferred to be James Elsbee, who owned the studio later taken over by Daniel Mundy. One image shows Mary and Julius together (Fig. 2). In a letter dated 2 November 1863, Joseph Hooker congratulates Haast on his marriage, and thanks him for the photograph of the couple he had recently received (Nolden et al. 2013: 54).



**Figure 1.** Earliest known portrait of Julius Haast, with a dedication to Arthur Guyon Purchas, dated Auckland, 26 July 1859. Photographer Bruno Hamel (attributed). John Webster Collection, Auckland Libraries Heritage Collections 881-01



**Figure 2.** Portrait of Mary and Julius Haast taken about the time of their wedding in June 1863. Photographer James Elsbee (attributed). Alexander Turnbull Library PA2-2164



**Figure 3.** Julius and Mary Haast outside their new home, Glückauf, in 1865. Photographer unknown. Hochstetter Collection Basel HCB 2.18.10

The couple settled in Avonside, Christchurch, and a photograph dated 1865 shows them outside their new home (Fig. 3) that Julius named Glückauf (a German miner's greeting). And of course, this was the start of their family. Mary and Julius had five children, all born at Glückauf – four sons and one daughter.

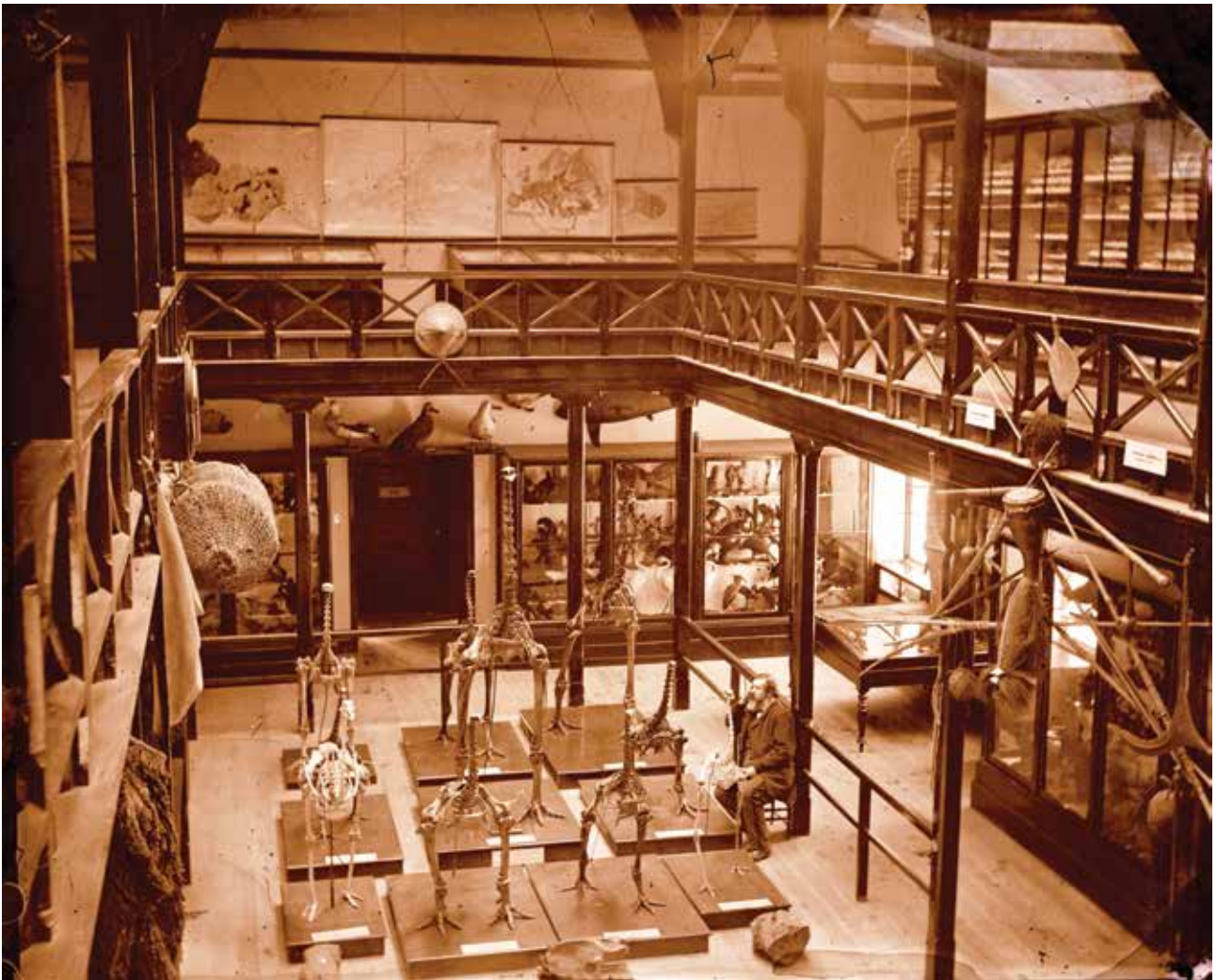
In the early 1860s Haast explored the whole of Canterbury province (which then included the West Coast), but sadly we have no photographs of this aspect of his life apart from one tantalising portrait. In 1865 Haast was awarded the Order of Franz Joseph by the Austrian Emperor as a mark of thanks for naming the Franz Josef Glacier after him, and he was photographed wearing the medal (Table 1:9). It was the first of many decorations that Haast sought and was to receive over the next 20 years.

In contrast, we do have a pictorial record of his work on the giant extinct moa. The discovery of a rich trove of moa remains in a swamp at Glenmark in 1865 was fully exploited by Haast. His taxidermist, Frederick Fuller, reconstructed skeletons for display and exchange with other museums and scientific



**Figure 4.** Julius Haast (left) with taxidermist Frederick Fuller examining moa bones. Photograph by Alfred Charles Barker. Hochstetter Collection Basel HCB 2.1.4





**Figure 5.** Main hall of Canterbury Museum soon after it was opened in 1870. Photograph by Alfred Charles Barker. Canterbury Museum 1944.78.66

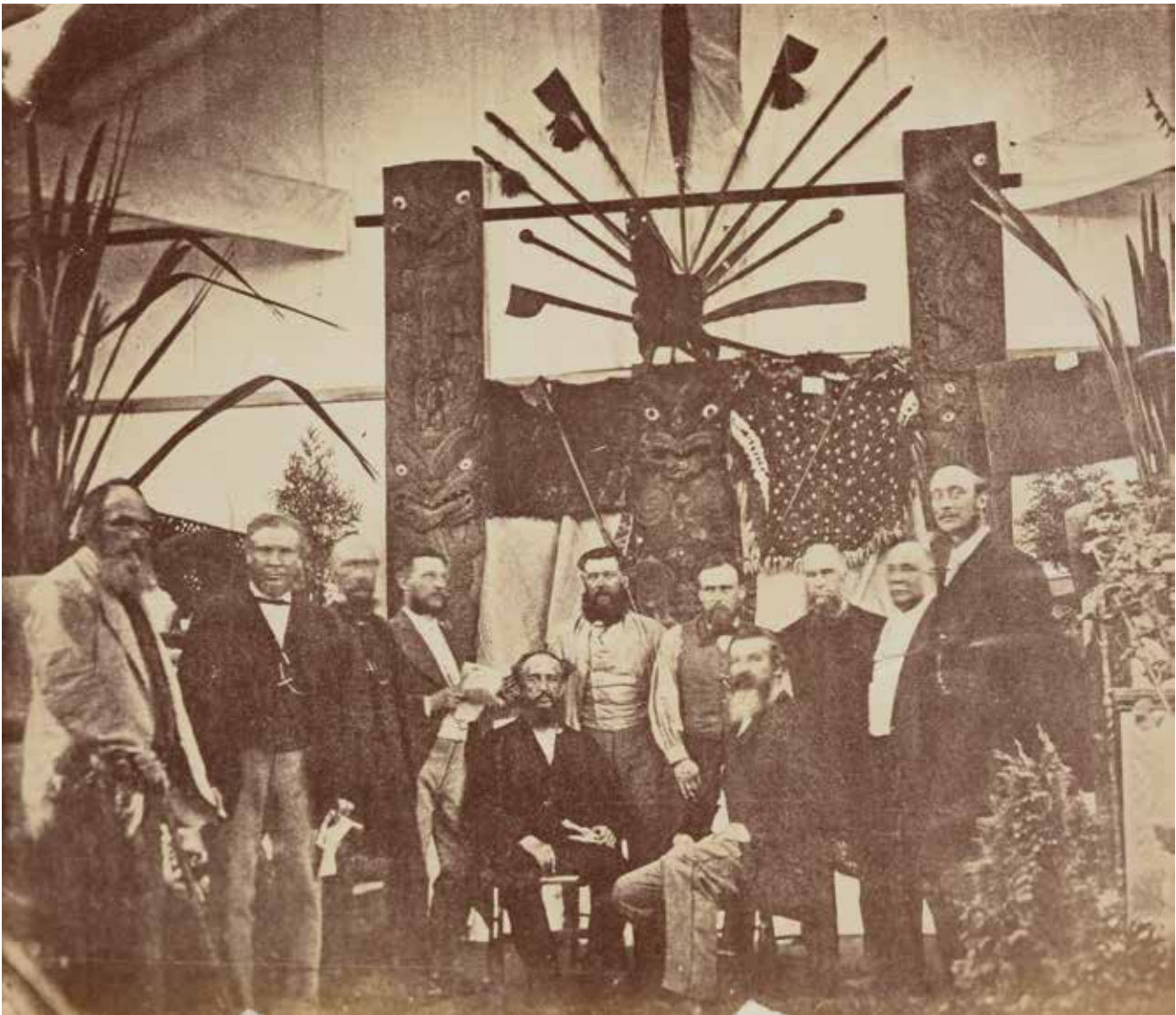
institutions. A Barker photograph, taken on 26 September 1867, shows Haast and Fuller examining moa bones (Fig. 4).

### **Photographs in the Early 1870s**

There are only two photographs that can be definitely dated from this period, both taken by Dr Barker. In them Haast is looking older than in the earlier photographs – his beard is grey, but the hair on his head is still black.

The earliest part of the present Canterbury Museum buildings was opened in October 1870. It was built around a main hall featuring the spectacular moa skeletons reconstructed by Frederick Fuller. In the photograph of the main hall Haast is shown seated contemplating the moa display (Fig. 5).

In December 1872 the Colonial and Vienna Exhibition was held in Christchurch to select material for display at an international exhibition occurring in Vienna in the following year. Dr Barker took a photograph of the organising committee (Fig. 6), probably on the opening day. Haast is seated, right of centre.



**Figure 6.** Group of notables at the opening of the Colonial and Vienna Exhibition in Christchurch, December 1872. Standing, from left: Alfred Charles Barker (photographer), Robert Heaton Rhodes, unknown, James Hector, Thomas Potts, John Enys, unknown, unknown, William Miles Maskell. Seated: Rev Charles Fraser and Julius Haast. Photograph by Alfred Charles Barker. Alexander Turnbull Library PA1-Q-166-052

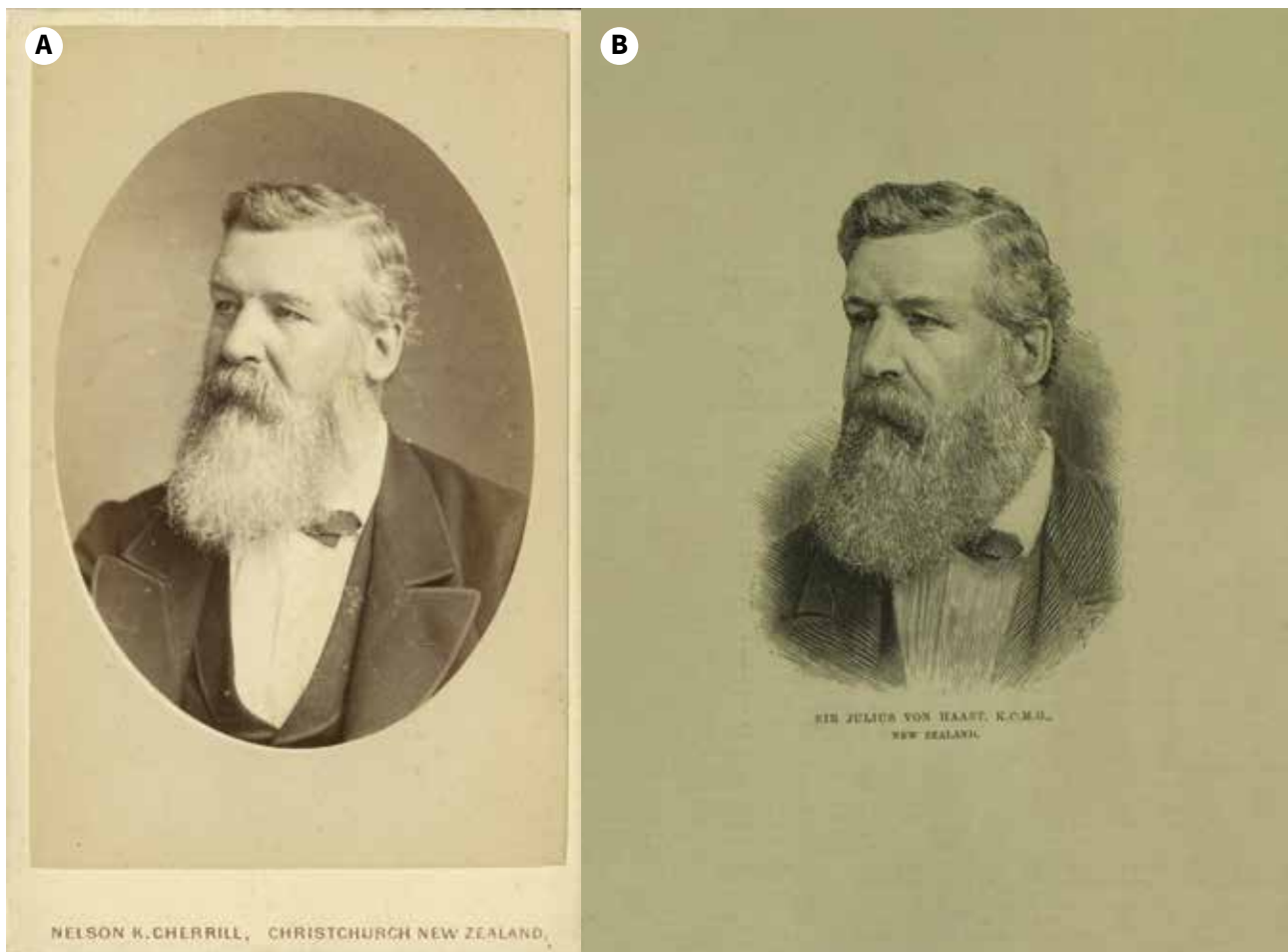
## Photographs in the 1880s

There is a gap in the photographic record of up to 10 years. The remaining photographs of Haast show him as an older man – a white haired, bearded patrician.

About 1881 Haast had a sitting with Nelson King Cherrill in Christchurch (Fig. 7A), and photographs taken during this sitting were the basis of cartes de visite that Haast sent to correspondents over the next few years. There is some variation in the mounted copies we have located – a sign that Haast re-ordered copies over the years.

Around 1882–1883 he had a sitting with E Wheeler & Son (Table 1: 19 and 20). One of these images was used to illustrate a biographical article (Bickerton 1884). As high-quality print reproduction of photographs was not available in New Zealand at that time, an endnote comments that the photograph was printed by the Autotype Co. in London and presumably sent back to New Zealand to be manually inserted in the journal.





**Figure 7. A**, Portrait of Julius von Haast by Nelson King Cherrill, circa 1881. Alexander Turnbull Library PA2-0471 **B**, Engraving reproduced in the *Illustrated London News* of 7 August 1886, page 12

In 1885 Haast was appointed Commissioner to oversee the New Zealand court at the Colonial and Indian (Colinderies) Exhibition to be held in London in 1886. Julius and Mary von Haast left New Zealand in March 1886, and were away for over a year, and his doings were regularly reported in the press. An article in the *Illustrated London News* of 7 August 1886 featured an engraving clearly based on the Cherrill photograph (Fig. 7B).

While in London Haast had a photographic sitting with the celebrated society photographer, Alexander Bassano, who produced a set of cabinet card portraits that Haast sent to colleagues (Table 1: 22 and 23). The copy reproduced as Figure 8 came from the University of Padua – a sign of the extent of Haast’s correspondence.

The last photograph of Haast was taken during a visit to Germany in February 1887 (Fig. 9). The weather was miserable – it snowed heavily, and Julius wrote to Heinrich saying that his beard was as white as the day on which the photograph was taken. Heinrich later commented that his father looked an old and sick man (Haast 1948: 943). Julius was exhausted after his trip and died a few months later, soon after returning to New Zealand.

This photograph has particular significance. Haast was photographed wearing his German consul’s uniform (Haast 1948: 841 and 876) and his medals, and the collection is impressive. They include the KCMG (Knight Commander of the Order of St Michael and St George) recently awarded by Queen Victoria, which entitled him to be called Sir Julius, and the Order of the Iron Crown awarded by the Austrian Emperor, which allowed him to use the title ‘von’.



**Figure 8.** Portrait of Julius von Haast by Alexander Bassano, London, 1886. Library of the Botanical Garden of the University of Padua IB.CC.2

## Comment


The photographs presented above show the changes in appearance of Sir Julius von Haast over almost 30 years, from his late thirties until his death at age 65. When he arrived in New Zealand, he was approaching middle age. In the succeeding eight years he undertook exploration of rugged and remote parts of the country and established himself as one of the pioneers of New Zealand geoscience. In terms of his photographs, those were his black-beard days.

In the late 1860s and early 1870s, he turned his interests to moa, Canterbury Museum, the organisation of exhibitions, and his ground breaking book *Geology of the Provinces of Canterbury and Westland* (Haast 1879). In his final decade – the white-beard phase – he had become an establishment figure as Professor of Geology, an authority in the museum world and finally New Zealand Commissioner for the Colinderies exhibition. His hair may have lightened, but we marvel at his energy and achievements. It is fitting that we can celebrate his 200<sup>th</sup> birthday together and remember his achievements.

Today we can look on the collection of medals and decorations as a record of Haast's reputation on the international scene established from an obscure museum at the bottom of the world. The only other New Zealand scientist who has received a similar level of recognition in his lifetime is Sir Ernest Rutherford.

After his death, the trustees of Canterbury Museum commissioned a painting of Haast by Alan Bowles Cambridge (front cover of this volume), which is undoubtedly based on the Bassano image in Figure 8. The painter has used some artistic licence – Haast was entirely white-headed in the 1880s, rather than the salt-and-pepper look he has been given.

Table of honours and decorations worn on Haast's German Consul uniform in 1887

	<p><b>1A. Knight Commander of the Order of St Michael and St George (KCMG)</b> collar and star, United Kingdom, 1886</p>	
	<p><b>1B. Knight Commander of the Order of St Michael and St George (KCMG)</b> badge, United Kingdom, 1886</p>	
	<p><b>2. Officier de l'Instruction Publique (Ordre des Palmes académiques)</b> [Officer of Public Instruction; Order of Academic Palms], Officier [Officer], France, 1886</p>	
	<p><b>3. Ordine della Corona d'Italia</b> [Order of the Crown of Italy], Cavaliere [Knight], Italy, 1879</p>	
	<p><b>4. Großherzoglich Hessischer Ludwigsorden</b> [Ludwig Order], Ritter I. Klasse [Knight 1st class], Hesse, Germany, 1877</p>	
	<p><b>5. Kaiserlicher Orden der Eisernen Krone</b> [Imperial Order of the Iron Crown] Ritter III. Klasse [Knight 3rd class], Austria, 1874</p>	
	<p><b>6. Herzoglich Sachsen-Ernestinischer Hausorden</b> [Saxe-Ernestine House Order] Ritter [Knight], Saxony, Germany, 1868</p>	
	<p><b>7. Verdienstorden Philipps des Großmütigen</b> [Order of Merit of Philip the Magnanimous]. Knight 1st class, Hesse, Germany, 1868</p>	
<p><b>8. Kaiserlich-Österreichischer Franz-Joseph-Orden</b> [Imperial Austrian Order of Franz Joseph], Ritterkreuz [Knight], Austria, 1865</p>		

**Figure 9.** In this studio portrait, taken in February 1887, Haast is wearing his German consul's uniform and his medals and decorations (illustrated on the right). Photograph by Fritz Meycke, Cologne & Bonn. Figure and information on medals compiled by Sascha Nolden. Alexander Turnbull Library PA3-0162; Curios-005-013/019



**Table 1.** List of photographs of Julius von Haast arranged in chronological order, noting the photographer (when known) and source of each image.

	Description	Photographer	Collection & reference	Comment
1	Studio portrait of Julius Haast	Bruno Lancel Hamel (attributed)	John Webster Collection, Auckland Libraries Heritage collections, 881-01	Earliest known extant photograph of Haast. Copy presented to Arthur Guyon Purchas on 26 July 1859.
2	Studio portrait of Julius Haast	Photographer unknown	Frontispiece to <i>The Life and Times of Sir Julius von Haast</i> , 1948. Location of original unknown	Probably taken about 1860.
3	Studio portrait of Mary and Julius Haast	James Elsbee (attributed)	Alexander Turnbull Library, PA2-2164, PA2-2515, PA2-2343	Part of a group of four images taken around the time of their marriage on 25 June 1863.
4	Studio portrait of Julius Haast standing with top hat	James Elsbee (attributed)	Alexander Turnbull Library, PA2-2512	As above
5	Studio portrait of Julius Haast sitting	James Elsbee (attributed)	State Library of New South Wales, P1/691	As above
6	Studio portrait of Julius Haast sitting	James Elsbee (attributed)	Alexander Turnbull Library, PA2-2850	As above
7	Locket with head and shoulders hand-coloured portrait of Julius Haast	James Elsbee (attributed)	Alexander Turnbull Library, Curios-005-004	Part of a portrait taken with Mary Haast (3 above).
8	Studio portrait of Julius Haast	Christchurch Fancy Bazaar	Alexander Turnbull Library, PA2-1320	Taken about 1863–1865.
9	Portrait of Julius Haast wearing the insignia of the Order of Franz Josef	Photographer unknown	Alexander Turnbull Library, PA2-2514	Probably taken 1865–1866. Haast was awarded the insignia in 1865.
10	Mary and Julius Haast outside their home, Glückauf	Photographer unknown	Hochstetter Collection Basel, 2.18.10	Taken in 1865.
11	Mary and Julius Haast outside their home, Glückauf	Photographer unknown	Alexander Turnbull Library, PAColl-5381-02	Probably taken 1865–1867. Vegetation has grown up around front of the house since above image was taken.
12	Mary and Julius Haast outside their home, Glückauf	Photographer unknown	Alexander Turnbull Library, PA1-f-080	Probably taken 1865–1867. Slightly different view but probably taken at same time as image above.

**Table 1.** Continued

13	Julius Haast (left) and his taxidermist Frederick Fuller with moa bones	Dr Alfred Charles Barker	Alexander Turnbull Library, PAColl-5381-01. Hochstetter Collection Basel, HCB 2.1.4	Taken on 26 September 1867 in front of Dr Barker's house in Christchurch.
14	Group of four portraits of Julius Haast taken at the same sitting	Daniel Louis Mundy	Geological Survey of Austria, GSA Signatur A 11637-BM.	With inscribed dedication by Haast dated 2 September 1869.
15	Interior of Canterbury Museum soon after it was opened in 1870, with Julius Haast sitting at lower right looking over the display of moa skeletons	Dr Alfred Charles Barker	Canterbury Museum, 1944.78.66	Probably taken late 1870 or 1871, soon after the new museum building opened.
16	Group at the opening of the Colonial and Vienna Exhibition in Christchurch. Haast is seated on the right.	Dr Alfred Charles Barker	Alexander Turnbull Library, PA1-Q-166-052. Canterbury Museum, 1957.13.312	Taken at the time the exhibition was opened in December 1872.
17	Portrait of Julius von Haast	Nelson King Cherrill, Christchurch	Alexander Turnbull Library, PA2-0471	Probably taken 1880.
18	Portrait of Julius von Haast	Nelson King Cherrill, Christchurch	Hochstetter collection Basel, HCB 5.2.H1	Inscribed date 1880; same sitting as 17 above but slightly different pose.
19	Portrait of Julius von Haast	Edmund Wheeler & Son, Christchurch	Alexander Turnbull Library, PAColl-7581-29	Probably taken about 1880.
20	Portrait of Julius von Haast	Edmund Wheeler & Son, Christchurch	Location of original unknown; copy negative Alexander Turnbull Library, ½-005290-F	Probably taken 1882–1883. Published by Bickerton (1884).
21	Portrait of Julius von Haast	Peter Schourup, Christchurch	Alexander Turnbull Library, PA2-1628	Probably taken early 1880s.
22	Portrait of Julius von Haast	Alexander Bassano, London	Library of the Botanical Garden of the University of Padua, IB.CC.2	Taken in 1886. This photo was later used as the basis for the 1888 painting of Haast by Allan Bowles Cambridge.
23	Portrait of Julius von Haast	Alexander Bassano, London	Alexander Turnbull Library, PAColl-4711-1	Taken in 1886.
24	Portrait of Haast wearing German Consul's uniform and his medals	Fritz Meycke, Cologne & Bonn	Alexander Turnbull Library, PA3-0162	Taken in February 1887.

**Table 2.** Published photographs that have been misidentified as Julius von Haast. Compiled by Simon Nathan.

	Description	Collection & reference	Comment
1	<i>A Welsh scientific eye surgeon</i> by G W Rice, page IV. Hawthorne Press, 2020.	Canterbury Museum, 19XX.2.2082	Identity unknown.
2	<i>Julius Haast in the Southern Alps</i> by C Burrows, page 19. Canterbury University Press, 2005.	Canterbury Museum, 2416	Person is Dr Carl Fischer.
3	<i>Moa</i> by Quinn Berentson, page 144. Craig Potton Publishing, 2012.	Alexander Turnbull Library, ½-047543-F	Couple is Anna and Robert Lendenfeld.
4	<i>Moa</i> (as above), page 147; Also Te Ara (online Encyclopedia of NZ), articles on Life Sciences, Research Institutions, and Museums.	Auckland Museum, 589-76	Figure is Frederick Fuller, taxidermist who worked for Haast.

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# “never anybody has been in that part of the country”: Contextualising Haast’s Journey over Tioripātea

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Julius Haast has been widely credited with ‘discovering’ Haast Pass and his words, quoted in the title, are an example of Pākehā blindness to indigenous knowledge and occupation. The pass, previously known as Tioripātea<sup>1</sup>, was well known by Māori and its existence was noted on maps published in 1851 and 1858. After Haast’s journey in early 1863 it became known as Haast Pass. Since 1998 it has been officially known as Haast Pass/Tioripātea. The author prefers its original name and has used that throughout this article.

After the discovery of gold in Otago in 1861 there was great interest in finding a route to the West Coast. Symms and Sutcliffe, Patrick Caples, Captain Alabaster, James Hector, Charles Cameron and others spent time searching for a route to the West Coast. In relation to Tioripātea, the most significant man is Charles Cameron who sent details of his explorations to both the Otago and Canterbury Provincial Governments, hoping for a financial incentive to continue his exploring.

Although no support was forthcoming Cameron started out again in early January 1863, in advance of Haast. Both men had information from Māori about a pass at the head of Lake Wānaka but the journeys they made were very different affairs. Cameron travelled fast, alone and with few provisions whereas Haast had four companions, a lot of equipment and, at least initially, ate very well.

From his own description, Cameron travelled over what is now known as Māori Saddle at the head of Blue River and into the Okuru River, a route that Māori preferred to the long trek down the Awarua (now Haast) River.

Cameron claimed to have reached the West Coast about 24 January by which time Haast had only just crossed Tioripātea. It is likely that Cameron saw Tioripātea but it is doubtful that he actually crossed it. Cameron returned to Makarora on 29 January 1863 after a journey of 3 weeks while Haast and party took 6 weeks and did not return to Makarora until 2 March 1863.

Though neither man ‘discovered’ the pass they were both keen to receive credit for doing so and there has been significant debate over who was first. This paper examines the journeys made by both men and discusses their respective contributions.

**Keywords:** Awarua, exploration, Haast, Māori knowledge, place names, Tioripātea

## Introduction

One of the many lasting legacies of geologist Sir Julius von Haast is the pass and river in southern New Zealand which were named by him. Haast Pass/Tioripātea (Fig. 1) is the lowest pass in the Southern Alps and the 100-kilometre long Haast River (or Awarua) drains westwards from the pass to the Tasman Ocean. Nowadays the pass is straddled by a road which travels from Lake Wānaka through the village of Makarora over the pass and down the Haast River to the sea, where there is a small township known as Haast.



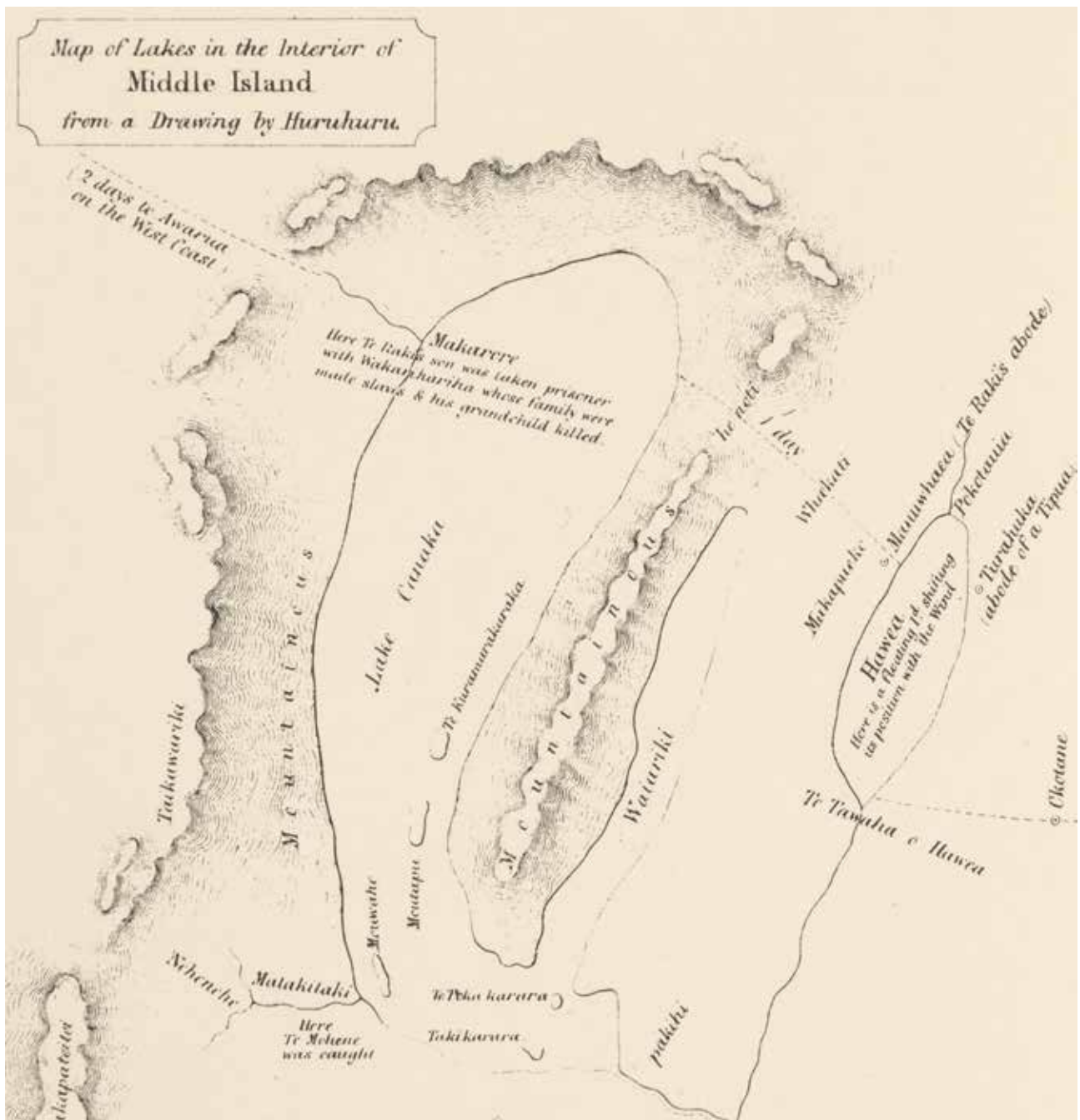
**Figure 1.** Tioripātea, the remarkably low pass through the Southern Alps. The pass is in the middle of the photograph with Makarora Valley flats visible in the distance. Photograph by Geoff Spearpoint

The discovery of the pass now known as Haast Pass was claimed by Charles Cameron as well as Julius Haast and these competing claims have been discussed by writers such as Heinrich von Haast (1948: 302–313), W G McClymont (1959: 83–85) and Phil Ross May (1962: 519–525). In recent years many early New Zealand newspapers have become available online and further accounts from Charles Cameron have been discovered.

In 1863, when Haast ‘discovered’ the pass, he was typical of his time and saw the South Island back country as an empty wilderness, without history or people. When writing of his proposed journey he stated that “never anybody has been in that part of the country from Lake Wanaka to the mouth of the Awarua” (Haast to Hooker, 13 September 1862 in Nolden et al. 2013: 27). His words are an example of Pākehā blindness to indigenous knowledge and occupation.

While the country that Haast was travelling through was lightly populated, it had a long history of human occupation and was a landscape filled with names and stories. Atholl Anderson noted four Māori settlements in the vicinity of Lake Wānaka in the early nineteenth century (1986: 18–21). Māori living in the district moved away after Te Puoho’s war party travelled down the Makarora Valley in 1836 to get to Southland from the West Coast but seasonal visits still occurred (Anderson 1986: 19). George Hassing recorded finding the charred remains of “Kaika Paekae (the place of abundant food)” after burning forest in the Makarora Valley during the early 1860s (Hassing 1996: 49) and Vincent Pyke wrote about finding Māori huts, gardens and carvings when he travelled through the area in 1865 (*Otago Witness*, 17 July 1890: 31).

Haast was also understating Pākehā knowledge. That there was a track from North Otago to the west coast was not unknown. In 1844 a resident of the Lower Waitaki River valley, Te Huruhuru, who had lived near Lake Wānaka, drew a map of the lakes in the interior of the South Island for



**Figure 2.** Te Huruhuru's map, as published in 1851 by Edward Shortland.

Edward Shortland, who published it in 1851 (Shortland 1851: 205).<sup>2</sup> This map (Fig. 2) showed a route from Lake Wānaka to Awarua which took two days to travel. Haast's party would take somewhat longer to make the same journey.

While the coastline of the South Island had been charted by Admiral Stokes on the *Acheron* in the early 1850s, only the sketchiest maps of the interior were available (Fig. 3) and it was easy to be confused, especially when faced with rows of mountains.

In March 1858 a map of Otago Province was compiled by draftsman John Reid which erroneously showed the Makarora River on the western side of Lake Wānaka and the route going across the mountains to Big Bay (Fig. 4). It was probably this map which misled Canterbury surveyor Edward Jollie and his cadet William Spearman Young, who were investigating the disputed boundary between Otago and Canterbury. On a previous survey they were fortunate to have Kawana, described





**Figure 3.** Detail from 1856 map of the Province of Canterbury that shows the largely unmapped area of inland South Canterbury. Archives New Zealand R22420403

as “very old but strong and intelligent” (*Mataura Ensign*, 18 April 1911: 7) from Waitaki as a guide. Young knew some te reo and Kawana gave him a detailed description of a pass at the head of Lake Wānaka. Jollie and Young searched country on the western side of the lake for a pass in 1859 but did not find one (Young 1976: 135).



**Figure 4.** Detail from an 1858 map of North Otago that shows the Makarora River flowing into the west side of Lake Wānaka and a route going from the middle branch of it to the Awarua. Archives New Zealand R698480



The Māori route was also known about in a general way by some Pākehā. For example, farmer William Gilbert Rees knew that Māori would come down the Makarora in mōkihi (rafts made from bundles of dried vegetation) (*Otago Witness*, 31 March 1860: 5) and the District Surveyor for Otago, James McKerrow, knew there was a Māori track up the Makarora River (*Otago Daily Times*, 28 June 1862: 5).

Survey cadet and part-time explorer John Holland Baker (later Surveyor General of New Zealand) had heard about the pass too and decided to have a look. He had 'discovered' what became known as Whitcombe Pass with runholder Samuel Butler in early 1861 and a couple of months later was in the Wānaka district with E Owen looking for sheep country. Although his journey was not mentioned until after his death, it is apparent from his journal that Baker and Owen stood on Tioripātea on 25 April 1861 (W G McClymont, *Press*, 17 August 1940: 5).

Not finding any sheep country, Baker and Owen returned the way they had come and did not think to mention their journey to any reporters or government officials, leaving Cameron and Haast to argue over who was first 2 years later.

Mapping of the interior did not proceed with any great urgency until the discovery of gold at Gabriels Gully in Otago in 1861. This momentous discovery was followed by more finds of gold further inland. Naturally there was interest in exploring further west in the hope of finding even more.

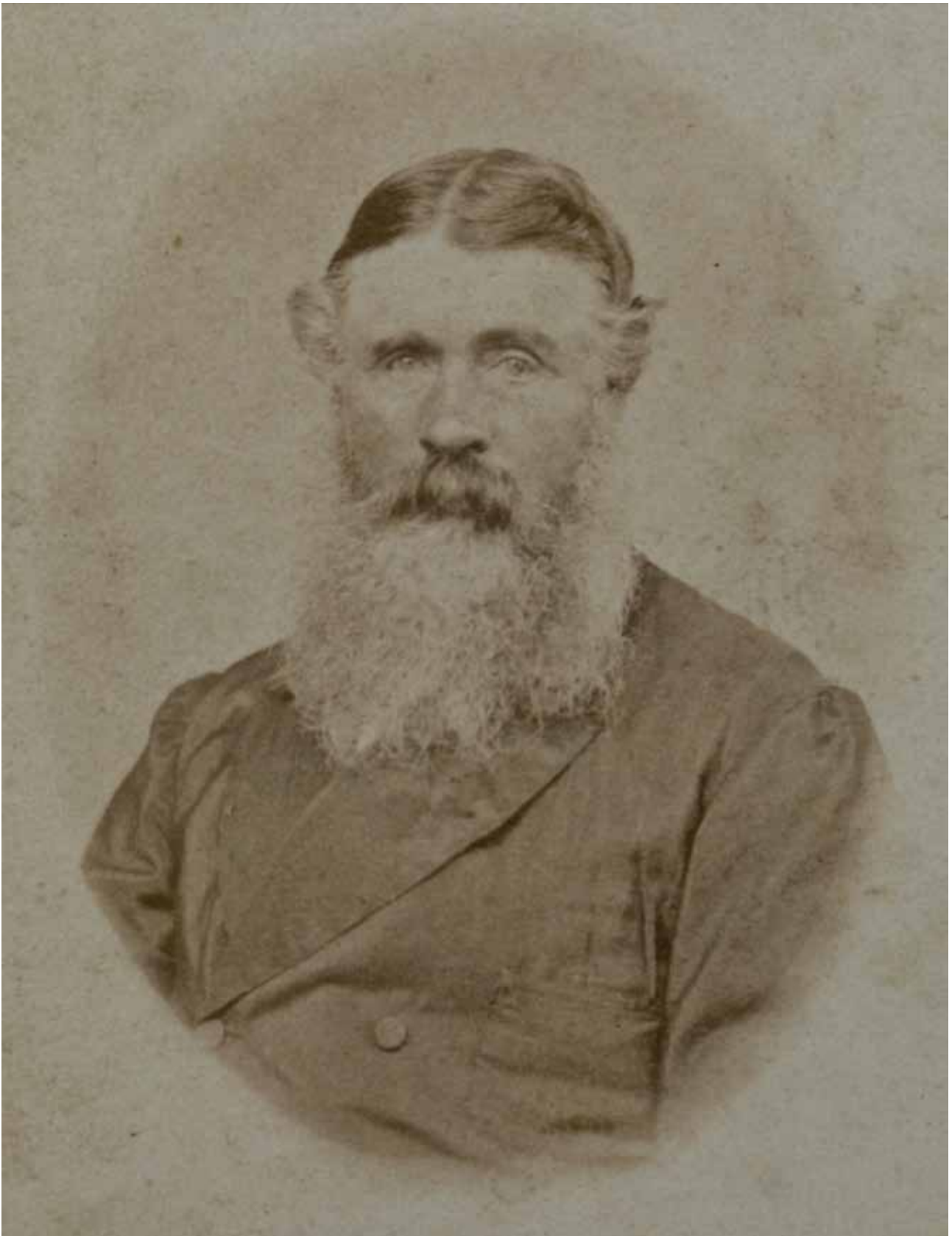
From mid-1862 adventurous men began looking for passes to the West Coast including Scottish-born Charles Cameron (Fig. 5) who had arrived in New Zealand in 1840 as a 20-year-old. Cameron became an experienced back country traveller and in 1847 was the first person to take a large mob of sheep and cattle from Wellington to Whanganui for the supply of troops during the siege of Whanganui (*Wairarapa Daily Times*, 18 Feb 1909: 5). During the late 1850s Cameron was exploring in Western Australia (*Hobart Town Daily Mercury*, 18 May 1860: 3) but came back to New Zealand when gold was discovered in Otago. He was a tall, lean man whom George Hassing, ferryman at Clutha River, described as an "impetuous explorer" (*Southland Times*, 16 May 1914: 9). In 1862 Cameron was 42 years old and recently married.

In September 1862 Cameron, his 19-year-old nephew John McGregor and 17-year-old Francis Foote, perhaps following Reid's 1858 map, travelled around the southern side of Lake Wānaka then up the Matukituki River valley and around the southern base of Mount Aspiring (*Otago Daily Times*, 26 February 1910: 3). Cameron recorded that on 14 October after a "hard struggle" he was successful in reaching a pass on the Main Divide, probably Matukituki Saddle (*Colonist*, 18 November 1862: 3).

After his return to Dunedin on 31 October, Cameron offered to disclose the route to Otago's Superintendent for £1,000 (about \$130,000 today) but was turned down as the Provincial Council was about to despatch their own expedition led by Dr James Hector (*Colonist*, 18 November 1862: 3).

While in Dunedin Cameron visited Māori who gave him details of a route at the head of Lake Wānaka (*Otago Daily Times*, 26 February 1910: 3). Cameron wrote to the Superintendent of Canterbury to tell him that he knew of a route to the West Coast near the southern border of Canterbury and was starting for it soon. Perhaps, he asked, Canterbury would consider offering him some financial assistance?<sup>3</sup>

Cameron's letter was received on 20 November 1862. Rather than giving any assistance, the Superintendent responded by saying that their geologist (Julius Haast) was about to start on an expedition to explore the area.<sup>4</sup> Haast had already been planning to 'find' the pass from Makarora to the West Coast. Two months earlier he had written, "This year I shall be in time in the very heart of



**Figure 5.** Charles Cameron (1820–1909). Sourced from [blenheim175.files.wordpress.com/2015/03/charles-cameron.jpg](https://blenheim175.files.wordpress.com/2015/03/charles-cameron.jpg) [accessed 9 November 2021]. Published online with a Creative Commons Attribution-Non Commercial-Share Alike 4.0 International Licence

the Alps [travelling] from Lake Wanaka to the mouth of the Awarua” (Haast to Hooker, 13 September 1862 in Nolden et al. 2013: 27).

Haast's specific information about the pass almost certainly came from William Young who had tried to find the pass in 1859 with Jollie and who was subsequently a member of Haast's Mt Cook party in early 1862 (Burrows 2005: 51). It is very likely that Young shared Kawana's information about a pass to the West Coast and his own experiences trying to find it. Haast's plans may have received added urgency after Canterbury's Superintendent received Cameron's letter on 20 November and Haast left Christchurch for the south shortly afterwards<sup>5</sup>, stopping en route to get additional information from Māori at Waimate (*Lyttelton Times*, 1 April 1863: 3).

Cameron reached Makarora first, having travelled with his horse and dog, and minimal equipment from the outlet of Lake Wānaka around the western side of Lake Hāwea, along the eastern side of Lake Wānaka and then upriver to Makarora village (*New Zealander*, 19 March 1864: 6). Cameron left Makarora on 8 January (*Lyttelton Times*, 19 December 1863: 4), well in advance of Haast's party who did not reach the village until 20 January 1863.<sup>6</sup>

The journeys made by Cameron and Haast and party were very different affairs. Cameron travelled fast, alone and with few provisions whereas Haast had four companions, a lot of equipment and, at least initially, ate very well. Cameron was carrying perhaps 10 kg of food and gear whereas Haast and party might have had as much as 300 kg, 60 kg per man.

### **“Travelling both dangerous and difficult”: Cameron's Journey**

Cameron's account of his journey, written at Upper Clutha on 11 February (when Haast and party were still battling down the Haast River) has recently been located on the National Library of New Zealand's website Papers Past in a collection of his letters published in the *New Zealander*, 19 March 1864: 6. This provides some details of where he went but is lacking in specifics partly due to the difficulty of describing locations in unmapped territory.



**Figure 6.** A view towards Tioripātea from Cameron's Flat. Mt Brewster is the snow-covered mountain in the background. Photograph by Julia Bradshaw





**Figure 7.** Looking down the Blue Valley from Haunted Spur, west of Māori Saddle. Cloud is gathering over the Main Divide on the left. Photograph by Geoff Spearpoint

After travelling with his nephew to the junction of the Hāwea and Clutha Rivers in early January 1863, Cameron struck out alone with minimal equipment, a horse, a dog called Lassie and a gun (*Otago Daily Times*, 26 February 1910: 3).

Cameron reported that he travelled about 40 kilometres up the valley from the head of Lake Wānaka (which would have taken him close to the pass) and then returned and left his horse and gun at what is now known as Cameron's Flat (Fig. 6). While Cameron may have reached Tioripātea it is odd that he does not mention it. It seems that Cameron was following information provided to him by Māori who often used a route up the Blue River in preference to the long difficult trip down the Awarua River (Roxburgh 1976: 11).

Leaving the flat, Cameron took with him 2 week's supplies and followed the Māori trail up the Blue River (Fig. 7), clearing the forest in about 5 hours and then crossing Māori Saddle. Cameron recalled:

*The mountains here are high and steep, and partly covered to a great depth with snow. Travelling both dangerous and difficult. On the western side, the glens are covered with heavy timber and scrub, and the mountains are very steep, with perpendicular cliffs and chasms. (New Zealander, 19 March 1864: 6).*

After a few days of difficult travel Cameron first caught sight of the sea on 21 January 1863, possibly from Mt Nerger. It appears that rather than going down the Okuru River to the sea, Cameron followed the Highlander's custom of travelling along the mountain tops where he could, commenting that the summits were bare and steep and that at times he found it "impracticable to follow the zigzag ranges" (*New Zealander*, 19 March 1864: 6).

Continuing westwards, Cameron says that he reached the coastline between the Awarua and Okuru rivers, however his description does not bear this out. He said that the mountains ended directly into the sea and that it was impossible to get along the coastline. Both of these statements are untrue, but it might look that way if viewing the coastline from the mountain tops further back.

Cameron gives little information about how he returned to the Makarora Valley. Cameron may have travelled along some of the mountain tops directly south of the Awarua River as he gives a reasonable description of the direction of the river but commented that "I think the river is subject to heavy floods" (*New Zealander*, 19 March 1864: 6). No-one who has travelled down the Awarua River could fail to miss evidence of frequent heavy floods.

This alternative mountain-top route back to the Makarora Valley is supported by surveyor Noel Brodrick's 1881 discovery of a powder flask with the words "Charles Cameron, January 1863" scratched on it. He found this in a cairn on the top of a snow-covered peak to the west of Tioripātea from which, as Brodrick noted, Cameron "could not have failed to see the pass..." (*Southland Times*, 16 May 1914: 9). Brodrick named Mt Cameron and Powder Flask Peak in Cameron's honour but these mountains are now known as Lindsay Peak and Mount Cross with the names Mt Cameron and Powder Flask Peak now appearing on the west side of Fish River.<sup>7</sup>

On 29 January 1863 Cameron returned to the flat now named after him and surprised three of Haast's men who had returned to collect a tent. According to one of the men, Cameron "stated with the greatest coolness that he had just returned from the West Coast, describing his route as lying along the tops of the mountains, rough and perilous in the extreme, and to follow which again he would not take £1,000" (*Lyttelton Times*, 17 November 1863: 5).

Another of Haast's men later described Cameron as "pumping" them for information (*Lyttelton Times*, 31 December 1863: 5) about the pass which supports the idea that Cameron had not actually reached or crossed it, despite seeing it from above. Cameron's journey had taken him 3 weeks and if he had travelled for this entire time, and there is no reason to doubt this, then his trip was a remarkable alpine journey.

Cameron's friend, Warden Lowther Broad, shared with newspaper readers Cameron's letter to him about the journey in which Cameron stated:

*My life has been in peril during this journey very frequently. On one occasion I gave up all for lost, and was on my knees praying for four hours, and my great entreaty was to be spared to accomplish the object of my journey. I have done this with God's help alive, and am now utterly callous as to the opinions of men.*

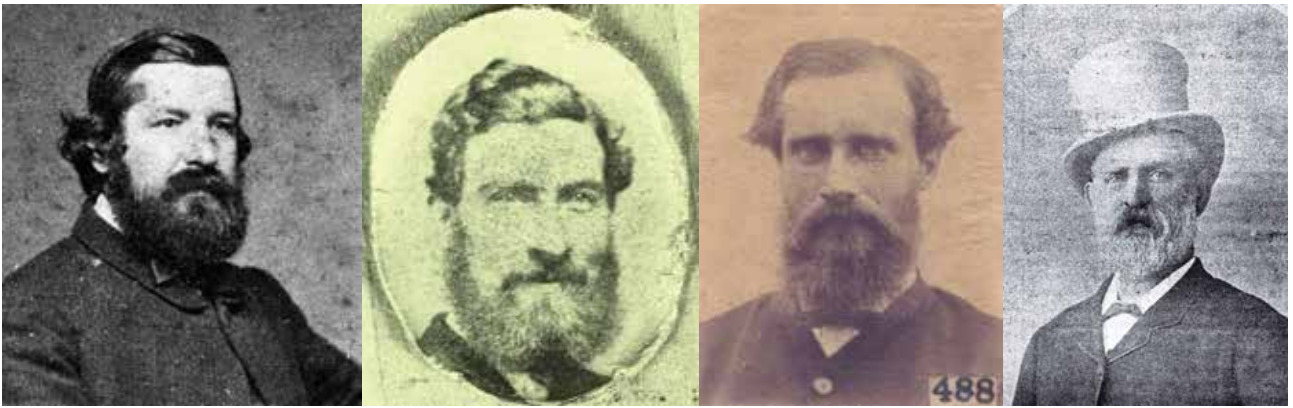
(Cameron quoted by Lowther Broad, *Otago Daily Times*, 26 February 1863: 5).

Cameron's lack of interest in the opinions of others would turn out to be just as well.

### **"We were separated from the whole world": Haast's Journey**

When Haast started his journey 2 weeks after Cameron, he was 41 years old, just 2 years younger than Cameron but much less experienced in back-country travel. His companions (Fig. 8) were the previously mentioned surveyor 21-year-old William Spearman Young as topographer, Haast's good friend 30-year-old Robert Langley Holmes, 28-year-old mariner William Francis Warner as survey assistant and Charles Häring, another mariner also known as Charlie Williams, about whom no further details are known.





**Figure 8.** Members of Julius Haast's party from left: Julius Haast (1822–1887), William Spearman Young (1842–1913), Robert Langley Holmes (1833–1915) and William Francis Warner (1836–1896). No photograph of the fifth member, Charles Häring, has been found. Photograph of Haast: 1/4-002124-G. Alexander Turnbull Library. Photograph of Young reproduced from Young (1976). Photographs of Holmes and Warner from ancestry.com.au

We are fortunate with accounts of Haast and party's journey. Haast wrote a report for the Superintendent of Canterbury (*Lyttelton Times*, 1 April 1863: 3) and compiled a more personal account for a paper which he never gave (Haast 1863), and on which his son Heinrich von Haast based his account of the journey (Haast 1948: 273–301). Robert Holmes wrote to his sister in Ballarat, Australia, (*Otago Witness*, 25 April 1863: 8), William Warner kept a laconic journal, mostly commenting on the weather and campsites which is held by Canterbury Museum (ARC1988.27), while William Young made a series of sketches which are also in the Museum's collection (1984.224.1–.6).



**Figure 9.** Gorge in the Upper Makarora River on the way to Tioripātea. Photograph by Julia Bradshaw





**Figure 10.** Haast's painting of the view from Fish River. Alexander Turnbull Library A-149-011



**Figure 11.** A sketch by William Young of Haast and party's first view of Tioripātea. Canterbury Museum 1984.224.1

Haast's party had a very different style of travelling to Cameron's. While they too had a dog, they also had tents, blankets, clothes, cooking utensils, survey equipment, mining implements and a month's provisions (*Otago Witness*, 25 April 1863: 8). These provisions included 90 kg of flour (Haast 1948: 276) as well as bacon, sugar, coffee, salt and brandy.

This was a lot to transport, and each man carried from 27 to 32 kg on their backs, constantly returning for a second load of the same weight (*Otago Witness*, 25 April 1863: 8). Caches of food were left along the route. For example, at the head of the Makarora River they left 13 kg of flour, 2.2 kg of bacon and 2.2 kg of sugar.<sup>8</sup>

After travelling by boat to the head of Lake Wānaka, Haast's party, like Cameron, camped at the small sawmilling settlement which is now the village of Makarora. They started on their expedition on 22 January 1863 and reached the gorges of the upper Makarora River (Fig. 9) and Fish River that night. Here Haast found time to make a sketch of the pass that Figure 10 is based on.

These gorges present significant obstacles which are not apparent when you glide past on today's modern highway. After some difficulty negotiating them and with several men returning to bring more supplies, the group reached Tioripātea on 24 January where they halted, gave three cheers and had a drink of brandy.

William Young sketched the scene of the party's first sight of the pass (Fig. 11). Writing to William Warner in 1890 he said "[this] will remind you of the first discovery of the Haast Pass ... you see the drs excitement when I made a sketch from the tree top as he exclaimed 'Well that must be one of ze most remarkable passes in ze world'" (Canterbury Museum 1984.224.1).

Haast described finding such a low pass (562 m) in "a chain of such magnitude as the Southern Alps" as remarkable and "probably without parallel in the known world" (*Lyttelton Times*, 1 April 1863: 3). Later Haast would describe how he forged ahead while his men returned for more provisions and commented that, "Only those who have been on similar exploring expeditions can understand what delight it is to go on by yourself in a country, when perhaps never before the foot of men has trodden" (Haast 1863: 7), ignoring the fact that as Māori had given him directions to the pass they had obviously been there.

The next day Haast and Young climbed Mt Brewster, collecting plant specimens as they went. They obtained a good view and could see that the route down the Awarua river was not going to be easy. This was probably the most enjoyable part of the trip. In just 3 days since leaving Makarora they had found the pass and had views towards the West Coast. But the good times didn't last. On 26 January it began to rain and it would continue doing this for the next 2 weeks.

During this rainy fortnight the party was only able to travel 7 km to the junction of the Burke and Haast Rivers which they reached on 12 February (by which time Cameron had written his report). Getting past the rough country around what are now known as The Gates of Haast (Fig. 12) was described by Holmes as "some of the roughest work I ever experienced, carrying our heavy loads up and down mountains and precipices" (*Otago Witness*, 25 April 1863: 8). During 3 days of heavy rain the men were forced to camp on a steep slope and Haast would later recall, "We were separated from the whole world, our only neighbour the abnormal night parrot, whose shrill call enlivened the dismal nights" (Haast 1948: 282).

By now Haast's party were running short of provisions and flour was rationed to 2.7 kg per day for the whole party, supplemented by whatever birds or eels they could get (*Otago Witness*, 25 April 1863: 8).





**Figure 12.** The rugged country near the Gates of Haast in good weather. Haast's party travelled down the left side of the river. Photograph by Julia Bradshaw

After crossing the River Clarke (now Landsborough River) the party was committed to staying on the north side of the Awarua as the main river was now too large to cross again. The route Haast's party took can be seen in Figure 13.





Fortunately, the weather improved and the men had high hopes of reaching the sea soon.<sup>9</sup> But the Awarua is a long valley and after 5 more days and 45 km the men were still 5 kilometres from the sea. But at least they were now in flat country. Young would later comment that his sketch at this point (Fig. 14) shows "... the doctor geologising, me taking a sketch and yourself, Holmes and Charlie congratulating yourselves that we were getting out of the everlasting mountains ..."

(Canterbury Museum 1984.224.3).

Starting early on 20 February the men left their camp, taking just blankets and provisions with them. Before leaving Warner wrote in his journal "... beautiful weather. Pray to God it may remain so until we come back or we shall all be starved".<sup>10</sup>

The party reached the coastline at 2 pm on 20 February, 30 days after leaving Makarora. None of the surviving accounts say much about this significant milestone so perhaps it was a bit of an anti-climax. Holmes recorded that they had hoped to find a Māori village from which to get food but were disappointed (*Otago Witness*, 25 April 1863: 8), the coastal village of Okahu being 40 km further south. Haast sketched a panorama (part of which is shown in Figure 15) showing the landscape north and south.

The journey back up the Awarua River was a much faster affair. Haast and party were able to follow the tracks they had already made and had mostly good weather and they got back to Makarora in just 10 days. Altogether they had been travelling for 6 weeks.

A final comparison of the two journeys concerns the birds that the men ate, which, because of the scarcity of food, both Cameron and Haast's men noted. In 3 weeks Cameron ate just one kiwi and two kakapo (*New Zealander*, 19 March 1864: 6). Haast's party ate about 80 birds including kakapo, whio, weka, kea, kaka, putangitangi, plovers and a single kiwi, along with 10 eels.<sup>11</sup> If you do the calculations, Cameron ate one bird per week while each man in Haast's party ate five birds per week.

### Competing 'Discoveries'

While Cameron and Haast had been travelling beyond the head of Lake Wānaka, others had also been searching for a pass to the West Coast. On 16 February 1863, Samuel Symms and William Sutcliffe reported that they had found a pass west of the Shotover River (*Otago Daily Times*, 16 February 1863: 5). Cameron's journey was reported shortly afterwards prompting Symms to write a letter saying that their pass was in Otago and much more useful than Cameron's Canterbury pass (*Otago Daily Times*, 18 February 1863: 5).



**Figure 15.** Section of a panorama by Haast showing details of the Awarua or Haast River mouth, looking south. Alexander Turnbull Library C-097-085

Also in February, there was news of another expedition to the west. Newly appointed Otago Provincial Geologist, 27-year-old James Hector, following in Cameron's footsteps (and possibly using information Cameron had supplied to the Otago Provincial Government), set out leading a party which included an embedded Otago Daily Times reporter, J W Hamilton (*Otago Daily Times*, 18 February 1863: 4, 5). Hector, Hamilton and a man named Rayer reached what is now known as Hector Col on 17 February 1863. Hector named the glacier below the pass, Haast Glacier (now Bonar Glacier), the river flowing from it Haast River (now Waipara River) and presumably also the Haast Range which still has that name. The group had difficulty crossing the glacier but after another 7 days reached the junction of the Arawhata and Waipara rivers. Soon afterwards, due to lack of provisions, the three men had to turn back only about 20 km from the coast (Pascoe 1976: 93–102).

Unaware of all this activity, Haast and Young continued surveying and exploring. Finally on 3 March at Makarora, Haast sat down and wrote his report to Canterbury's Superintendent and this was published by the *Lyttelton Times* on 1 April 1863. Haast reported that he had given his name to the river as directed by Superintendent William Sefton Moorhouse. The name Haast Pass was first used by Haast himself on a map he sent to Joseph Hooker, Director of Kew Gardens in London, England, dated 12 June 1863.<sup>12</sup>

Other examples of Haast's geographical names are Mt Hooker (Fig. 16) which was previously Rakai (standing up threateningly), Mt Brewster (named after Scotsman Sir David Brewster) which was Hau-mai-tiketike (the wind blowing from the heights), and the Young Range which had been known as Te Whare-manu (the house of birds). Thankfully the Grey Range which Haast had named for New Zealand's Governor-General Sir George Grey did not stick and a version of its earlier name has survived as the Matukituki Range (Beattie 1945: 70–71).

Haast's news coincided with the return to Christchurch of James Drake who had been surveying northern routes to the West Coast and with Hector's return to Dunedin from the Matukituki. Rather unkindly, Otago newspapers described Hector's journey as more thrilling than Haast's (*Otago Daily Times*, 6 April 1863: 4).



**Figure 16.** The mountain previously known as Rakai (which means to stand up threateningly) but now known as Mt Hooker, from the junction of the Burke and Awarua or Haast Rivers. Photograph by Julia Bradshaw

Cameron and Haast's competing claims to have 'discovered' a pass at the head of the Makarora were aired in letters to newspapers. In October 1863 Cameron stated that he had "discovered the northern route through Canterbury, being in advance of Dr Haast" (*Lyttelton Times*, 10 November 1863: 5). Alluding also to Hector's journey, Cameron complained that no credit was "conceded to private explorers in connection with the discovery of these routes ..." (*New Zealander*, 19 March 1864: 6). Those employed by provincial governments to fill in blank spaces on maps needed to secure their careers and they were not generous in recognising competitors.

Robert Holmes fiercely defended Haast's right to be acknowledged as the "first discoverer of the pass to the West Coast" (*Lyttelton Times*, 17 November 1863: 5). Holmes asked, how could Cameron have possibly done the trip in 10 days while they took 6 weeks? Could anyone believe, he asked, that Cameron had "performed the Herculean task of crossing to the coast along the tops of the mountains, a feat that might be performed by a chamois, but certainly not by a human being". He added that Cameron's sole claim to discovery was a bird's eye view of it from the flanks of Mt Stuart (now Lindsay Peak) (*Lyttelton Times*, 17 November 1863: 5).

Holmes had been misinformed. Rather than leaving 2 days before Haast, Cameron had actually left on 8 January and was away for 21 days rather than 10 days. Cameron attempted to correct this error in a restrained response and pointed out that his sketch of the route which had been forwarded to the Superintendent of Canterbury would show clearly that he was the discoverer (*Lyttelton Times*, 19 December 1863: 4). Unfortunately this map, which might provide some clarity, has not been located in the surviving Canterbury Provincial Government records held by Archives New Zealand.

Charles Häring responded to Cameron's letter by calling him a "Blowhard" and saying that all Cameron had done was "crawl about the ranges" between Lakes Wānaka and Hāwea (*Lyttelton Times*, 31 December 1863: 5).

In July 1863 John Browning published the latest map of Canterbury and this included information provided by Haast and Young along with work done by other surveyors. Not only did the map include Haast River, it also showed the Haast Range named by Hector, but did not show Hector Col. Figure 17 shows details of inland South Canterbury from Browning's map, and the amount of information added by Haast can be clearly seen when compared to the 1856 map (Fig. 3).

Haast was very fortunate with the timing of his expedition. If he hadn't located the pass in early 1863 then others would have. Cameron, who had at least seen it from above, would have further publicised it and gold miners trying to get to the new rushes on the West Coast would have found it, as would other surveyors. Not only was Haast's timing fortunate, he also worked quickly to get his new geographical names and information officially recognised.

The discovery of a payable goldfield on the West Coast a year later meant that rather than falling into obscurity, Haast's pass, which was fortunately of very low altitude, provided a cheaper, though potentially a much more dangerous and uncomfortable, way for Otago diggers to get to the new goldfields on the West Coast. Their only other option being to go by sea from Dunedin or Invercargill (*New Zealander*, 7 September 1865: 30).

In April 1865 District Engineer Charles O'Neill was sent to explore the route from Wānaka to the West Coast. Following a tracing that he was given, O'Neill tried to find a pass at the head of the Young River but without success. From a summit he saw Māori Pass and he also referred to a "Maori Track" which he thought could be made into a "practical track" to the West Coast, though





**Figure 17.** Detail from Browning’s 1863 map of the Province of Canterbury. Sourced from gallica.bnf.fr/ark:/12148/btv1b530252869 [accessed 29 March 2022]

unfortunately O’Neill did not record its location (*Otago Daily Times*, 5 June 1865: 5).

Holmes wrote to Haast that there was a “paper war” about Haast Pass and that Hector was “fighting a little battle for you here [Dunedin]” (Holmes to Haast, 11 June 1865, Burns & Nathan 2012: 19). The battle consisted of roasting O’Neill by insinuating that he was incompetent. Hector wrote that when O’Neill referred to the “Maori Track” “he apparently overlooked the results of Dr. Haast’s explorations” (*Lyttelton Times*, 13 June 1865: 3).

After O’Neill’s lack of success, the next to be sent to investigate the route was Vincent Pyke, secretary of Otago’s Gold Fields Department. Pyke’s mission was to find a practicable and easy route to the West Coast. After his return in October Pyke wrote that he had fully accomplished this (*Otago Daily Times*, 4 November 1865: 5).

Unsurprisingly this generated another letter from Haast’s party, this time from William Warner, accusing Pyke of taking credit for finding the pass (*Lyttelton Times*, 1 Dec 1865: 2). Pyke responded by saying that he had never taken credit for finding the pass but took credit for finding a good line for a pack track which Haast hadn’t done. Pyke described Haast’s route down the north side of the river as “impracticable for any useful purpose” (*Lyttelton Times*, 20 December 1865: 3).

In 1875 Pyke’s track along the south side of the Haast River was upgraded to a horse track. During the Depression men worked on turning this into a road and it was opened to motor cars in 1960. Today it is a very scenic journey along a sealed road and you can get from Makarora to Haast village in about an hour.

## **Conclusion**

Cameron and Haast made two very different journeys with Haast's being more significant from almost every point of view but particularly from the perspective of science and mapping.

Haast and his party have the distinction of being the first Europeans to travel down the entire length of the Awarua River and to confirm the location of a Māori route. It was a difficult journey hampered by poor weather and the large amount of gear that they carried. This, together with the need to take survey measurements and collect specimens, meant that the expedition proceeded at a reasonably leisurely pace. Even on their way back from the Awarua River mouth to Makarora the party only averaged 9 km per day. They returned with surveyor's measurements of the country, sketches, plant specimens, some rock samples and Haast's first kiwi skin.

In contrast, Cameron's journey was lightweight and fast and he was fortunate with the weather. Cameron got to within sight of the Tasman Sea along the mountain tops which was quite a feat and worthy of recognition, however, his lack of observations and scientific information meant that it was easy for Haast and others to belittle his trip and inflate the importance of their own journeys. Although it is still to be established exactly how far Cameron got, he has the distinction of being one of the first Europeans to make an extended alpine journey in the southern mountains.

Credit often goes to those who make the most noise and to those who are in the position to make sure that they get recognised. Haast was very quick to get his name on maps. This was due to his ambition and his need for the recognition that would improve his professional standing and secure his career.

One of Haast's unfortunate legacies is the displacement of Māori names. At the time this was not unusual but some surveyors and explorers did make an effort to find out the original names rather than making up their own. Due to Haast's need to impress he was reluctant to acknowledge Māori. He asked Māori for information about the route but did not return to ask them for the names of geographical features he had observed along the route. Indeed, he knew before his trip that the name of what he called Haast River was Awarua. Haast's new names effectively covered up centuries of accumulated observations and stories connected to the landscape. This is frustrating as these earlier names lead to a greater appreciation of the history and stories of the areas than irrelevant newer names, such as Hooker and Brewster, given simply to win favour with the great and influential men of the 1860s.

Haast's journey was significant for Pākehā knowledge of the country's landscape, flora and fauna but it is a mistake to say that he discovered Haast Pass. The pass was well known to Māori who had discovered it hundreds of years earlier but Haast and party were the first Europeans to travel and map the route.

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## Endnotes

- 1 See Kā Huru Manu, The Ngāi Tahu Atlas, www.kahurumanu.co.nz [accessed 5 May 2022].
- 2 For more information about Te Huru-huru's map see Barton 1998.
- 3 Charles Cameron to J Moorhouse, 11 November 1862, ICPS 1790/1862. Archives New Zealand, Christchurch.
- 4 Letter from AFN Blakiston, Clerk, to Charles Cameron 21 November 1862, reproduced in *The New Zealander*, 19 March 1864: 6.
- 5 Haast was at Lake Ohau by 10 December 1862, taking perhaps 2 weeks to get there. See Nolden et al. 2013: 32.
- 6 W F Warner's Journal, entry for 20 February 1863. Canterbury Museum ARC1988.27
- 7 W G McClymont, Press, 24 August 1940: 5. Geoff Spearpoint, personal communication, 24 April 2022.
- 8 W F Warner's Journal, entry for 1 March 1863. Canterbury Museum ARC1988.27
- 9 W F Warner's Journal, entry for 17 February 1863. Canterbury Museum ARC1988.27
- 10 W F Warner's Journal, entry for 20 February 1863. Canterbury Museum ARC1988.27
- 11 Holmes, 7 March 1863 in *Otago Witness*, 25 April 1863: 8. W F Warner's Journal, entry for 25 February 1863. Canterbury Museum ARC1988.27
- 12 Map, The Southern Alps of The Middle Island of New Zealand by Dr Julius Haast, 12 June 1863. C.14.3 Kew Archives.

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## Rivalry and Cooperation: Julius von Haast's Influence on the Otago Museum

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Although not directly responsible for building the Otago Museum or its collections, Sir Julius von Haast (1822–1887) exercised a surprising influence over Dunedin. From surviving correspondence in scattered archives, it is clear that the relationship between the Canterbury and Otago Museums was complex. Haast and his contemporaries collected museum specimens to fill their respective cathedrals of science at a time when museum building was a global enterprise.

The first Otago curator, Captain Frederick Wollaston Hutton (1836–1905) had a love-hate relationship with Haast through the 1870s, but called on him to help the southern museum in a variety of ways. For instance, by trading specimens, by sending Otago's taxidermist to learn from Andreas Reischek (1845–1902) and by providing information on opening hours. Hutton fomented interprovincial rivalry between the provincial councils in a more-or-less successful attempt to get the Otago bureaucrats to provide funds. He copied Haast's approach with his successful exploitation of moa bones from Glenmark Swamp when a similar stash was found not far from Dunedin. Hutton argued with Haast over some of his ideas to the exasperation of the older man.

The second Otago curator, Thomas Jeffery Parker (1850–1897), was less argumentative and sought Haast's help with selling specimens at the Indian and Colonial Exhibition in 1886 when Haast was the commissioner. Parker used an innovative technique to preserve cartilaginous fish and internal organs of various mammals. Haast sold fish and invertebrates preserved by this technique to natural history museums in London and Dublin, where they remain, proving that both Dunedin and Christchurch were part of a flourishing global trade in natural history specimens.

**Keywords:** cartilaginous fish, Frederick Wollaston Hutton, moa bones, natural history trade, nineteenth century zoology, preservation techniques, specimen exchange, Thomas Jeffery Parker

There have been rivalries between Dunedin and Christchurch, the two major towns in the South Island, since the days of permanent European settlement in the 1840s. For example, Scottish versus English, Presbyterian versus Anglican, and it continues today through most sporting codes. Such interprovincial rivalry was as useful to the early museum builders in both cities as was cooperation.

When the Otago Museum opened its new building in August 1877, Dunedin people were enthusiastic and proud of the achievements of curator Captain Frederick Wollaston Hutton (1836–1905) and his taxidermist Edwin Jennings (1835–1910). Reporters had been allowed glimpses during its construction but were overwhelmed by the exhibits on opening day: “the eye is literally bewildered with the superb collection of birds of all countries and climes” (*Otago Witness*, 18 August 1877: 7). It had taken just over 10 years to reach this point. The first set of collections, largely minerals and rocks labelled and designated for the Otago Museum, had been put into storage after the Dunedin Industrial Exhibition held in 1865 (Crane 2017). These minerals and rocks were used by eager gold prospectors, other explorers and surveyors to compare against their finds. As soon as Hutton was appointed curator in 1873, he asked for help from Julius Haast (1822–1887) who was able to supply specimens without depleting his own store. The recently re-discovered earliest register has revealed that Haast sent two consignments of bird skins in 1873 comprising 32 British and 27 other bird skins (of unknown origin), and later in 1876 a further 12 New Zealand bird skins (Otago Museum Archive

1868–1892). Thus, some of the earliest natural history specimens in the Otago Museum had come directly from Canterbury. Hutton also wrote to a friend in London, who was in a position to facilitate exchanges and explained he wanted a comprehensive collection “for teaching Natural History, and not a peep show of birds—sponges, corals, Echinodermata, crustacea &c, also reptiles, fishes, and mammals, all are wanted” (Hutton 1874a). But the bird collection, with Haast’s contributions, that so bewildered the eye was indeed a peep show of birds.

From the outset Hutton single-mindedly stuck to his scientific aim to produce lists of fauna. It harkened back to an earlier period of exploration when the Eurocentric world imposed order on the mass of new-to-them flora and fauna, and to the emergence of the professional naturalist (Farber 2000). New Zealand, full of unique and largely unknown creatures, presented challenges to the systematic naturalist, and even today our knowledge is scattered and fragmentary. Hutton, who was an all-round naturalist, was by his own admission “fond of geology and natural history, [and was] so anxious to get employment in the scientific line” (Hutton 1866). His appointment as curator at Otago Museum seemed to fulfil his dreams as he was able to direct his own work. “One of the principal objects of the catalogues that I am bringing out is to supply [in] a cheap form the names of our animals”. He wrote to Haast that he had already “worked up” the Echinodermata [starfish and allies] and was hard at work on the shells:

*I expect to begin on the fossils next month, but don't let that hinder you from describing any also. I should only be too glad to have them all named as it would save me at any rate from innumerable mistakes. But it must be done unless we are to stick fast just were [sic] we are, so I have made up my mind to fire away and to bear calmly all the abuse I shall get from European naturalists who don't understand our reasons to pushing ahead (Hutton 1872).*

It is not clear what abuse he expected but the egotistical tone of the letter is typical. Hutton seemingly had little patience for people who did not share his work ethic. He produced a series of catalogues that culminated in the grandly named *Index Faunae Novae Zealandiae* published in 1904 (Hutton 1904).

## **Moa Bone Exchanges**

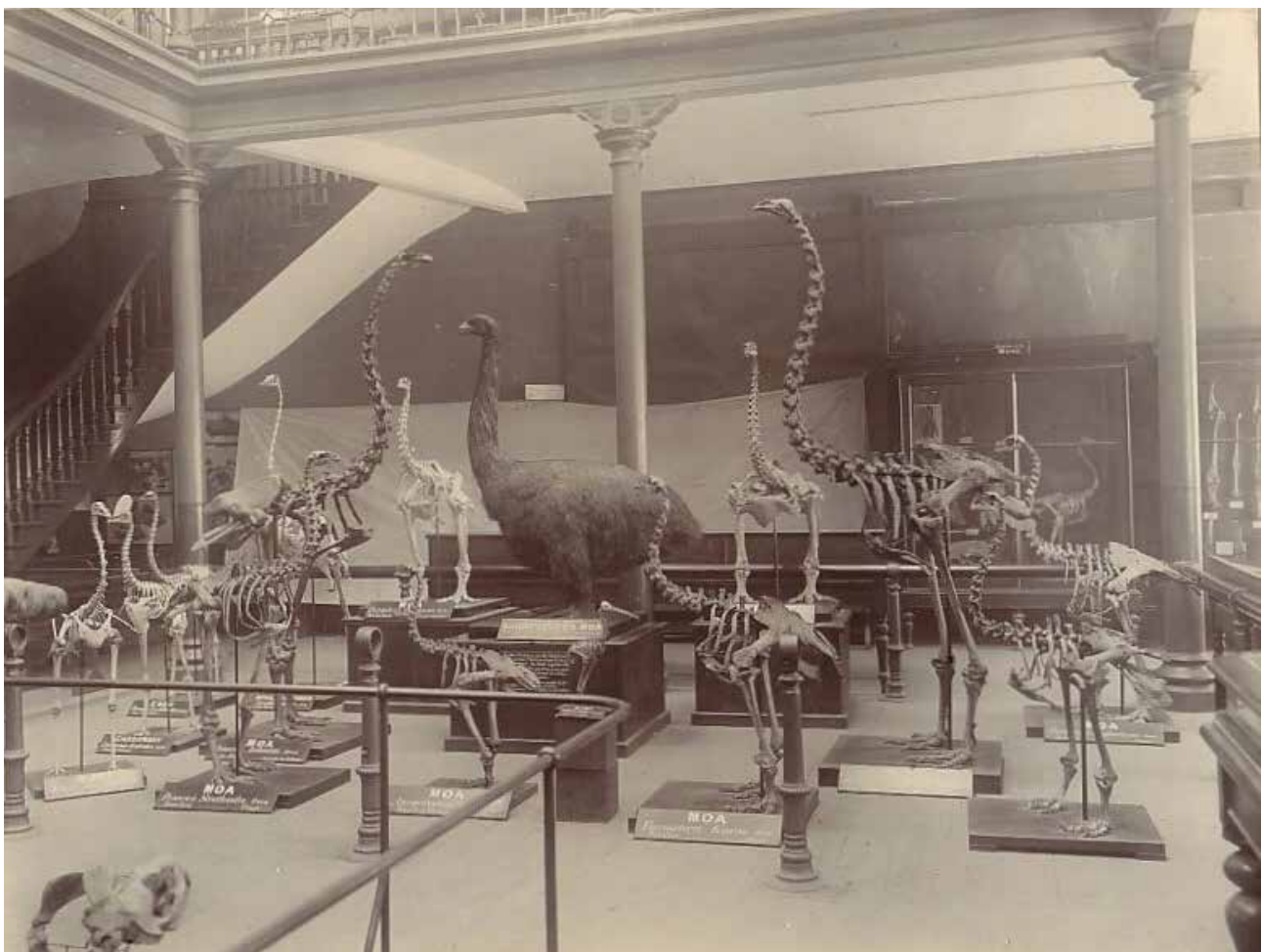
The story of how Haast sold moa bones to fund the development of the Canterbury Museum is well-known. How he acquired moa bones from Glenmark swamp in 1866 was told by Haast himself some years later when he gave a presidential address to the Philosophical Institution of Canterbury (Haast 1881). The finds were numerous enough to allow Haast and his taxidermist Frederick Fuller (1830–1876) to articulate seven complete moa skeletons. The mounts were displayed in Canterbury Museum while Haast sold or exchanged other bones through his personal networks. The story has since been told on several occasions; in the nineteenth century by Walter Buller in his *History of the Birds of New Zealand* (Buller 1888: xxv), then several times through the twentieth century including the account by his son in the biography of his father, *Life & Times* (Haast 1948: 480–489). Later his museum and moa bone story featured in international perspectives on the historical significance of Haast’s museum building activities (Sheets-Pyenson 1988: 1, 83; Barton 2000; Mackenzie 2009: 217–219; Berentson 2012: 146–151). And most recently Canterbury Museum’s 150<sup>th</sup> commemorative volume added a brief summary (Beattie et al. 2020: 7–8).

The story of how Hutton exploited the smaller deposit of moa bones from Hamilton’s diggings, near Ranfurly in Otago’s goldfields, is not so well known. Hutton undoubtedly copied Haast’s successful exploitative methods and, like Haast, kept several complete skeletons back for display in the museum (Fig.1). Shortly after the transport of bones in a wagon to Dunedin, Hutton wrote excitedly to Haast:

*You will be delighted to hear that I have got a large collection of moa bones from a swamp at Hamilton's diggings on the Taieri. I don't know what there will be yet, but the place is just similar to the Glenmark swamp and the known hole full of bones is larger than the one you got yours out of (Hutton 1874d).*

A month later Hutton was keen to exchange items with Haast: "I shall be able to send you some vertebrae and the two bones of *Cnemiornis* [a large extinct goose] presently but ... I have no room to sort out my things and a great deal too much to do" (Hutton 1874c). One of the things he had to do was exploit his moa bones. Hutton sold and exchanged his moa bones through a different network of contacts to that of Haast. Haast swapped specimens with his German-speaking colleagues, including Louis Agassiz (1807–1873) Director of the Museum of Comparative Anatomy at Harvard University, Ferdinand Mueller (1825–1896) Director of the Royal Botanic Gardens, Melbourne and Gerard Krefft (1830–1881) at the Australian Museum, Sydney. In contrast, Hutton used British contacts.

Hutton's first exchange using moa bones as currency involved Liverpool Museum. Thomas John Moore (1824–1892), the founding Director of the Liverpool Museum, enthusiastically embraced Hutton's proposal to swap moa (Greenwood 1980). "The *Dinornis elephantopus* in particular will be a most desirable acquisition", Moore wrote, and cautiously offered some mammal skins including lion, leopard, guanaco, tayra, a young harp seal (with skull) and both a West African civet cat [genet] and Indian civet [palm civet] (Moore 1874). But the largest tranche of moa bones



**Figure 1.** Collection of mounted moa skeletons and other flightless birds, including kiwi, cassowary, and ostrich in the Otago Museum. The model was covered with emu feathers. Photo taken about 1908 by unknown photographer. Otago Museum Archives P250-27

was sold to the London-based dealer Gerrard & Sons, who valued the consignment at £50, and in return sent about 20 mammals to Dunedin. These included an indri, a jaguar, and several squirrels, all of which survive on display in the Animal Attic and a saiga antelope, which has not survived (Gerrard 1875) (Fig. 2). Edward Gerrard (1832–1927) asked for further New Zealand birds if Hutton had duplicates that could be spared but added a cautionary note, “I do not want bird skins unless something very uncommon” (Gerrard 1875). Gerrard maintained deals with a variety of New Zealand suppliers including other ornithologists and also with London Zoo who supplied carcasses to the dealer. By 1879 Gerrard noted that the market was satiated with Little Spotted Kiwi: “there has been so many *Strigops* [Kakapo] & *Apteryx owenii* [Little Spotted Kiwi] skins & skeletons sent here lately that there is now no sale for them.” However, he still wanted the rarer Southern Brown Kiwi and wrote to Haast “if *Apteryx australis* could be sent me at £1 each I would take 6 skins and 6 skeletons” (Gerrard 1879). Haast and Hutton competed for attention from the dealer as such exchanges meant both parties had a clear understanding of the value of the specimens under negotiation.

Hutton sent some moa bones to University College Aberystwyth, Wales, in answer to a plea from lecturer of geology, Frederick Rudler (1840–1915) who was dismayed to discover he could not match the deal. Rudler had expected a box of specimens to the value of about £15 and regretted he “cannot make up a collection of Welsh fossils of anything like this value. Fossils hereabouts there are none and [only] in [a] few parts of Wales are they at all abundant” (Rudler 1878a). Rudler did his best and managed to send over 300 fossils including “Cambrian & Silurian fossils [which] are very difficult to get here and we prize them ourselves very much ... and only regret that they are not more numerous” (Rudler 1878b). Hutton made no comment when they arrived in April 1879, so it remains unclear whether he thought the deal a fair one, he simply recorded “a collection of Welsh fossils” in the register. But we cannot read too much into such a superficial entry in the records, it was common practice to simply record “a collection of”, or “some”, or for example “25 fishes” without any further details.

Otto Finsch (1879–1913) was a well-travelled ornithologist who supplied all of New Zealand’s major museums with bird skins. In June 1872, Finsch sent the President of the Otago Institute two boxes of birds containing 77 specimens comprising 20 stuffed and 57 study skins (Finsch 1872). Only eight birds listed by Finsch from this consignment can be positively identified among the current holdings of the Otago Museum. Given the large number of Finsch specimens in the museum this seems surprising, but it is unclear how many were originally destined for Otago. “One case is destined for Dr Haast in Christchurch and one for ... Auckland being objects of exchange with the museums in those places” (*Daily Southern News*, 27 November 1872: 7). Just over half of the birds were caught and prepared in Bremen, northwest Germany where Finsch was curator of the local museum, the rest resulted from his travels. Finsch sent a second large consignment of 375 birds which Hutton registered in March 1875 (Otago Museum Archive 1868–1892). This large collection of mostly European birds prompted Hutton to write to Haast about exchanges: “I will send you skin for skin — I do not want any European birds, nor those of Australia except the waders & water birds, or anything rare” (Hutton 1874d). Hutton’s glut of Australian birds came from Eli Waller (d.1881) a bird shop owner and commercial taxidermist in Sydney, who had formerly worked at the Australian Museum and had sent a consignment of 50 skins (Waller 1875). Pacific birds came from Sir George MacLean (1834–1917) a banker, treasurer of the Otago Provincial Council and Director of the Union Steam Ship Co. who had donated a large collection of bird skins, shells and other marine life from his travels throughout the South Pacific. Hutton explained to Haast that among the collection there were “a lot of duplicates in spirits which I am sending to Finsch” (Hutton 1874e).



**Figure 2.** Indri lemur (*Indri indri*) acquired in 1875 in part exchange for consignment of moa bones with Gerrard & Sons, London and valued at £7.0s.0d. It was packed as a taxidermied mount rather than as a skin. Otago Museum OMNZVT2384

Exchanges between naturalists were sometimes tense and misunderstandings easily arose. Hutton, it should be noted, was a pedant, inclined to argue and be outspoken, all personality traits that sometimes prevented him from working smoothly with colleagues: “he is often too pungent a critic to please those from whom he differs in opinion” (Thomson 1885). His relationship with Haast mirrored this critique and an initial exchange over penguin skins broke down quickly:

*Unfortunately I cannot say what is a fair money value for the different skins, as I have no experience in valuing. Before I sent the penguin to you you wrote to me and said that you wouldn't give me more than two dozen of your duplicate foreign birds and some NZ birds for it,... but if you like to return me the penguin I shall be very happy to send you 32 other skins back again.*

*I am sorry that your trustees do not consider the exchange satisfactory. It is certainly not so to me. (Hutton 1874f).*

This particular misunderstanding was quickly resolved. Hutton conceded that in future such exchanges should be agreed “before hand what each are to send and then there will be no disappointment.” (Hutton 1874d). This example demonstrates Hutton’s ability to rub people up the wrong way. Later, when Hutton was established in Christchurch, his difficult personality led Haast to step away from the Philosophical Institute: “as long as Hutton is President I will not have anything to do with it, as I want peace” (Mildenhall et al. 2013: 3).

The monetary value of Hutton’s moa bones was obvious to him straightaway as he wrote to Haast, “it will be the making of this museum, and they will have now to put up a building” (Hutton 1874b). The “they” that Hutton referred to were the members of the Otago Provincial Council, who were now goaded to action. The pro-museum members of the Council played the card of inter-provincial rivalry, for without a suitable building “they were behind the neighbouring Province of Canterbury. The building would probably cost about £5000, and it was proposed to erect it at the north end of the town.” (*Mount Ida Chronicle*, 12 June 1874: 2). In July 1874, Hutton, keen to make amends over the earlier acrimony about the penguin exchange, wrote to Haast, “I am delighted to hear of your £14,000 [for a new building] for it does me all the good in the world getting moving here”. Hutton’s admiration was tinged with rivalry and he continued, “I cannot hope to compete with you in buildings or foreign collections, but I shall do my best to beat you in New Zealand collections” (Hutton 1874g). Work began on the new building during 1875 as Hutton and his taxidermist Edwin Jennings prepared the specimens for display.

## **Financial Precarity**

The campaign to abolish the provincial system of governing reached a head during 1876. As the new reality sank in, a public meeting was called in Dunedin and it became clear the half-built museum and its ongoing finances would be adversely affected (*Otago Witness*, 19 August 1876: 6). The Otago Provincial Council was criticised for not acting years before to acquire a similar endowment scheme to Canterbury, and it was now too late. The New Zealand Government had granted 100,000 acres of land to the Canterbury Provincial Council with the proceeds from rents to form an endowment to be used for maintenance of the Canterbury Museum (*Bruce Herald*, 15 August 1876: 5). With justification Hutton was worried about the future financial stability of the Otago Museum and confided to Haast, “I am rather doubtful as to how our museum & myself will get on after the abolition of provinces as we have no endowment. You are all right” (Hutton 1875). Inevitable delays in the building process occurred and in mid-1876 Hutton was despondent. “My collections are increasing very fast, but the building goes on very slowly,” he wrote to Haast, “at present there is a stoppage, a contractor for iron



work having thrown up his contract. The walls are not quite half up yet. There is very little chance of its being open to the public before a year's time" (Hutton 1876). Nonetheless Hutton was envious of the situation in Christchurch and wrote to explain his attitude:

*It is all very well for you to say that we should not talk about having the best museum for you are endowed and safe. But it is necessary for me at present to work on the rivalry between the provinces to get something done. You must not mind it, there is really not a particle of jealousy in it. It is only a dodge for raising the wind, and as soon as this museum is safe it will end. There would have been no Museum in Dunedin if you had not just started one in Christchurch (Hutton 1876?).*

By September 1876, however, things began to look up. The Government agreed that the University of Otago should be administratively responsible for the upkeep of the museum and allowed rental income from a high country sheep station to fund its running expenses (Otago Museum Archive 1873–1878, meeting dated 5 September 1876). Thus, with its immediate future assured Hutton turned his full attention to filling the museum. By May 1877 he was frantically busy and had to forgo a visit to Christchurch for the opening of Haast's new exhibition: "it is impossible [to leave Dunedin], ... I am also just commencing to put up some skeletons in the Hall of the Museum. We are in a dreadful mess at present, but things look as if they would get straight soon" (Hutton 1877a). Hutton was still frustrated: "there are no end of delays in finishing the fittings but I hope to open by 1st September" (Hutton 1877b). Hutton was a little out in his estimates as the Otago Museum opened in August at its Great King Street site where it remains.

The subject of Sunday opening raised its head and Hutton sought advice from Haast. In Dunedin, a town still dominated by Scottish Presbyterians, Sunday was set aside for worship and the rational entertainment that a visit to the museum offered was frowned upon. He wrote to Haast seeking clarification about Canterbury's opening hours:

*I am in favour of opening from 2pm to 4pm on Sunday but one of our committee is against it & objects on the supposed fact that it has been a failure in Christchurch, and that your museum is only used on Sundays by fashionable loungers (Hutton 1877c).*

Haast confirmed that Sunday opening was worthwhile as Hutton wrote a week later, "the information about your museum was just what I wanted – it will enable me to have ours opened on Sunday" (Hutton 1877b). This did not please some of the clergy who felt Sunday should be a day of rest, that opening the museum was unnecessary and would lead to further secularising of the Lord's Day (*Otago Daily Times*, 22 August 1877: 2). It was left to the newspaper columnist, Civis, to proffer the final advice to Hutton over this storm in a teacup: "his best plan will be to treat everything of this sort with the contempt it merits" (*Otago Witness*, 18 August 1877: 13).

## Taxidermy Help

In March 1877, Hutton met Andreas Reischek at Port Chalmers who had just arrived in the colony. A renowned Austrian naturalist, Reischek had left Vienna after only a year in business as a taxidermist to take up the vacant position in Canterbury Museum. Reischek had a large job ahead of him, 30 chests of skins and skeletons awaited his skills (King 1981: 30, 36). Reischek had a totally different way of mounting specimens to Hutton's conservative approach and explained, "I placed two grizzly bears before a cave (canvas) clawing at a dead antelope, while from a rock above a lynx and a condor looked greedily down on this vanishing prey" (Haast 1948: 796). Hutton did not approve, yet he acknowledged Reischek's skill. "I think that you have got a treasure in Reischek

[sic],” he wrote to Haast at the beginning of May, “and [I] am surprised that he should come out for so small a salary” (Hutton 1877d). Later that month Haast offered Reischek’s services to Hutton but Hutton was unable to take up the offer: “I am afraid I shall have to decline it”. He had no money but more importantly “there is no room in our museum for groups, which appear to me to be better adapted to an Art Gallery than to a Natural History Museum” (Hutton 1877a). Yet later when Haast and Reischek needed specialised help with the preparation of an elephant Hutton readily agreed to send Jennings:

*Jennings is delighted at the idea of coming up to help Reischek [sic]. ... He will take up the skin of Saiga tartarica, ... which, after the elephant is finished, he can (if you have no objection) stuff under the eye of Reischek [sic]. It is a lesson in stuffing deer that I want him to have most* (Hutton 1877e).

The saiga antelope had been part of the consignment from Gerrards in exchange for Hutton’s moa bones.

1879 proved an important year for Hutton and by mid-year he appeared settled. The museum attracted visitors including John Enys, an immigrant Cornish-man who ran a sheep station in Canterbury, and was a well-rounded naturalist who supported Haast in his endeavours. Haast wrote seeking Hutton’s help with information in preparing an exhibition of moa bones for the International Exhibition at Sydney, and wrote, “I was very glad to hear from Enys who enjoyed his visit to your Museum very much, that you are comfortably installed in your new house & that you have now plenty of elbow room” (Haast 1879). But in December Hutton suddenly left Dunedin: “I have been transferred to Canterbury College to take Powell’s place. We move to Christchurch in January” (Hutton 1879). The language he used remains puzzling. ‘Transferred’ is a curious choice of word, implying the decision may not have been Hutton’s alone although that seems unlikely. There is no other evidence one way or the other to explain his sudden departure. However, he left behind a museum that had been built as a conscious response to inter-provincial rivalry fomented by Hutton. Many specimens had originated from Haast’s generosity. Like other museum curators in the late nineteenth century both Hutton and Haast utilised a system of acquisition based on exchange and worldwide trade (Ville 2020).

## **Parker & Haast 1880s**

Haast’s involvement with the Otago Museum continued when Hutton’s replacement, Thomas Jeffery Parker (1850–1897) arrived in mid-1880. Parker, a committed evolutionist, had spent the previous 8 years working in London for biologist Thomas Henry Huxley (1825–1895), better known as ‘Darwin’s Bulldog’. Parker responded to a letter from Haast, “thank you very heartily for your kind letter of welcome ... I shall be very glad of the antelope skin & still more grateful if you can at any time spare in spirit specimens of Monotremes, Marsupials, or Amphibians” (Parker 1880a). The relationship between the two men was harmonious and respectful, for instance, Parker asked Haast if he had “a few insect pins of various sizes? We are quite out of them now” (Parker 1881a). They swapped scientific information frequently but after an exchange of correspondence both declined to be involved in an expedition to find living takahe in remote Fiordland (Parker 1882). Again in 1884, Parker asked for Haast’s assistance. He wanted information on the location of breeding colonies of tuatara because he had received a grant from the Royal Society in London to investigate their embryology and needed eggs in different stages of development (Parker 1884a). Parker’s museum exhibits were driven both by his own research on evolutionary embryology and by the needs of teaching courses in comparative zoology for both zoology and medical students for whom such lectures were compulsory (Crane 2020). Parker was not interested in Hutton’s kind

of systematic inventory science and only wrote papers describing new species when opportunity arose (Parker 1880b; Parker 1883).

The character of the museum displays changed from Hutton's unwanted but accurate description of a "peep show of birds" towards displays featuring innumerable skeletons described accurately as a "mania for skeletons" ('Our Dunedin Letter' *Tuapeka Times*, 15 February 1882: 5). Each nineteenth-century museum curator wanted his own iconic animals, for Haast it was a room full of mounted moa skeletons. And while Otago had some moa too, they never quite achieved the status of Haast's extinct birds because they were not the first to be displayed in the country. Large specimens filled the criteria for iconic animals and whales certainly fitted this category. Hutton had mounted a right whale skeleton on the floor of the museum where it remained for decades until it was dismantled and put into storage. Finally in 1940 it was sent to Southland Museum in Invercargill to become an iconic attraction there (Skinner 1941).

Parker's iconic exhibit came in the form of a large fin whale skeleton he acquired in 1883. He wrote to Haast:

*We are now mounting a skeleton of what I take to be the same species [as yours] ... It is in very good condition except that a portion of caudal vertebrae were thrown away with the flukes and many of the phalanges are lost. ...The baleen is in beautiful condition, & the skeleton altogether will be a very fine one. It is to be slung from iron girders supported by the columns. What size is your specimen? Mine is 54ft 6ins (Parker 1884b).*

Friendly teasing and rivalry between Otago and Canterbury continued. The whale had stranded at Nelson, and Captain William Jackson Barry (1819–1907) had it de-fleshed and cleaned, then carted it around the South Island giving lecture tours. The whale became a source of entertainment. By June 1883, he set it up in a warehouse in Dunedin where it was an attraction for a couple of months. But by the middle of August, a one-sentence newspaper report recorded that "Captain Barry has disposed of his whale skeleton to the Otago Museum" (*Star*, 16 August 1883: 3). And so, Captain Barry's whale became Professor Parker's whale and in so doing became a source for serious study (Crane 2015). Parker wrote a detailed description of the whale for the *Transactions and Proceedings of the New Zealand Institute* that included measurements of all the bones (Parker 1884c). Parker's published account hides his anxieties and angst. In a letter to W H (William) Flower, Director of the Natural History Museum in London, he wrote:

*I send with this a photograph of the Museum showing a skeleton of Balaenoptera I had put up some time ago. I feel a little uncomfortable about the (artificial) pelvic bones, which are modelled from a figure of Haast's. Ought they to be reversed! (Parker 1886a).*

On the face of it, the Otago Museum and its fin whale played second fiddle to Haast's Canterbury Museum. But in fairness Otago never had the resources of its northern rival.

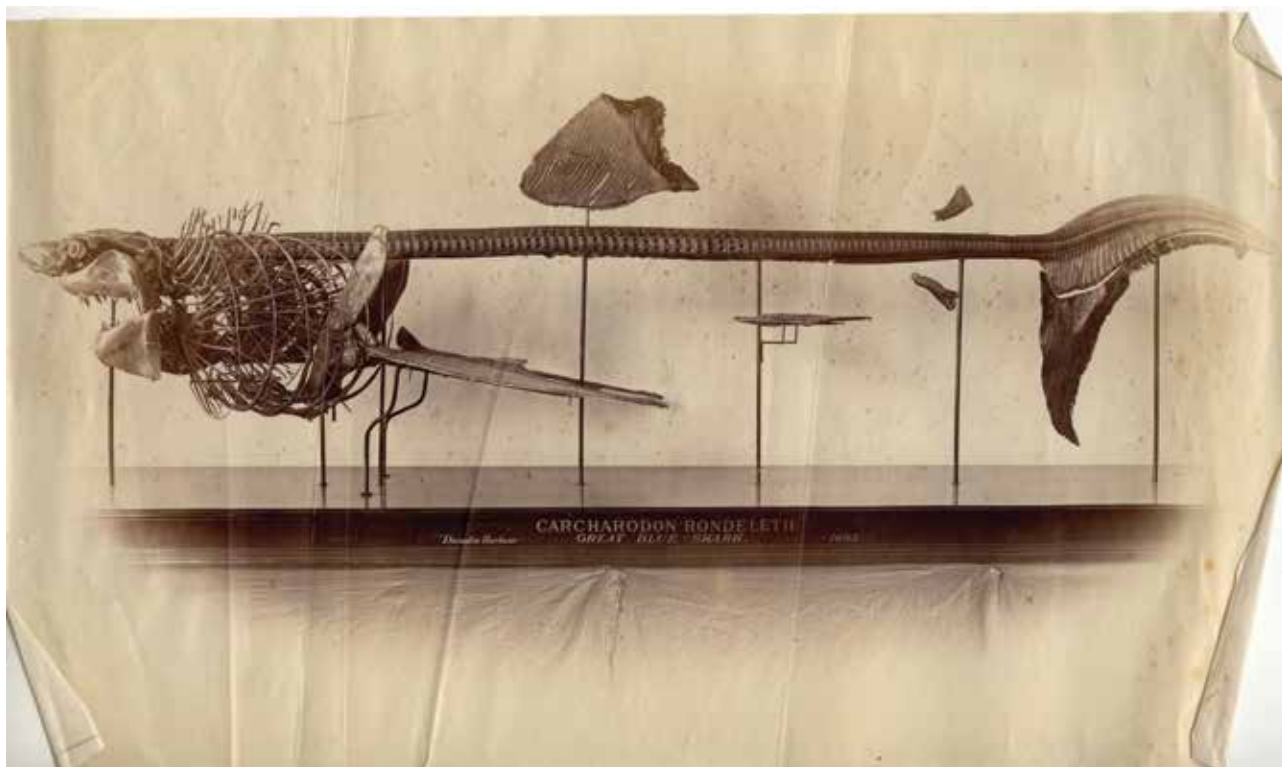
## Cartilaginous Fish

Parker was resourceful and developed a new technique for the preservation of cartilaginous fish. This made a mark on the international museum world and was cited on his certificate of election to fellowship of the Royal Society of London in 1888 (Royal Society Archive 1888). Among the proposers signing from personal knowledge was Haast who had good cause to understand the effort involved. Haast was appointed Commissioner of the Indian and Colonial Exhibition held in 1886 and was in little doubt about Parker's contribution to the success of the venture. Parker

undertook to provide a large collection of the “principal food fishes to be found in New Zealand waters” (*Star*, 10 November 1885: 4) and sent off a large collection to Haast in 1885. “The collection now sent,” he wrote, “includes 43 stuffed fishes, 99 fishes in alcohol, four cartilaginous and four bony fish skeletons, mounted octopus & 7 or 8 crustacea, & group of tuataras & mutton birds” (Parker 1885). The most impressive of this collection was the preserved skeleton of a great white shark. Including this amongst the specimens allowed Parker to show off his innovative preservation technique using hot glycerine to impregnate the tissues (Parker 1881b). The method was long-winded, expensive, messy, and involved a series of processes. These included putting the soft parts in methylated spirits for two to three weeks which hardened them. The specimen was then transferred to a glycerine fluid for another week, before being placed in melted glycerine jelly at about 40°C for two to four days. Finally, the specimen was drained and stretched across a made-to-measure trellis to dry for several weeks, and, when the surface was no longer sticky, two or three coats of varnish was applied. Consider the effort involved in dealing with zoological specimens, the experimentation that went on, the space required for numerous animals in various stages of processing, the patience for a week’s worth of effort for what was an uncertain outcome, and the constant maintenance of the processes by Parker and his staff. It is an aspect of collecting natural history material often overlooked, a point that historian Samuel Alberti makes in discussing what happens to specimens once they arrive at the museum (Alberti 2009: 123).

New Zealand newspapers reviewed the whole Indian and Colonial Exhibition and gave parochial pride of place to the New Zealand Court. Haast’s scientific approach was noted with approval: “[he has] obtained for New Zealand a more scientific character than any other Court in the Exhibition” (*Star*, 18 March 1887: 3). An anonymous reviewer for one of the English magazines pinpointed Parker’s efforts: “the Otago University Museum is an important contributor, and visitors and experts alike will admire the very beautiful specimens of cartilaginous skeletons” (Anonymous 1886). Haast organised a lucrative sale for Parker and sold a substantial part of his fish collection, including the shark, ribbon fish (*Regalecus*) and other specimens to William Flower for a total of £203/0/3d (Haast 1886a) (Fig. 3). At the same time Dublin Natural History Museum bought the octopus, the skeleton of a lamb, and some stuffed birds for £35 0s 0d (Haast 1886b; Parker 1887a). Parker had expected higher prices. “I think Flower has got a bargain with *Carcharodon* [great white shark] etc. but I would far rather let him have them at a smaller price than I expected than have them returned” (Parker 1886b). Nevertheless, he was grateful to Haast: “I am very glad to hear that so many of my exhibits have gone off” (Parker 1886c). Parker put a different spin, however, on his thank-you letter to Flower: “I am very glad to hear that you have decided to take some of my specimens, both my assistants & I feel quite proud at being represented in the National collection” (Parker 1886a). Parker could not disguise his emotional investment in the sale. He thought highly of his glycerine method as did Flower when he initially encountered the cartilaginous fish at the exhibition. Haast wrote to Parker, from London during the exhibition, “your work is very much admired & Prof. Flower told me the other day, that it was funny that they had to come to an Antipodean court to learn something” (Haast 1886c). By the time the exhibition closed in November, however, Flower had lost confidence in Parker’s process. Haast wrote to Parker, “considering that the skeletons were constantly losing the Glycerine, I think I did very well. I saw Prof Flower this very afternoon as he explained his doubts of the skeletons keeping for any length of time” (Haast 1886b). Parker promptly reassured Flower:

*I don't think you need be under any apprehensions as to the permanency of the glycerine jelly process .... If a really impervious coat of varnish could be given to the whole specimen I [am] certain there would be no more trouble at all* (Parker 1886a).



**Figure 3.** Skeleton of great blue shark (*Carcharodon carcharias*) preserved by Parker's hot glycerine method. Exhibited at the Indian and Colonial Exhibition, London and sold as part of consignment by Haast with a total value £238/0/0d. Unknown photographer. Otago Museum Archives P465-25

Four months later, in March 1887, Flower by now happy with his purchase, wrote to Parker:

*your shark is safely lodged in ... the Museum. When I removed it from the Exhibition it was in a sad state ... all flabby and dripping. But after a month or two in the dry air of this place, it quite recovered (Flower 1887).*

The total £238 that Haast raised for the Otago Museum needs to be put into perspective as it was a considerable sum; Parker's museum salary was £300 per year (with an extra £300 as professor, plus fees from students) (Hamilton 1894).

Haast returned to New Zealand in 1887 and Parker wrote to welcome him home, "I was very glad to hear of your safe arrival & that your health was improved. I sincerely hope there will now be no more sciatica or other troubles" (Parker 1887b). Sadly, this letter was written just a few days before Haast died at his home in Christchurch on 16 August. An obituary in *Nature* explained Haast had overtaxed himself organising the exhibition and "travelling while in weak health" and had died from heart disease ([Lockyer N] 1887). Haast had had a considerable influence on Otago Museum during its formative years, whether by supplying specimens, enabling the taxidermist to upskill, or by being an agent in the sale of specimens. He had also proffered advice and scientific support to both fellow curators, Hutton and Parker. All three men were an integral part of an extensive worldwide trade in natural history specimens, the scale of which is only just becoming apparent (Finney et al. 2022).



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# How True to Nature are Julius Haast's Field Sketches and Paintings of Glaciers in the Southern Alps of New Zealand?

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A reproduction of Julius Haast's 1866 painting of the Lyell Glacier in the headwaters of the Rakaia River has recently been used on science news websites to illustrate the extent to which glaciers in Kā Tiritiri o te Moana (the Southern Alps) of New Zealand have retreated by comparing it with an aerial photograph. This raises the question of whether Haast's landscape paintings, and the field sketches on which they are based, are accurate environmental records of the extent and volume of those glaciers. There was little commentary on the veracity of Haast's sketches in the scientific or art-historical literature until the late twentieth century. In a more recent book on Haast's glaciological research, ecologist Colin Burrows included many field sketches by Haast, which he asserted are largely accurate based on his visits to many of Haast's sites, but little visual confirmation was provided.

In the research underpinning this paper, the fidelity to nature of Haast's illustrations was investigated by comparing a sample of Haast's field sketches, and the corresponding landscape paintings, with site photographs or virtual views generated by Google Earth Pro from, or close to, Haast's vantage points. The set of nine views selected were encountered on an expedition to investigate the headwaters of the Rakaia River in Canterbury and to document the glaciers that fed that braided river. For all of those views, Haast produced landscape paintings based on his field sketches, which were eventually reproduced in his official report as lithographs.

The fidelity analysis described here involves comparing enduring geographical, geomorphological and sometimes ecological features illustrated in his works with those recorded in contemporary site photographs or in virtually generated imagery. Faithfully rendered features and those modified for scientific or artistic reasons, are identified, leading to a significant conclusion about the reliability and value of Haast's glacial works as historical environmental records.

Finally, the findings of this research project on the fidelity to nature of a sample of Haast's works are compared with Burrows' judgement.

**Keywords:** fidelity to nature, field sketch, glacier, historical environmental record, Julius Haast, landscape painting, Rakaia River, roche moutonnée, Southern Alps, watercolour

## Introduction

In recent years there have been a number of radio, newspaper, television and internet news items on the dramatic retreat of the glaciers of Kā Tiritiri o te Moana (Southern Alps) of New Zealand. One such internet article, on the *SciTechNews* website, is titled "New Zealand's Southern Alps glacier melt has doubled – up to 77% of Little Ice Age glacier volume already lost".<sup>1</sup> The item was based on research published by an international team of glaciologists led by the University of Leeds, working in conjunction with scientists at the National Institute of Water and Atmospheric Research (NIWA) in New Zealand (Carrivick et al. 2020). The article opened with a striking illustration, reproduced in Figure 1, which compares an 1866 landscape painting by Julius Haast (1822–1887) of the Lyell Glacier at the headwaters of the Rakaia River with a 2018 aerial photograph of that glacier by NIWA climate scientist Andrew Lorrey. Although the photograph was taken from a much higher vantage point, the aerial shot dramatically illustrates how far the ice has retreated in just over 150 years,



**Figure 1.** Comparison of a recent aerial photograph of the Lyell Glacier with a nineteenth-century painting. **A**, View from Meins Knob looking West, the Southern Alps with the Lyell Glacier, watercolour, 141 × 248 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-003 **B**, Upper Rakaia catchment looking west toward Lyell Glacier while flying over Meins Knob during the Southern Alps end-of-summer snowline survey in 2018. Photograph by Andrew Lorrey, 2018



from a state in which the terminus of the glacier apparently filled most of the valley to its present position much further up the valley just beyond the more recently formed proglacial lake.<sup>2</sup> (Glacial terms are defined at the end of this article.)

Intriguing though the comparison is, it raises the question of the fidelity of Haast's landscape painting – is it an accurate historical environmental record? Was it true to nature at the time or did Haast use artistic licence to transform features of the glacier, rendering it a less reliable record?

In the 1860s, Haast explored and surveyed much of Kā Tiritiri o te Moana (the Southern Alps) lying within the mid-nineteenth-century boundaries of the Province of Canterbury in the British colony of New Zealand. In 2005, the ecologist Colin Burrows published a substantial book, titled *Julius Haast in the Southern Alps*, which focused on Haast's pioneering scientific research, particularly "his contributions to topographical and geological mapping, and his innovative studies of the glacial geology of the region" (Burrows 2005: back cover). Included in the book are 16 coloured sketches by Haast of glaciers or glacially formed features, all of which are in the Alexander Turnbull Library (ATL) collection. A search conducted through the website hosted by the National Library of New Zealand identified numerous other field sketches of views in Kā Tiritiri o te Moana (the Southern Alps) by Haast, as well as a limited number of finished landscape paintings based on some of those sketches,<sup>3</sup> one of which was used in the *SciTechNews* article.

Aware that I had recently completed extensive research into the issue of fidelity to nature in the Antipodean landscape paintings of the mid nineteenth-century colonial artist Eugene von Guérard (Hook 2022b), and of my interest in Haast's sketches, research librarian Sascha Nolden suggested that I might like to apply the techniques I had developed to assess whether Guérard's works are reliable environmental records to Haast's oeuvre. This appealed, as it would provide a further test of the validity and reliability of those methods.<sup>4</sup> The present study could not be completed on the same scale as the Guérard research, which had involved researching and visiting the sites of more than 100 of his landscapes, but a worthwhile assessment could be made of the fidelity of a sample of Haast's field sketches and paintings. This research could make a significant contribution to the literature on the recent history of New Zealand's glaciers, particularly as they are sensitive indicators of climatic changes, measurably expanding in volume and length as the climate cools and shrinking as the climate heats over interannual and longer time scales (Mackintosh et al. 2017; Baumann et al. 2020; Lorrey et al. 2022). Given that very few photographs were taken of New Zealand's glaciers until late in the nineteenth century, when it became more feasible to transport and set up bulky photographic equipment in remote alpine locations, Haast's sketches and paintings of glaciers, if accurate, are important sources of information about the maximum extent of Kā Tiritiri o te Moana (the Southern Alps) glaciers near the end of the Little Ice Age (Lorrey et al. 2014), before human-induced global warming began to influence the extent of glacial ice in New Zealand (Vargo et al. 2020).

## Commentary on the Fidelity of Haast's Sketches and Paintings

In a 1911 chapter on the physiography and plant ecology of the Mt Arrowsmith district at the head of the Rakaia River, geologist Robert Speight acknowledged his "indebtedness to Julius von Haast on points so numerous that it is impossible to mention them in detail" (Speight et al. 1911: 317). However, he made no mention of the field sketches, most likely because he would not have seen them, as at that stage they were in the possession of Haast's widow Mary, stored in two metal trunks (Nathan 2022).

The first scientific article to comment specifically on the fidelity of some of Haast's field sketches of glaciers in Kā Tiritiri o te Moana (the Southern Alps), provocatively titled "The dwindling glaciers of

the Upper Rakaia Valley, Canterbury, New Zealand”, was published by the geologist Maxwell Gage in 1951. Having visited the site in 1949, he wrote that Haast’s sketch of the Lyell Glacier (Fig. 9B) “is a remarkably detailed and faithful representation of the *more permanent* features [emphasis added]” of the view (Gage 1951: 504).

In a 1974 article that mentioned the numerous field sketches made by Haast held in the Alexander Turnbull Library collection, art historian Janet Paul acknowledged that she was “struck by Haast’s accurate eye and the speed of his work”, with sometimes several “vast panoramic drawings” completed in a couple of days (Paul 1974: 6). Paul claimed that Haast limited the watercolour paints he used in the field to a cerulean blue wash for the sky and water, a scrubby grey for rocks and terre verte for vegetation.

The next scientists to specifically mention Haast’s sketches of glaciers were Burrows and Brian Maunder (1975) in a paper on the recent moraines of the Ramsay and Lyell Glaciers in the Rakaia Valley. They noted that Haast had painted a watercolour of the Lyell Glacier from Meins Knob (Fig. 9C), the original of which was held in the Alexander Turnbull Library, “from which it could be seen that the terminus lay at the position of the M3 moraine”. The researchers also commented that “Haast’s painting from near the Louper [sic] Stream shows that the glacier terminus extended to the foot of Meins Knob in 1865 [sic]” (Burrows and Maunder 1975: 479, 482–483). In this instance, they were actually referring to a lithographic print in the back of Haast’s report on the headwaters of the Rakaia River (Haast 1866: View No. 11). That print is based on a watercolour (Fig. 8C) that Haast produced back in Christchurch using his field sketch (Fig. 8B). As Burrows and Maunder did not question the visual information in Haast’s sketch, painting or print, it can be assumed that they considered them to be accurate illustrations of the view, including the mid nineteenth-century glacial features. Their confidence would have been based on having reached some of Haast’s vantage points and seen that enduring topographical features were accurately rendered.

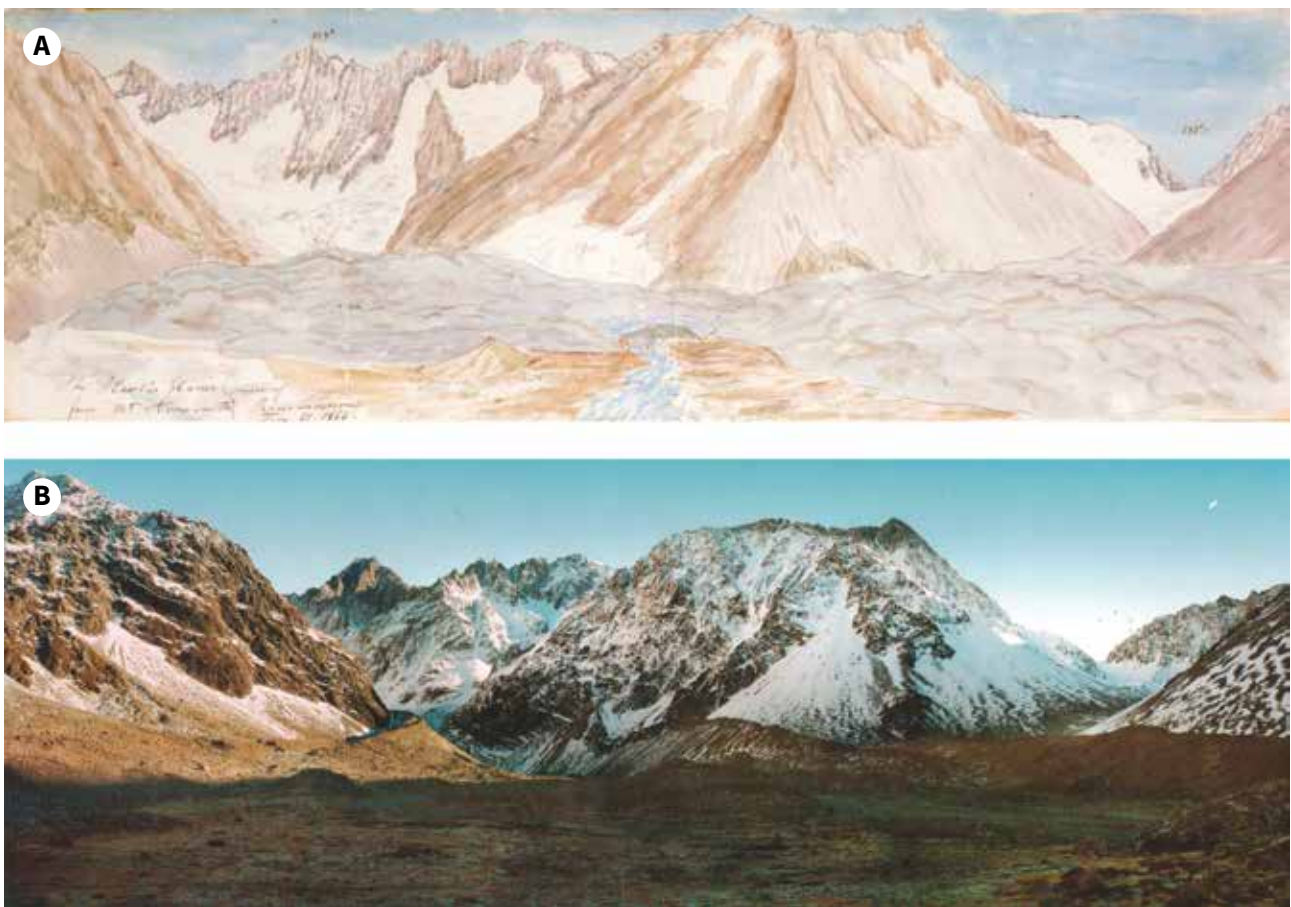
The most recent scientific publication to include reference to the fidelity of Haast’s field sketches and paintings of glaciers is the aforementioned book *Julius von Haast in the Southern Alps*. In that tome, Burrows included colour reproductions of 16 of Haast’s sketches that illustrated alpine scenes with glaciers. Two of Haast’s landscape paintings were also reproduced. Given the effort Burrows made to locate those specific images among the 200-plus sketches and paintings held in the Haast Family Collection in the Alexander Turnbull Library,<sup>5</sup> and then requesting colour scans, it is obvious that he had a great deal of confidence in the accuracy of the images. They informed significant sections of his analysis of the changes that particular glaciers have undergone in the intervening 140 years (relative to the time of publication of his book). Burrows commented that as his “own research career took me to many of the locations that Haast visited in the 1860s”, he could only conclude that Haast “had not received due credit for his many acute observations on aspects of New Zealand glacial geology” (Burrows 2005: 14). Furthermore, Burrows wrote that “[one] special benefit of describing Haast’s scientific investigations of the Southern Alps is that it provides an opportunity to present many of his drawings ... to a wider audience”. The ecologist noted that as Haast’s exploration of the alps occurred before alpine photography became feasible, “his drawings and maps are valuable first-hand information on many natural phenomena, seen through European eyes for the first time”. At no point in his substantial text did Burrows question the veracity of Haast’s field sketches, although he did question the degree of accuracy of some. Clearly this confidence was based on the ecologist having reached many of Haast’s sites on extended field trips after 1985,<sup>6</sup> and having compared reproductions of Haast’s sketches with actual views. Despite his obvious familiarity with many sites, Burrows included few comparative photographs taken from or close to Haast’s vantage points, and those photographs are located in a different insert of colour plates from that including reproductions of the field sketches. A striking exception

is the pairing of a sketch and a contemporary photograph of the Cameron Glacier (formerly the Hawker) at the headwaters of the Rangitata River, which illustrates the cover of the book and is reproduced in Figure 2. Burrows noted on the imprint page that “the glacier had receded by more than two kilometres”.

### Selecting a Sample with which to Assess Haast's Fidelity to Nature

A comprehensive assessment of the fidelity to nature of Haast's field sketches was beyond the scope of this research project, so I considered a sample of works instead. These could have been chosen randomly from the extensive collection here in New Zealand and in the more limited collection held overseas,<sup>7</sup> but this would have created some difficulties in investigating sites that would be in widely separated locations. I therefore decided to assess the fidelity to nature of the sketches that Haast completed on one particular excursion, that to the headwaters of the Rakaia River in Canterbury (see Figure 6).

Although there are at least 25 painted images connected to the 1866 Rakaia expedition in the Alexander Turnbull Library collection, not all were digitised. After viewing the digitised images it became apparent that there are two types of works, both executed in watercolours. Some are pencil and watercolour sketches and others are watercolour landscape paintings. The paintings reproduce views recorded in some of the sketches. Eventually it was established that there were nine paintings, each based on one of nine sketches. The library's metadata indicated that



**Figure 2.** Comparison of a field sketch of the Hawker Glacier (now known as the Cameron Glacier) with a contemporary photograph of the same view taken from close to Haast's vantage point **A**, *The Hawker Glacier, source of River Cameron from Mt Arrowsmith, 27 Feb. 1864*, pencil and watercolour, title in ink, 180 × 540 mm. Julius Haast, 1864. Alexander Turnbull Library C-097-040 **B**, *Arrowsmith Range, Canterbury*. Photograph by Callum Marshall, 2005

the landscape paintings were used as ‘originals’ to inform the lithographers who produced the illustrations found at the back of Haast’s report on his survey of the topography and geology of the Rakaia catchment, published in the year of the expedition (Haast 1866). Therefore, for each of nine views Haast encountered in the Rakaia headwaters, there are three works – a coloured sketch, a landscape painting and a lithographic print.

Nine views would constitute an adequate sample for an exploratory investigation into the fidelity of both Haast’s field sketches and landscape paintings, provided photographs of the same views could be obtained through site visits or other means. Although not randomly selected, the works have the advantages of relating to a fairly limited geographical region,<sup>8</sup> and of being completed when Haast was a well-established topographical and geological surveyor with well-developed draughting and artistic skills. Given that the prints were the lithographers’ replication of Haast’s landscape paintings, they do not form part of this fidelity analysis of Haast’s works, although he would of course have had to approve them.

### **Haast’s Alternative**

Before assessing Haast’s works, it is worth briefly considering the alternative approach that he contemplated. Two years prior to the Rakaia expedition, Haast commissioned the landscape painter John Gully (1819–1888) to produce 12 large watercolour paintings based on field sketches he supplied (e.g. Figs 3A and 3B). In 1864 Haast sent these artworks to the Royal Geographic Society in London to be used as visual aids when his paper was read to the society. The editor of the society’s journal, in which Haast’s paper was eventually published, described them as “well executed water-colour drawings” (Haast 1864: 92 footnote). In his published address, the society’s president, Roderick Impey Murchison,<sup>9</sup> wrote that those paintings seemed to him “never to have been surpassed by any delineator of icy regions” (Murchison 1864: clxi first footnote).<sup>10</sup> The world-renowned botanist Joseph Hooker wrote to Haast from the Kew Gardens herbarium telling him that he was looking forward to seeing the “glacial views, which I hear are glorious” (Nolden et al. 2013: 65).<sup>11</sup>

Perhaps encouraged by the praise heaped on these watercolours, which established Gully’s reputation, Haast came to appreciate the artist’s abilities as a watercolourist despite his earlier reservations about his skills,<sup>12</sup> and invited Gully to accompany him on an expedition to survey the headwaters of the Rakaia. Given that Gully had not visited any of the glaciers he had painted for Haast (Paul 1974: 6), the scientist must have contemplated how much better illustrations of the glaciers would be if Gully could see the ice masses with his own eyes. This could have been another Antipodean example of an artist accompanying a scientific expedition, in order to paint the views encountered on the journey, such as Eugene von Guérard (Hook 2018) and Nicholas Chevalier (Gregg 2011: 92–116) joining the geophysicist Georg von Neumayer on some of his magnetic-survey expeditions across Victoria, Australia. Unfortunately, this never happened as Gully was “sorry to say that I cannot accept your offer much as I would like it. Our present Supert. [sic] would not listen for a moment to the proposition of two months leave of absence” (Gully 1984: 33).<sup>13</sup>

Despite this disappointment, Haast reconciled himself to painting the required ‘original’ images with his own brushes, based on the field sketches he would make. There is no information in the massive biography of Haast, written by his son Heinrich, about whether he received any formal artistic training, but judging by the landscapes produced following the Rakaia expedition, he was a talented amateur. In Burrows’ opinion Haast’s “ability with pen and watercolour was invaluable, although he was a careful accurate recorder of scenes, rather than an artist” (2005: 173). In Heinrich’s opinion, his father’s “skill with pencil and brush enabled him to record the striking scenes that had thrilled his being” (Haast 1948: 347).





**Figure 3.** Comparison of John Gully's painting of Macauley Glacier with Haast's field sketch **A**, *Sources of River Macaulay, 10 March 1862*, watercolour and pencil on paper, with ink annotations, 170 × 430 mm. Julius Haast, 1862. Alexander Turnbull Library C-097-083-1 **B**, *Macauley Glaciers, 4375 feet*, watercolour, 285 × 460 mm. John Gully, 1862. Alexander Turnbull Library C-096-007

### Features of the Rakaia Field Sketches and Finished Landscape Paintings

Before assessing the fidelity to nature of Haast's illustrations of nine views in the Rakaia Valley, the general features of the field sketches and the finished landscape paintings are identified below. These observations are based on a viewing of the original works in the National Library of New Zealand, facilitated by curator Oliver Stead. The sketches are the middle images of Figures 7–15, and the landscape paintings are the bottom images, except in Figure 14 where the sketch and painting are in the middle rows.



## The Field Sketches

The nine sketches were all made on thick sheets of paper of variable size, depending on the view being sketched and the pieces of paper available, often roughly cut or torn. Most sketches are approximately 180 mm in height, suggesting they may have been cut from a roll. Some sketches are panoramic in scope, while others are rectangles of the more typical landscape painting ratio of height to width of around 3:4. Two are framed within a pencilled rectangle. An outline of the gross topographical features of each scene was pencilled in initially, then watercolour paint applied to different areas. The limited colour range is discussed in the section titled View VII later in this paper. For some of the sketches the whole surface of the paper is covered in paint, but in others, parts of the foreground or the far sides of the scene are left unpainted. No staffage is included for estimating the size of natural features or their distance from the viewer. Most of the sketches have annotations in either pencil or ink, indicating the names of features (or code letters for them),<sup>14</sup> or giving brief descriptions of details, distances and sometimes compass directions. The title of the view is typically inked in and sometimes also the date on which it was sketched.

Most of the above characteristics of Haast's sketches are those generally associated with landscape sketches completed in the field in front of the subject (Hook 2022b: 147). It is highly likely that Haast completed the nine sketches largely in situ, particularly as it would have been challenging to recall the details of the topography and colouration on a later occasion, back at a campsite, hut, homestead or his office. Indeed, with reference to the field sketch of the Ramsay Glacier (Fig. 10B), Haast reported that, "For several hours I was occupied taking the necessary bearings and making a sketch of the glorious scenery before me" (Haast 1866: 19). This implies that he must have applied paint in front of his subject, as completing just the pencil outlines of the two sketches is unlikely to have occupied him for long. With regard to his sketch of the Lyell Glacier (Fig. 9B), Haast wrote that the "view towards the west [from Meins Knob] was magnificent" and that although the lower part of the glacier was covered in debris, higher up there were "many seracs [of] peculiar green and bluish hues", colours he attempted to capture on his sketch. Elsewhere in his report, Haast refers to "accompanying sketches, drawn carefully on the spot" (Haast 1886: 34).<sup>15</sup>

## The Finished Landscape Paintings

The finished landscape paintings are all watercolour on paper but with a more extensive palette of colours used than in the corresponding field sketches. The features of each scene are more detailed than in the sketches, with the entire surface of the paper painted in, implying they are finished artworks. The foregrounds of the pictures are well developed and most have staffage to provide a sense of the scale of natural features. The paintings were executed on carefully cut rectangular sheets of paper in landscape orientation and two are panoramic in scope. Four of the works have identical dimensions, as do two other paintings. The other three are of variable dimensions. Each painting is mounted on a larger sheet of paper, which has an inked rectangle framing the work.

The mounts have neat handwritten titles and labels, as well as a number at the top. Given the completeness of these works, the carefully rendered detail using an extended set of colours, the regularity of the dimensions of the sheets and the pictorial depth apparent in each, Haast could not have painted them at a campsite or hut located in such rugged and often inhospitable environments. If Haast had been a professional painter, these would be considered studio works. In Burrows' opinion they were "more elaborate studio versions of the simpler field sketches" (2005: 173). Most likely they were painted when Haast had returned to Christchurch, either at home or in his office. It is clear, though, that they were produced primarily to act as the original finished artworks on which the lithographs inserted in the report would be based. Attractive though they are as works of art by an amateur artist, given their small size and variable dimensions it is unlikely

that Haast was contemplating using them as visual aids to accompany a paper that he would submit to an overseas scientific journal, as he had done previously. Furthermore, as art historian Mark Stocker asserted, “nor would he have considered them as ‘art’, fit to be exhibited”.<sup>16</sup>

## **Techniques for Assessing the Fidelity to Nature of the Sketches and Paintings**

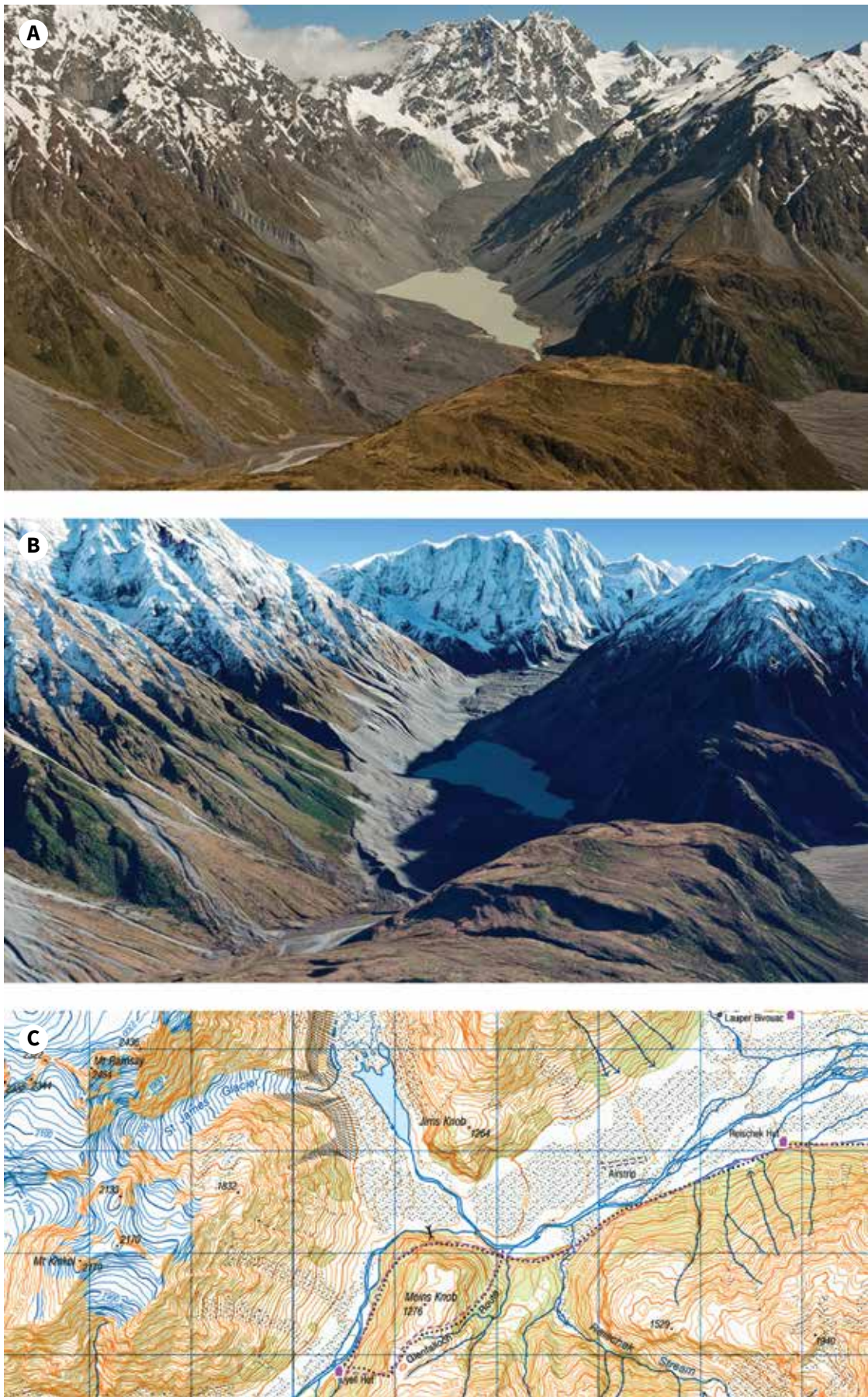
When assessing the fidelity to nature of a landscape sketch or drawing, a variety of aspects of the view and of natural features recorded in the work are considered. Given that in his Rakaia sketches Haast recorded little detail of the rocks or trees he encountered, the focus of this study is primarily on enduring topographical and geomorphological features and, to a lesser extent, ecological aspects such as the distribution of vegetation. While it was not expected that the glaciers themselves would be the same after an interval of more than 150 years, some of the non-ice geomorphological features such as moraines, roches moutonnées and sugarloaf hills that Haast illustrated should still be in place if his field sketches are indeed accurate renditions of the views he beheld.

Typically, when assessing the fidelity to nature of a field sketch or landscape painting, the location of the site would need to be determined and then visited in order to compare a reproduction of the illustration with the view of nature visible from the artist's vantage point, which would then be recorded in a site photograph (Hook 2022b: 133–177). Knowledge of the natural history of the location would also be used when assessing the fidelity to nature. While it proved possible to identify locations and even to determine vantage points of some of Haast's Rakaia sketches without venturing into the field, actually reaching them would have been challenging given the very isolated mountainous regions in which they are located.<sup>17</sup> In this situation it was sometimes possible to make use of photographs taken from close to Haast's vantage points by experienced alpine trampers, some of whom are excellent photographers (Hook 2022a: 7, 11, 17, 21, 31, 35).

If no site photographs are available, then the topography illustrated in sketches or paintings can be compared with the view generated by a digital elevation model (DEM). One such model is that used by the mobile phone application PeakFinder (Hook 2022b: 161–163), whose topographical profiles are derived from the height data of Earth's surface recorded by the NASA space shuttles last century. The profiles are surprisingly accurate for middle- and far-distance features. The application also names and gives the elevations of most of the peaks visible from a particular spot on Earth's surface,<sup>18</sup> which can help to resolve issues relating to peaks being misidentified by Haast or renamed by later cartographers.

A better-known application, which uses the same data but supplemented by satellite and oblique aerial photography, is Google Earth Pro. Its DEM generates stunning pictorial views of alpine features from wherever the virtual observer is placed. While initially, with this project at least, I was doubtful about how reliable such views would be as compared to taking a photograph from the same spot, it was reassuring to see how realistic the renditions often are, as can be seen from the example illustrated in Figure 4.

When using either PeakFinder or Google Earth Pro, the challenge is to locate the vantage point from which Haast made the sketch in the field. The title and labels on sketches (or paintings) often provide significant clues as to where they were made, as well as what the view was of, as do descriptions of sites in Haast's report. For example, titles indicate that two views were from atop Meins Knob, which is a steep rocky knoll towering about 350 m above the Rakaia riverbed (Fig. 4C), which Haast named (Burrows 2005: 180) and referred to as ‘Mein Knob’ (i.e. my knob). He described this “remarkable” geomorphological feature lying between two glaciers as a “true roche-moutonnée” with gigantic “erratic blocks perched in every possible position ... deposited when the glacier retreated” and



**Figure 4.** **A**, Above Meins Knob, Ramsay Glacier and Mt Whitcombe beyond Rakaia Valley Canterbury (detail). Photograph by Shaun Barnett, 2013 **B**, Google Earth Pro virtual view dated 29 May 2020 from the same vantage point as the above photograph **C**, location of Meins Knob on the topographical map. Memory-Maps





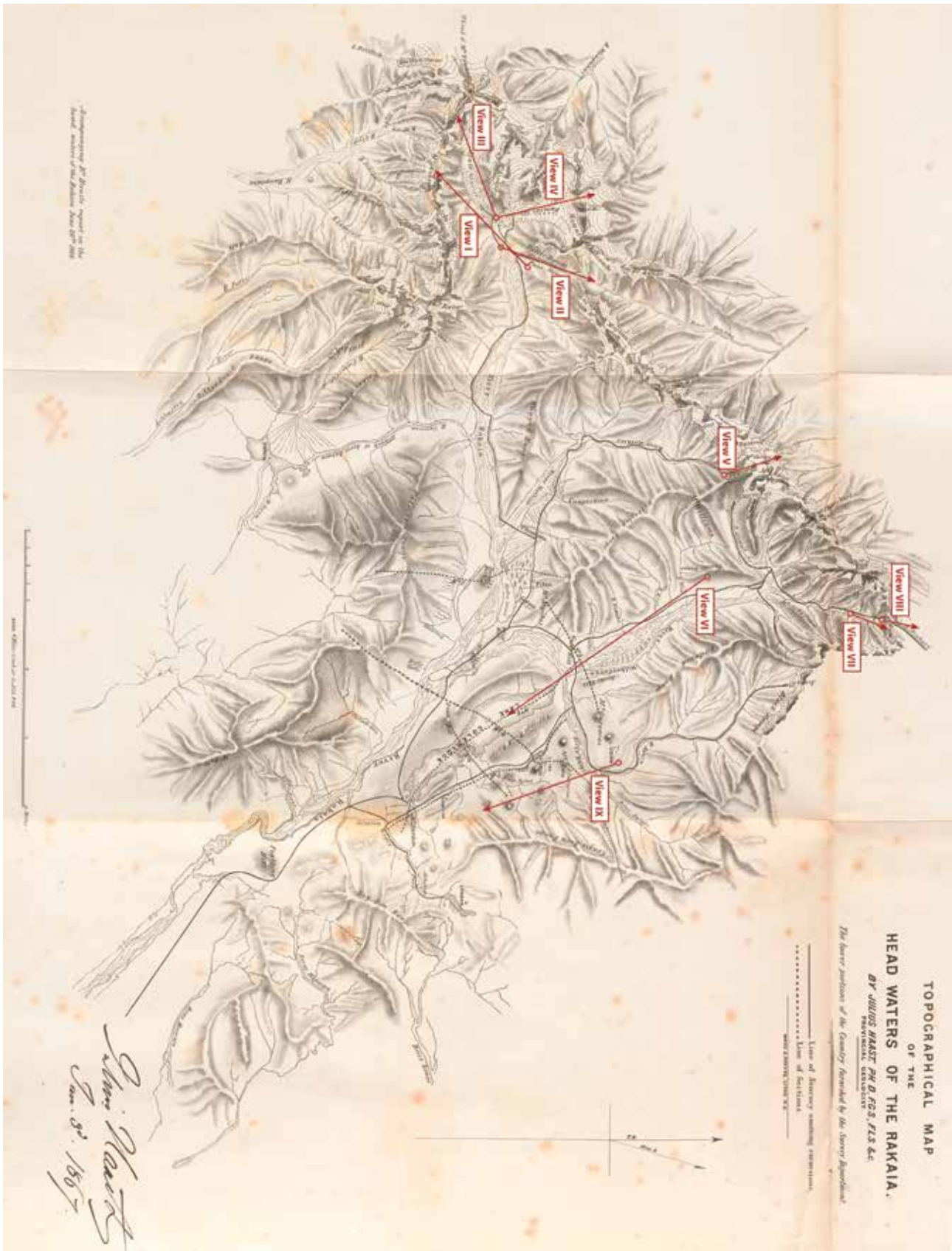
**Figure 5.** The glacial valley occupied by the braided Rakaia River, as seen from Glenfalloch Station in December 2021. Photograph by George Hook

striations (Haast 1866: 12, 17–18). I had expected that he would have made both sketches from the highest point of the plateau (1,276 m), but this proved not to be the case. Given the foregrounds of the sketches, it was apparent that the two views must have been sketched from different locations on the summit, but that summit is as Haast noted “about half a mile broad, and covered with a succession of bosses, amongst which lie ... several lagoons” (Haast 1866: 18). Finding the viewpoint of such sketches involves a time-consuming process of systematically moving the virtual observer of either application in large steps on a grid pattern, then progressively smaller steps until the view generated closely resembles that recorded in the field sketch. Occasionally it was possible to ‘reach’ a location with a closely matching virtual view, in which case the GPS spatial coordinates of Haast’s vantage point were determined.<sup>19</sup> More often than not, I had to settle for a virtual view from a location that, at best, is close to Haast’s vantage point. Regardless, such views with marginally different perspectives are usually adequate for assessing whether the topography of mountains, hills, gullies and riverbeds has been accurately rendered.

## The Rakaia Expedition

The exploration of the headwaters of the Rakaia River was Haast’s main expedition in 1866. Accompanied by A J Mathias, who assisted with the topographical survey, and Frederick Fuller, who acted as Haast’s collector of bird skins, plant specimens and rock samples,<sup>20</sup> the party spent nearly seven weeks (from 2 March to 18 April) exploring the glacially sculpted Rakaia Valley and its braided-river system (Fig. 5), fed by a number of major tributaries such as the Cameron, Mathias, Wilberforce and Harper rivers. Early autumn would have been the ideal time of year to survey the extent of the glaciers as the snowfalls of the previous winter would have largely melted.

The route taken by the party is marked by a solid black line on the finely detailed and largely accurate map that Haast produced (Fig. 6), which attests to both his surveying and cartographical skills. That map eventually formed part of the published report.



**Figure 6.** Topographical Map of the Head Waters of the Rakaia, 1867 (Haast 1866). Lithographer: Ward & Reeves, Lyttelton. The map was completed after the report was submitted and Haast signed it on 3 January 1867. The approximate location of the vantage point and the direction of the view for each of Haast's sketches are indicated by the red labels and arrows.



After taking the dray road along the northern bank of the Rakaia River, the party crossed the Wilberforce River near its junction with the Rakaia, then followed a track leading to where the Mathias River joins the Rakaia, which they crossed, before continuing further up the Rakaia. After crisscrossing the braided river several times, they set up camp on 13 March some distance west of its junction with Whitcombe Pass Stream (now known as Lauper Stream).<sup>21</sup> From that confluence they could see Whitcombe Pass (Fig. 6, View I; Fig. 7B). On 14 March, Haast and Mathias ascended the stream to reach the pass. From that vantage point they were able to view the Whitcombe River, one of the principal sources of the Hokitika River on the West Coast. Three days later, on 17 March, Haast set off on horseback from their campsite to explore the glacial sources of the Rakaia headwaters, which he could see to the west (Fig. 6, View II; Fig. 8B), particularly a large glacier whose terminus projected across the valley floor. He found the route blocked, though, and could not make his way along the narrow gorge between the tip of the glacier and Meins Knob, through which a torrent of water flowed. The next day the party ascended Meins Knob along a very difficult route between gigantic boulders. On top of the knoll, spectacular views of Lyell Glacier (Fig. 6, View III; Fig. 9B) to the west and Ramsay Glacier (Fig. 6, View IV; Fig. 10B) to the north opened up.<sup>22</sup>

After returning to their Rakaia campsite, they travelled down the valley to the junction with the Mathias River. They then spent several days ascending the rugged gorge of the Mathias until they could see the glaciers that fed it on 22 March (Fig. 6, View V; Fig. 11B). After that excursion, they retraced their tracks to the Wilberforce River, where they stayed at the accommodation house by Goat Hill for several days. On 28 March, they followed the Wilberforce some distance northwards. From a steep slope on the Cascade Range they had an excellent view looking back towards Lake Coleridge (Fig. 6, View VI; Fig. 12B). The party continued up the Wilberforce for 2 days before sighting Nōti Raureka (Browning Pass) on 30 March (Fig. 6, View VII; Fig. 13B), which they ascended to the next morning along a very steep zigzag track to reach Whakarewa (Lake Browning) just beyond the pass (Fig. 6, View VIII; Fig. 14B). After descending some way along the Arahura River on the West Coast, they returned to Goat Hill, where they spent several days processing and packing their extensive collections of rocks, plants and bird skins.

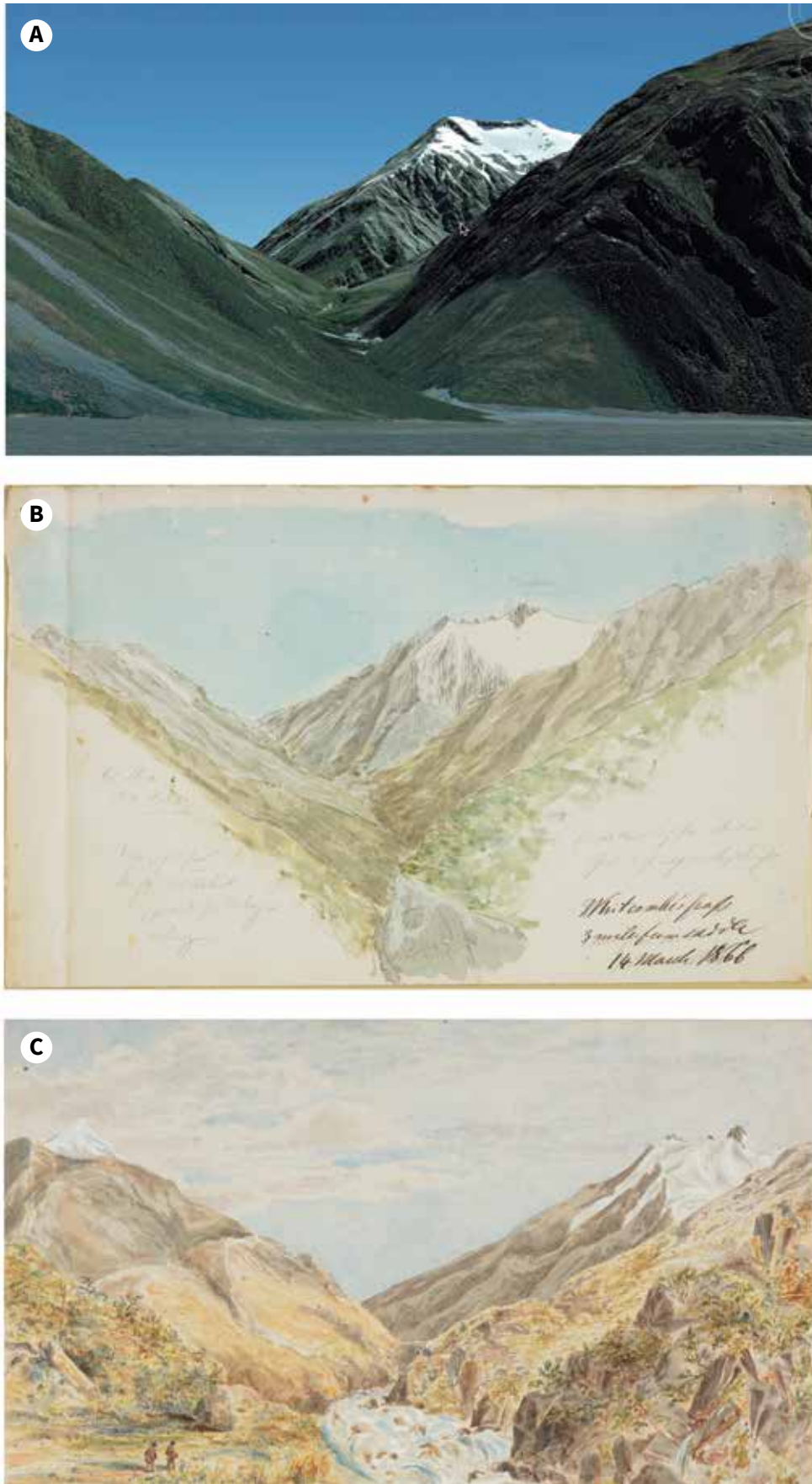
On 4 April, they set out for the junction of the Harper and Avoca rivers, where the following day Haast sketched a view of some unusual glacial features (Fig. 6, View IX; Fig. 15B). Further excursions occurred, but Haast made no paintings of the views encountered. After the party returned to Christchurch, Haast spent several months processing the collection, writing his report and preparing topographical sections and the map (Haast 1879: 143), as well as painting those landscapes.

## **Evaluating the Fidelity to Nature of the Rakaia Sketches and Paintings**

The field sketches and finished paintings associated with each of the nine views that Haast chose to illustrate in his report are considered in chronological order below. The approximate location of the vantage point and general direction of the view for each are indicated by red labels and red arrows added to Haast's map (Fig. 6).

### **View I: Looking towards Whitcombe Pass**

Haast's sketch looking northwards from near the junction of Whitcombe Pass Stream and the Rakaia (Fig. 7B) accurately replicates the topography of the peak in the distance, which Haast named Mt Martius but which has no official name, and that of the mid-ground slopes, as generated in the Google Earth Pro view from 43°17'10.0"S, 170°56'44.0"E (Fig. 7A). However, the right peak of Martius appears slightly elevated. The bed of the stream is accurately rendered, as is the distribution of vegetation on either side, but Haast did not record the large scree slope above the stream as



**Figure 7.** View I: Looking towards Whitcombe Pass **A**, virtual view generated in Google Earth Pro from close to the vantage point of Haast's sketch of Whitcombe Pass **B**, *Whitcombe's Pass 3 miles from saddle, 14 March 1866*, watercolour and pencil on paper, title in ink, 180 × 280 mm. Julius Haast, 1866. Alexander Turnbull Library C-097-015 **C**, *View of Whitcombe's Pass from the banks of the Pass Stream*, watercolour on paper, 143 × 248 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-013

the foreground is largely unsketched. In the left foreground Haast pencilled the annotation “Mt Whitcomb [sic] liegt hinter diesen Vorbergen verborgen” [Mt Whitcombe lies hidden behind these closer mountains].<sup>23</sup>

In the landscape painting (Fig. 7C), Mt Martius has been shifted dramatically to the right (east) relative to the mid-ground slopes and its peaks steepened further, particularly the right one. More significantly, a snow-covered peak has been inserted behind the left mid-ground mountain (Lauper Peak), which Haast named as Mt Whitcombe (Low 2010: 84). That mountain is actually 2 kilometres west of Lauper Peak, well outside the field of view of the sketch according to PeakFinder. Geographical features of the mid and foregrounds have been significantly elaborated or invented, and the green subalpine forest in the sketch has been changed to yellow, suggesting tussock rather than bush. The gently flowing sketched stream is transformed into painted rapids tumbling over rocks. Overall, Haast exercised a significant degree of artistic licence in producing this landscape painting.<sup>24</sup> He may have chosen to move Mt Whitcombe into his landscape painting as homage to John Henry Whitcombe, who with Jacob Lauper was the first European to survey Whitcombe Pass in 1863.<sup>25</sup> Whitcombe died in an accident when they reached the West Coast.

## **View II: Towards the sources of the Rakaia**

Haast's sketch (Fig. 8B), made from close to where Whitcombe Pass Stream joins the Rakaia (Fig. 6), looks to the southwest. Meins Knob is the large green knoll just left of centre in the mid-ground, with a smaller knob just to its right. The terminus of Ramsay Glacier can be seen protruding from behind Jims Knob (the mid-ground green hill on the right), reaching across to the base of Meins Knob. When compared with the virtual view generated in Google Earth Pro from 43°16'6.9"S, 170°57'24.2"E (Fig. 8A), Haast's sketch accurately reproduces the topography of the peaks forming the horizon and the shape of Meins Knob, but that knoll has been shifted to the left (southeast) relative to the peaks behind it. Despite numerous movements of the virtual observer, it was not possible to obtain a view in which Meins Knob lined up below the peaks labelled B and C on the sketch. Nor was it possible to recreate the wide sketched gap between Meins and Jims knobs without other aspects of the view going out of alignment. It is therefore likely that Haast combined two views: one made from near the Lauper junction, which provided the back and foregrounds; and another made from further out on the bed of the Rakaia, which would have opened up the area between the two knobs, thus allowing more of the features of the glacier terminus to be seen, particularly the blue-grey ice cave out of which a glacial stream flows.

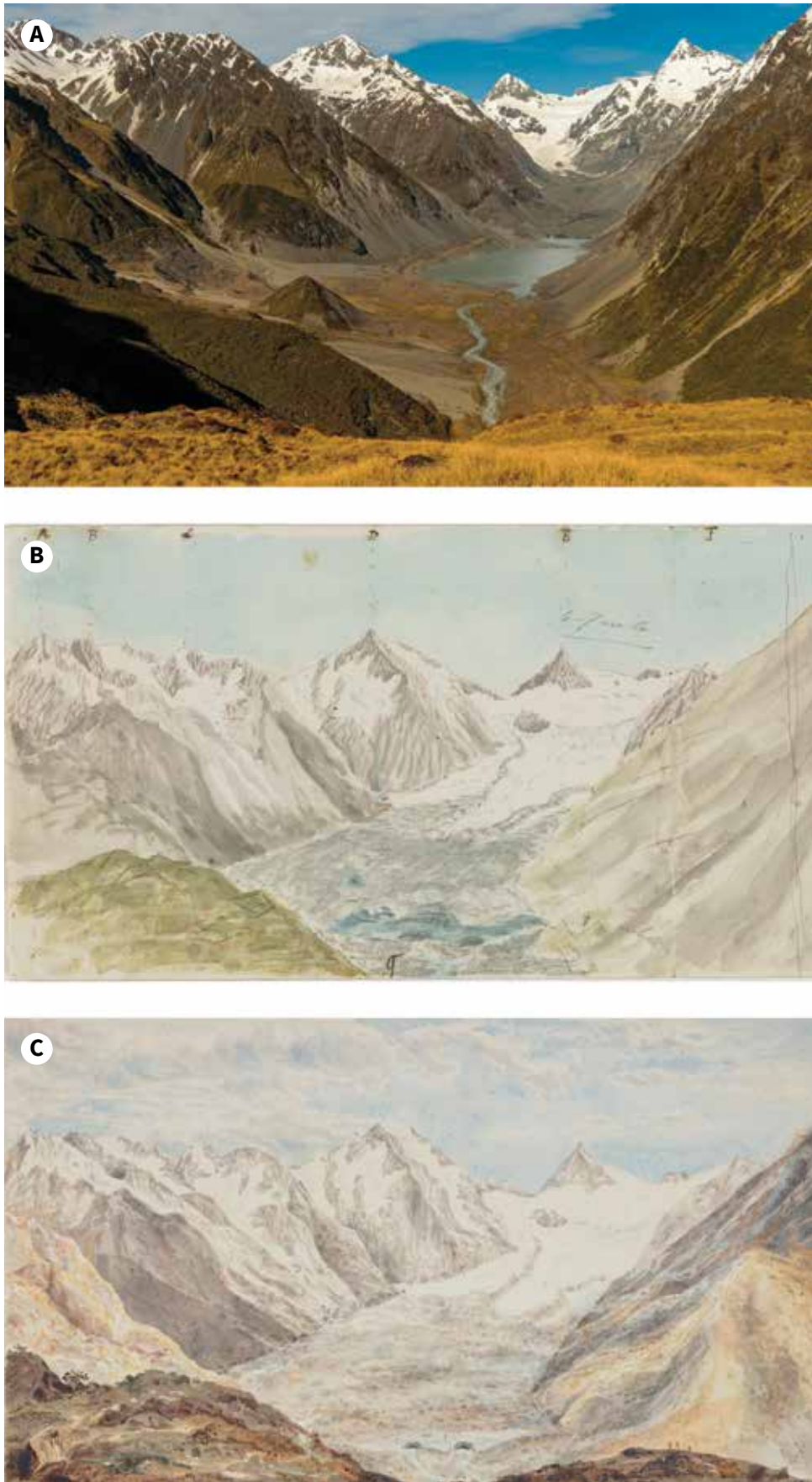
The landscape painting (Fig. 8C) largely reproduces the view recorded in the sketch but also introduces a much more dominant foreground slope that fills nearly a quarter of the work. The painting faithfully reproduces the sketched distribution of vegetation on the mid-ground slope and knobs. The colours of the two glaciers entering from the left have been intensified, bringing them to the notice of viewers. The ice cave out of which the glacial stream flows has also been made more distinctive. No staffage has been added to give an idea of scale.

Despite the mid-ground topographical liberties, both the sketch and the painting generally present a faithful view of the scenery at the location, albeit by combining views from two different vantage points. Haast exercised this artistic liberty for the sake of illustrating two unusual glacial features, primarily the terminus of a massive glacier pressing almost directly against a large rocky knoll, but also a glacial meltwater stream emerging from the side of the terminus. According to Gage, Haast observed that the glacier's “snout was thrust across the Rakaia trough to the foot of Meins Knob”, almost blocking it (Gage 1951: 506). Haast estimated that the terminal face was about 45 m high, but that it was constantly being undermined by a “glacial torrent of considerable size” flowing through the narrow gorge between the terminus and Meins Knob, which came from



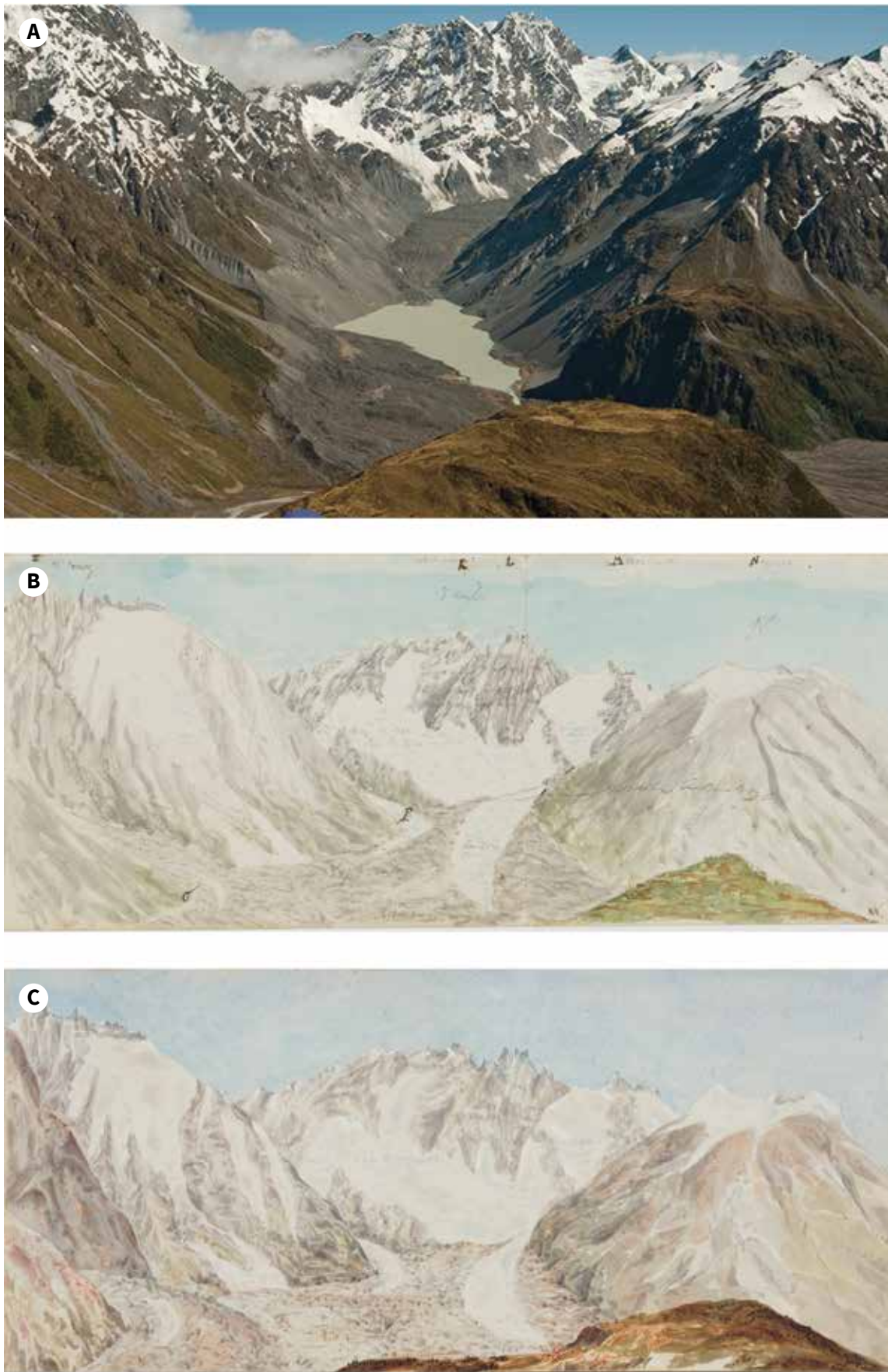
**Figure 8.** View II: Towards the sources of the Rakaia **A**, virtual view generated in Google Earth Pro from close to the vantage point of Haast's sketch of the Rakaia Valley **B**, *Towards sources of Rakaia and glaciers from Griffiths Hut, 17 March 1866* (detail), watercolour and pencil on paper, title in ink, 180 × 360 mm. Julius Haast, 1866. Alexander Turnbull Library C-097-042-1 **C**, *Towards sources of Rakaia and glaciers from Griffiths Hut*, watercolour on paper, 180 × 360 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-001





**Figure 9.** View III: Lyell Glacier from Meins Knob **A**, *Meins Knob with Lyell Valley beyond, Canterbury* (detail). Photograph by Shaun Barnett, 2013 **B**, *The Ramsay Glacier [sic] & Lyell Glacier from Mein's Knob, 18 March 1866* (detail), watercolour and pencil on paper, title in ink, 170 × 510 mm. Julius Haast, 1866. Alexander Turnbull Library C-097-084-1 **C**, *View from Meins Knob looking West, the Southern Alps with the Lyell Glacier*, watercolour on paper, 141 × 128 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-003





**Figure 10.** View IV: Ramsay Glacier from Meins Knob **A**, *Above Meins Knob, Ramsay Glacier and Mt Whitcombe beyond Rakaia Valley Canterbury* (detail). Photograph by Shaun Barnett, 2013 **B**, *M [sic] Ramsay, Whitcombe, Erewhon Pk.*, Butler, watercolour and pencil on paper, title in ink, 180 × 360 mm. Julius Haast, 18 March 1866. Alexander Turnbull Library C-097-042 **C**, *View from Meins Knob looking North, with the Ramsay Glacier*, watercolour on paper, 126 × 275 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-005

another glacier (Haast 1866: 16–17). This description clarifies what Haast was attempting to illustrate. Field research by Burrows and his colleagues in the 1970s established that a moraine exists close to the northern bank where the Rakaia flows tightly around Meins Knob (Burrows and Maunder 1975: 482–483), confirming that the terminus of a glacier crossing the Rakaia Valley nearly touched the face of Meins Knob. Further study of the age of terminal moraines in the Upper Rakaia Valley using lichenometry dating confirmed that in the late nineteenth century the snout of the Ramsay Glacier did indeed nearly reach Meins Knob (Burrows and Russell 1975: fig. 10).

### **View III: Lyell Glacier from Meins Knob**

Haast described the view from Meins Knob of the mountains and Lyell Glacier to the west as “magnificent” (Haast 1866: 19). Fortunately, Shaun Barnett took a photograph in 2013 (Fig. 9A) from close to the vantage point where Haast made his sketch (Fig. 9B). The photograph was taken from a short distance to the left (south) of Haast’s vantage point, as an additional peak (Malcolm Peak) can be seen near the top right of the horizon. Haast accurately rendered the topography of the mountains, most of which have not been steepened except for Mt Nicholson, which is the peak with the annotation “6–7 miles” above it. The foreground section of Meins Knob in the sketch differs from that recorded in the photograph, suggesting that Haast’s vantage point was further back than Barnett’s, rather than Haast’s sketching being inaccurate. Surprisingly, the rocky hill just to the left of the middle in the photograph does not appear in Haast’s sketch. In the mid-nineteenth century that hill would have been a nunatak, an isolated rock outcrop protruding above the surface of the glacier. Either Haast chose to omit it or he could not see it from his position on Meins Knob, which is what Burrows and Maunder argued (1975: 486).

The landscape painting (Fig. 9C) largely reproduces the mid and backgrounds of the sketch, although a richer palette of colours is used. The foreground section of Meins Knob has been embellished and extended to the right (north), with tiny staffage figures inserted for scale. Distinctive cloud forms have been introduced, but as they are transient features they are not of interest when investigating fidelity to nature.

Given that the enduring features illustrated in the mid and backgrounds of the sketch have been accurately rendered when compared with the site photograph, it is reasonable to conclude that the glacial features are also accurately portrayed. The overall shape and features of Lyell Glacier are, therefore, faithfully rendered, showing the glacier largely filling the entire valley, with two glacial streams emerging from ice caves at the terminus of the glacier. Burrows and Maunder asserted that the dating of now exposed moraines in the valley confirms that during the second half of the nineteenth century the terminus did indeed extend to the position shown in Haast’s sketch (1975: 479–480, fig. 2). However, by the first decade of the twenty-first century the terminus was 2.3 km further up the valley, a retreat that is clearly visible in the site photograph, where the terminus can be seen lying on the far side of the relatively recently formed proglacial lake. The terminus is grey-brown because of the immense amount of rocky debris on the surface of the glacier there and for several kilometres up the valley.

### **View IV: Ramsay Glacier from Meins Knob**

Haast claimed that this panoramic view to the north, with its “diversity of scenery and its wild alpine character”, was “second to none in New Zealand” (Haast 1866: 19), and he was in a position to pass judgement given he had seen so much of Kā Tiritiri o te Moana (the Southern Alps). When comparing the view in Haast’s sketch (Fig. 10B) with another 2013 photograph by Shaun Barnett (Fig. 10A),<sup>26</sup> it is clear that the photographer was close to Haast’s vantage point. However, Haast must have been lower down on Meins Knob as Jims Knob on the opposite side of the Rakaia River (Fig. 4C) is obscured by the northern end of the summit of Meins Knob. The profile of Mt Whitcombe

in the centre, the topography of the other mountains and the scree slopes have all been accurately rendered by Haast. He described Mt Whitcombe in the centre of the view as a “stupendous, rugged mass with turrets, pinnacles and even minarets” (Haast 1866: 19). The inclination of the rock faces on Mt Whitcombe also appear to be faithfully portrayed. In contrast, though, the topmost features of Mt Butler on the right have been simplified. Although it is difficult to visually reconcile the pointed shape of the far end of Meins Knob in the sketch with the squarer end of that summit in the photograph, that may just be a consequence of different perspectives.

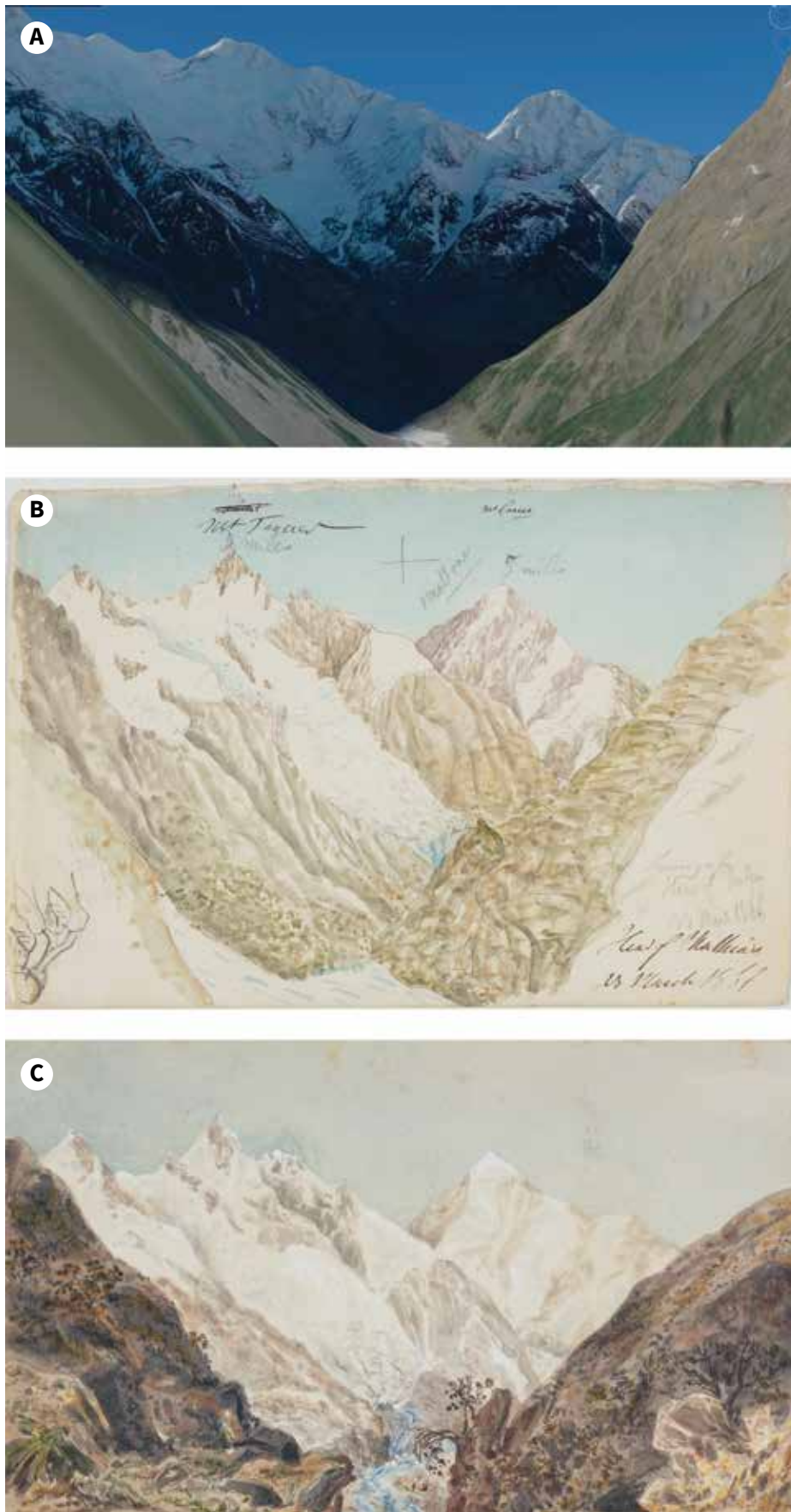
In the landscape painting (Fig. 10C), Haast mostly reproduces the topographical and geomorphological features visible in the field sketch, particularly those of the Ramsay Glacier, which largely fills the valley. He effectively uses a more extensive colour palette to distinguish ice from the rocky debris covering the glacier in the area now occupied by the proglacial lake. The St James Glacier on the left (labelled “O” on the sketch), which merges with the Ramsay, is highlighted and given more of a sweeping curve. The lower slopes just above the glaciers appear to have been steepened slightly. The sketched foreground, however, is significantly transformed in the landscape painting, both in its extent and its appearance, creating a dramatic contrast with the mid and backgrounds of the picture. There is no sign of staffage.

Given that the enduring features visible in Haast’s field sketch are generally faithful to the view he beheld atop Meins Knob, we may assume that the extent to which the glacier filled the valley in the 1866 sketch is also accurately recorded. Haast’s 1866 report supports this contention, as he described the Ramsay Glacier as “striving, but ineffectually, to bar the way of the torrent” coming from the Lyell Glacier as it rushed around the base of Meins Knob, “the waters continually undermining and destroying the ice” (Haast 1866: 19). Fieldwork by Burrows and Maunder in the 1970s confirmed that the Ramsay Glacier filled all of the valley floor visible from atop Meins Knob in the second half of the nineteenth century, as the lichenometry-dated terminal moraines lie beneath the vertical field of view of Haast’s sketch (1975: 482–483).<sup>27</sup> It is clear from the 2013 site photograph that the Ramsay Glacier has retreated a significant distance up the valley, with the valley floor, which was previously covered by the glacier, now largely submerged beneath the proglacial lake. The grey debris-covered terminus of the Ramsay Glacier can be seen on the far side of the lake, while the St James Glacier has retreated beyond the field of view.

### **View V: The headwaters of the Mathias River**

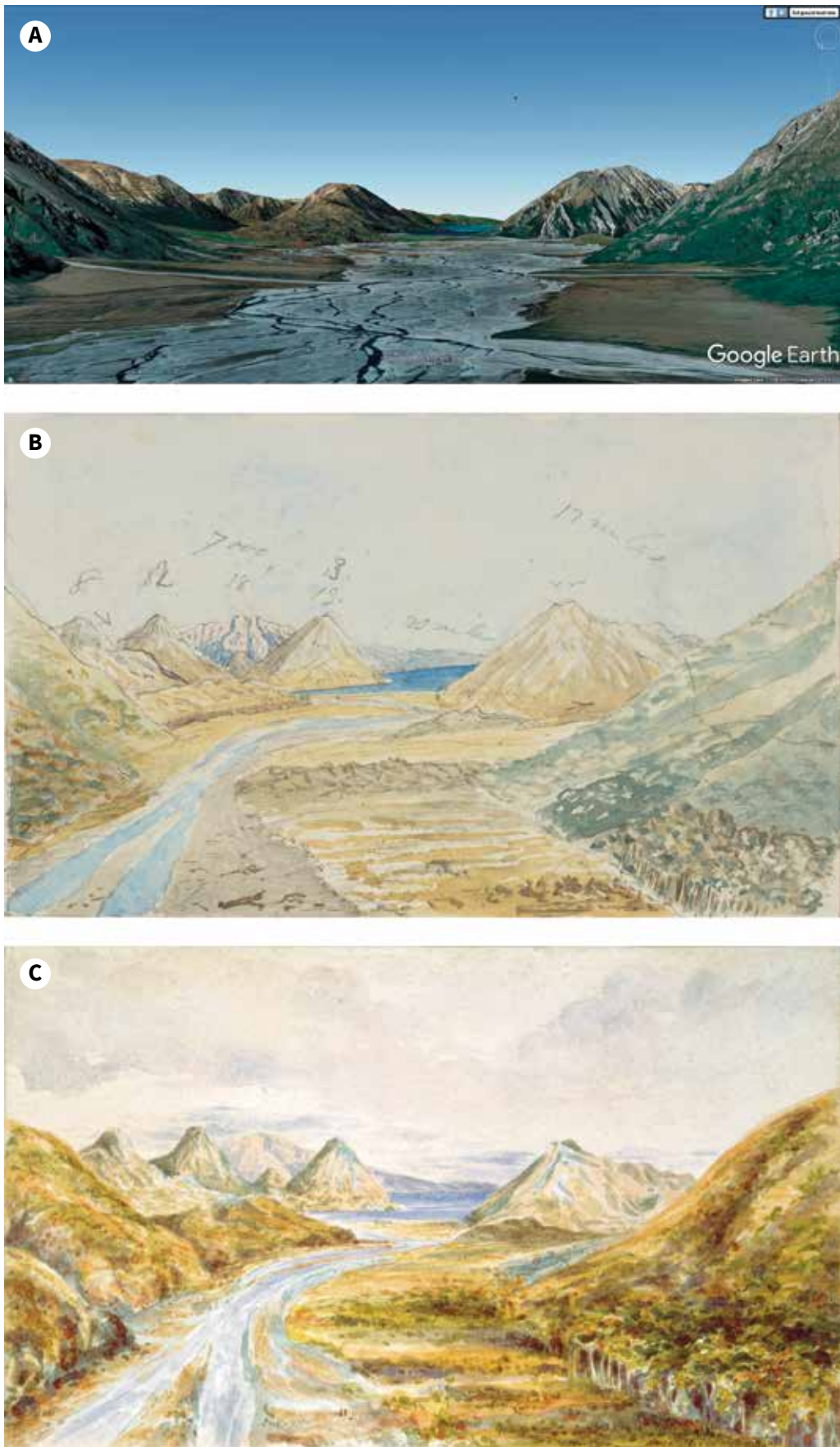
Haast went on to explore the headwaters of the Mathias River to see if a “practicable pass exists there to the western side” (Haast 1866: 23). This possibility did not eventuate, but near the upper reaches of the river “two very prominent peaks rose conspicuously above” the party. These were Mt Tancred (now Shafto Peak) and Mt Carus (now Mt Bryce) (Burrows 2005: 68). Haast was taken with the view and completed a detailed sketch in pencil and watercolours (Fig. 11B) looking northwest from a steep slope on the western side of the North Mathias River. This view emphasised the dramatic glacier descending the slopes of Mt Tancred. While no photographs of the headwaters of the Mathias could be located on the internet, it is possible to generate a view in Google Earth Pro from 43°5'54.5"S, 171°9'22.9"E that shows similar profiles of the distant mountains and of the slopes of the mid-ground peaks (Fig. 11A). However, the two principal peaks appear to be heightened and their slopes steepened in the sketch.

In the landscape painting (Fig. 11C), Haast makes those peaks even pointier. The mid-ground slopes are illustrated in stronger colours and an elaborate foreground is invented, which frames both sides of the work. In that foreground, unidentifiable rocks and plants are inserted, and the icy stream emerging from the ‘Tancred’ glacier is highlighted in blue tones, while the gorge through which it flows towards the viewer is widened. Even though these transformations are typical of



**Figure 11.** View V: The headwaters of the Mathias River **A**, virtual view generated in Google Earth Pro from close to the vantage point of Haast's sketch of the headwaters of the Mathias River **B**, *Head of the Mathias*, 23 March 1866, watercolour and pencil on paper, title in ink, 180 × 265 mm. Julius Haast, 1866. Alexander Turnbull Library C-097-018 **C**, *View of the Head waters of the Mathias a branch of the Rakaia*, watercolour on paper, 89 × 148 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-008





**Figure 12.** View VI: Towards Lake Coleridge **A**, virtual view generated in Google Earth Pro from close to the vantage point of Haast's sketch looking towards Lake Coleridge **B**, [View of Lake Coleridge from the valley of the Wilberforce near Cascade Peak], watercolour and pencil on paper, 90 × 145 mm. Julius Haast, 28 March 1866. Alexander Turnbull Library C-097-129 **C**, *View of Lake Coleridge from the Valley of the Wilberforce near Cascade Peak*, watercolour on paper, 88 × 148 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-009



the liberties that mid-nineteenth-century colonial landscape painters often took (Hook 2022b: 435–437), they do not affect the fidelity of the view of the more distant alps.

There is no independent evidence to confirm the extent of the ‘Tancred’ glacier other than Haast’s own report, but it is clear from the Google Earth Pro view that this glacier, which was pristine along its length in the 1860s (Haast 1866: 23), has retreated a significant distance up the mountain.

### **View VI: Towards Lake Coleridge**

On 28 March Haast sketched a view (Fig. 12B) looking southeast towards Lake Coleridge from relatively high up on the steep slopes of the Cascade Range on the west side of the Wilberforce River, which flows into the Rakaia from the northwest (see Figure 5). As a number of the topographical features visible in the Google Earth Pro view of the landscape from 43°6'22.9"S, 171°19'4.0"E (Fig. 12A) align well with much of the sketched horizon, I was confident that the virtual view was close to Haast’s vantage point. Although the framing slopes and the shape of Mt Oakden (right horizon peak) in the sketch match the virtual view, Haast made the four mid-ground hills (Little Knuckles, Goldney Hill, Mt Hennah and Mt Cotton) on the left pointier and exaggerated their heights when compared with the virtual view and a drone photograph viewable on the internet.<sup>28</sup>

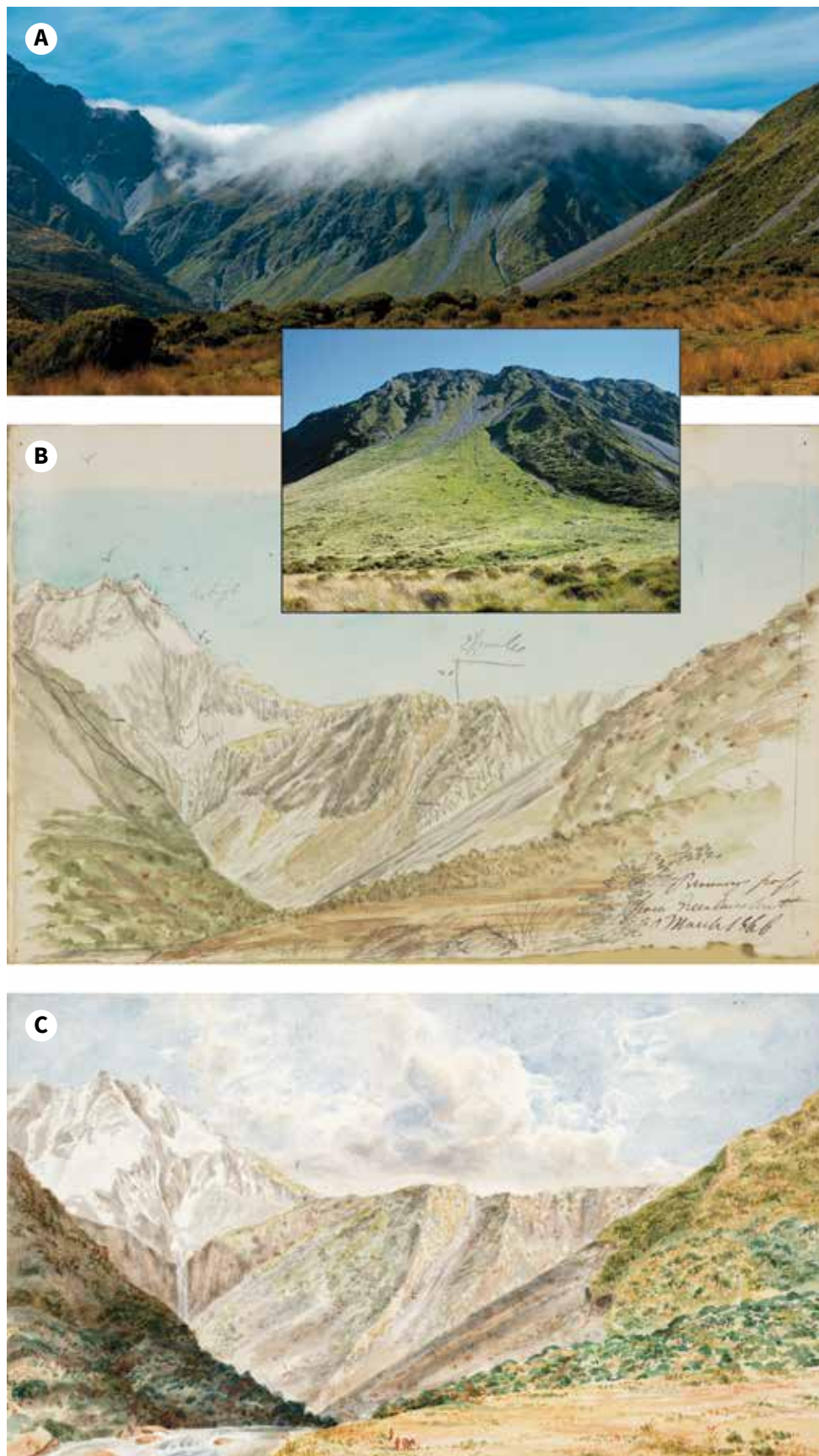
In his report, Haast described Mt Oakden as one of two “roches-moutonnées of very remarkable form” (Haast 1866: 47). Roches moutonnées are rounded, asymmetrical bedrock hills, which were sculpted by the glaciers that overrode them. They are usually elongate parallel to the direction of the flow of the glacier. Typically, the upstream end is smooth and gently inclined, while the downstream end is rough and steeply inclined. Judging from the topographical map, two of the other above-named hills are also roches moutonnées, but the much smaller Mt Hennah is a round-topped sugarloaf. The distribution of the “magnificent [beech] forest [that] clothes the lower slopes” of the Cascade Range (Haast 1866: 25) in the right foreground is accurately reproduced in the sketch.

In his watercolour (Fig. 12C), Haast faithfully reproduced the overall topography illustrated in the sketch, although the shapes of the roches moutonnées are further exaggerated and the framing hills are more rounded. While Haast used his extended colour palette to clarify details of the scene, his recolouration of the beech forest on the slopes of the Cascade Range is less authentic than the colour of the forest in the sketch.

As to the reason why Haast exaggerated the shapes of the roches moutonnées, they were a significant part of the evidence he put forward to support his assertion that the whole of the Rakaia Valley and its tributaries had been filled with a massive glacier during the Ice Ages (Haast 1866: 40–42, 44, 46–47). This conjecture can be seen more clearly on the map illustrated in Figure 16. Perhaps, understandably, Haast likely wanted to make the roches moutonnées near Lake Coleridge appear more dramatic when they were later reproduced in his report as a lithograph based on his watercolour, although he did not identify them as such on the labelling of his finished watercolour.

### **View VII: Looking up at Browning Pass from the Wilberforce Valley**

After ascending the Wilberforce Valley for several days, on the evening of 30 March Haast’s party reached Greenlaw’s Hut, “situated a mile below the southern foot of Browning Pass” (Haast 1866: 27). The pass, originally known as Nōti Raureka, had been discovered by Māori several centuries earlier and was used for transporting pounamu (greenstone) from the West Coast.<sup>29</sup> The following morning Haast sketched a view from close to the hut looking northwards up to the pass (Fig. 13B), which is marked by the “2½ miles” label. This drawing well illustrates how Haast would have sketched in the field. The relatively small, roughly torn sheet of paper would have been pinned



**Figure 13.** View VII: Looking up at Browning Pass from the Wilberforce Valley **A**, *Browning Pass*, photo taken from *Three Passes Track, New Zealand* (detail). Photograph by Michael Klajban, 2021. Wikimedia Commons. Inset: *Browning Pass zigzag*. Photograph by Ian George, 2011. New Zealand Tramer website **B**, *Brownings Pass from Greenlaw's hut, 30 March 1866*, watercolour and pencil on paper, 180 × 265 mm. Julius Haast, 1866. Alexander Turnbull Library C-097-033. **C**, *View of Brownings Pass from the Valley of the Wilberforce*, watercolour on paper, 88 × 148 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-006

onto a stiff board, as evidenced by the holes in the corners. Most likely Haast sat with the board on his knees and his watercolours nearby. Outlines of the main geographical features, such as peaks, glaciers, scree slopes, falls, hills and gullies, were then pencilled in, before paint was applied in wide or narrow brushstrokes as appropriate. According to two experienced watercolourists, Saskia von Voorn and Miles Fairburn, at least five paints were used – cerulean blue, terre verte, a light grey, yellow ochre and burnt sienna,<sup>30</sup> which increased the number proposed by Paul. These paints are transparent, so Haast's pencil outlines can still be seen. The zigzag path up to Nōti Raureka (Browning Pass) is indicated only by a sinusoidal pencil line. Interestingly, Haast added a pencil line below the profile of the Twin Peaks on the left horizon, with an annotation indicating that the peaks were too high. In a manner atypical of his sketches, Haast painted in nearly all of the foreground, except for the pencilled outlines of a few rocks and plants.

Haast's field sketch can be compared with a very useful site photograph (Fig. 13A) taken by Michael Klajban from very close to Haast's vantage point at approximately 42°57'50"S, 171°20'35"E,<sup>31</sup> which captures much of the same field of view, except for Twin Peaks. Unfortunately, cloud covers the top of the pass, so a photograph by Ian George, which shows more of the detail of the pass, albeit from a different vantage point, has been inset. On the whole, the topography of the scene has been accurately rendered by Haast, that of Twin Peaks being confirmed by the virtual view generated by Google Earth Pro. The details of the shingle screes on the left, and Hamer Falls beneath them, closely align with those features in Klajban's photograph. The distribution of vegetation in the foreground and on the hillsides framing the mid-ground closely matches that shown in the photograph, as does the colour of the tussock, suggesting that the scene was viewed by both the painter and the photographer during late summer. When the middle section of Haast's sketch is compared with George's photograph, taken in midwinter, when the tussock is greener, it is clear that Haast did not show that the track zigzags up to the pass across a massive scree slope, as in the sketch it appears to cross back and forth across an ascending ridgeline.

The landscape Haast painted (Fig. 13C) faithfully reproduces the topography of the fore, mid and backgrounds illustrated in the sketch, although the ice fields and screes on the Twin Peaks are slightly enlarged in size. Haast used the wider range of watercolours available to him back in Christchurch to create greater contrast between features, which effectively highlights Hamer Falls and distinguishes screes from alpine vegetation on the steeper slopes. The headwaters of the Wilberforce are made much more prominent in size, emphasised by the size of the nearby inserted staffage.

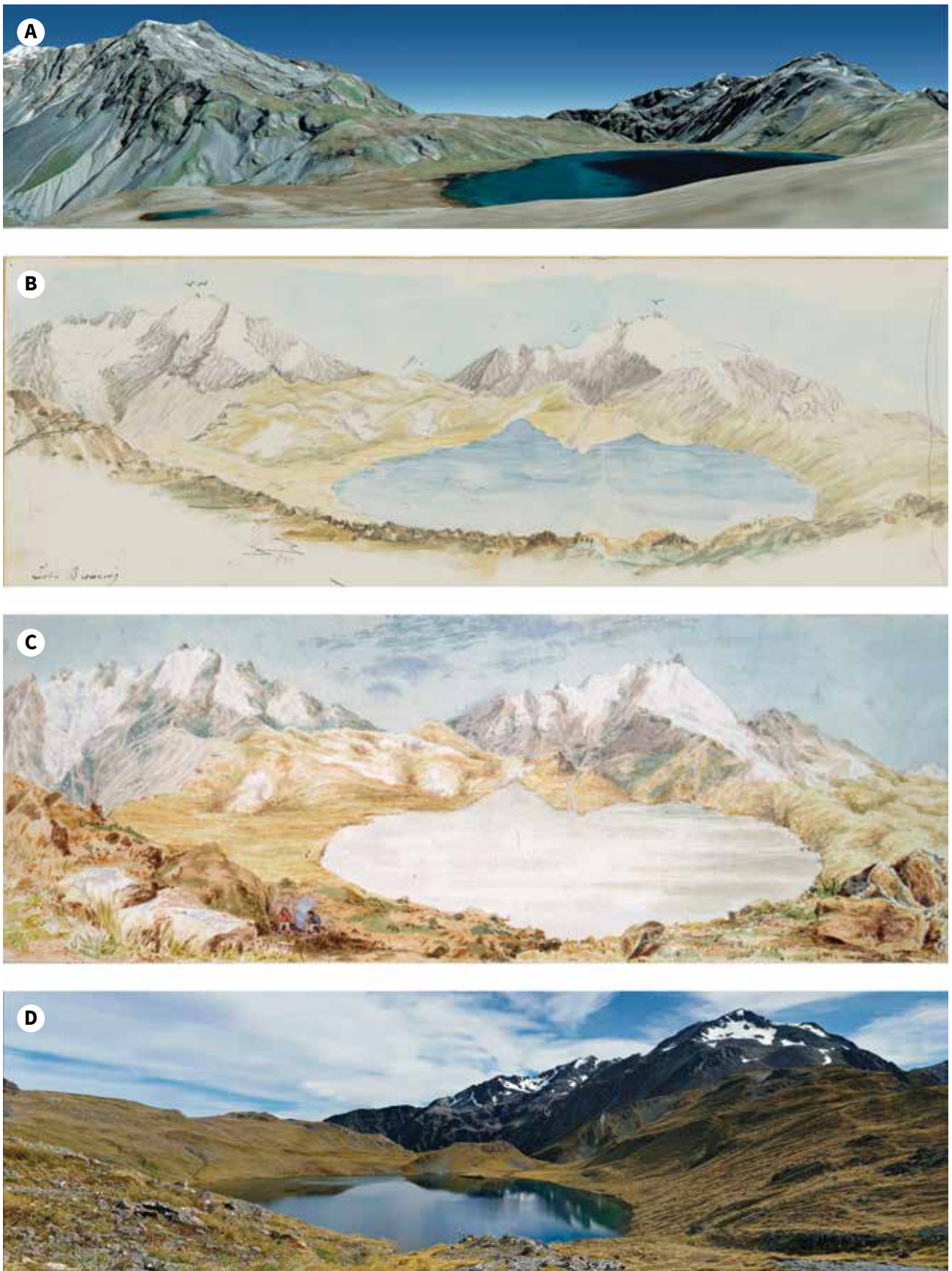
### **View VIII: Lake Browning**

Having reached Nōti Raureka (Browning Pass) after ascending the zigzag track on the morning of 31 March, Haast wrote that:

*a picturesque lake lay at our feet, surrounded by hills mostly covered with a deep green alpine turf, thickly studded with flowers. Over them rose the majestically rugged forms of Mt Harman and Twin Peaks with their snow-fields and ice-masses glistening in the morning sun* (Haast 1866: 28).

Whakarewa (Lake Browning) lies in a depression atop the Main Divide, which separates eastern and western catchments. Haast's sketch (Fig. 14B) takes in a panoramic, northward-facing view of the tarn and its surrounding hills and mountains from a rise just west of the highest point of the pass at 42°56'59.4"S, 171°20'32.5"E.<sup>32</sup>





**Figure 14.** View VIII: Lake Browning **A**, virtual view generated in Google Earth Pro from close to the vantage point of Haast's sketch of Nōti Raureka (Lake Browning) **B**, *Lake Browning*, 31 March 1866 (detail), watercolour and pencil on paper, 170 × 507 mm. Julius Haast, 1866. Alexander Turnbull Library C-097-035 **C**, *View of Brownings Pass from the Gap looking North*, watercolour on paper, 100 × 275 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-007 **D**, View from the pass itself. Photograph by Sergey Kamch, 2020. Google Earth Pro

When Haast's sketch is compared with either the Google Earth Pro virtual view (Fig. 14A) or the site photograph taken by Sergey Kamch (Fig. 14D), it is apparent that while the features and topography of Twin Peaks and Kaniere (Mt Harman) are accurately portrayed, there is an issue with the almost 180-degree field of view being compacted horizontally. This is particularly obvious when considering the gap between the right flank of Twin Peaks and the left flank of Kaniere (Mt Harman), which is much compressed in the sketch. It is not possible to find a virtual vantage point from which that gap closes up to the extent sketched while still maintaining the vertical alignment of mid-ground hills with background mountains. Perhaps Haast shortened the distance between the two mountainsides to accommodate his panorama within a more standard-sized field of view. The small hills on the opposite side of the lake have also been inaccurately rendered. Regardless, the distribution of the carpet of vegetation around the lake is accurately rendered and coloured.

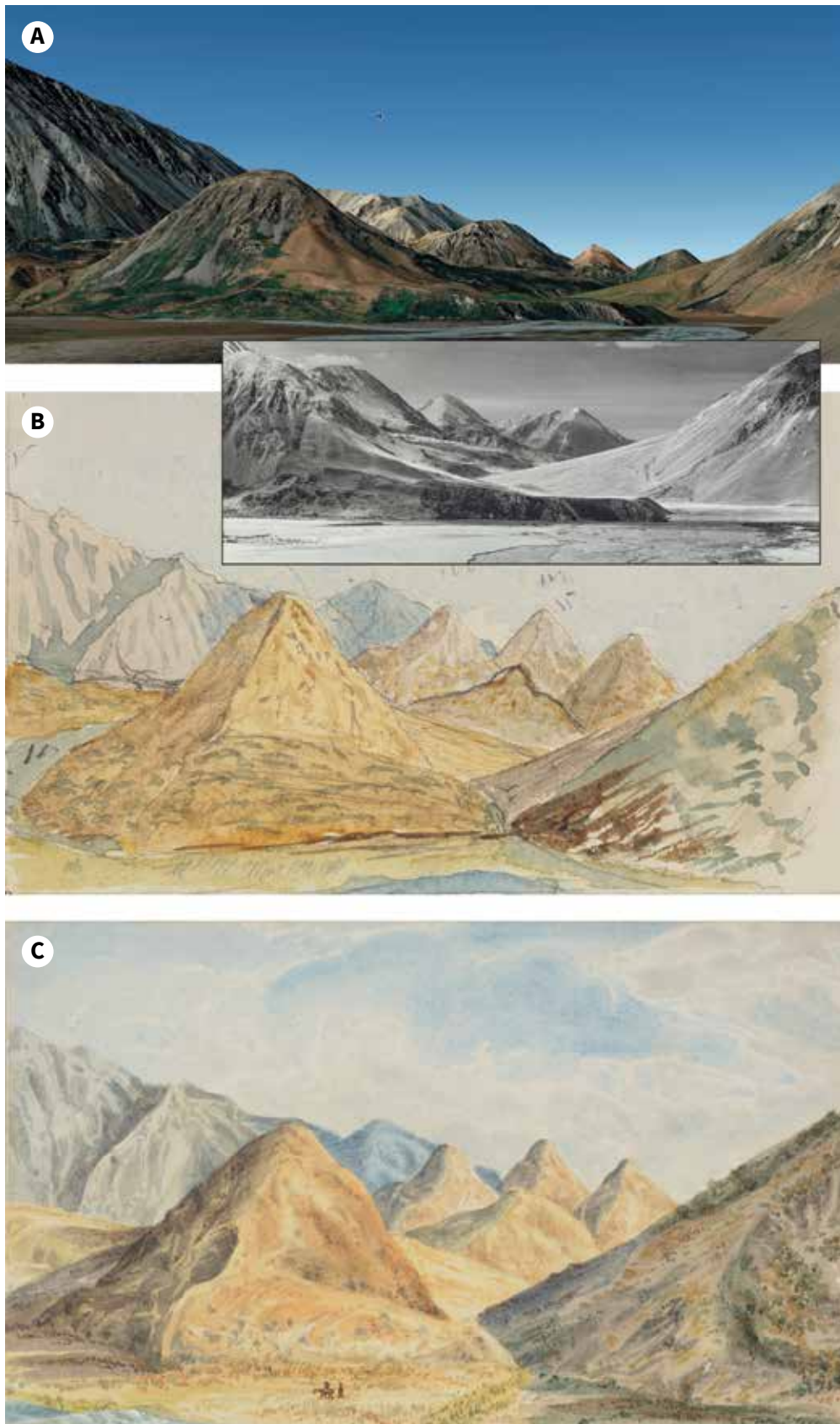
Haast's watercolour (Fig. 14C) diligently reproduces the mid and backgrounds of the field sketch, although the peaks have been made slightly higher and steeper. The whole sweep of the lively foreground is invented, with Haast inserting plants, rocks and people. This is the only painting with such clearly delineated rocks, yet it is still not possible to identify the rock type. Haast's decision to insert such rocks may have been because he had now reached schist country (Nathan et al. 2002).<sup>33</sup> It must be conceded, though, that it would be difficult for even a professional landscapist to paint an identifiable rock type on the scale of his painting, which measures only 100 mm by 275 mm. His treatment of the far side of the lake reveals the limits of his artistic ability, as slopes are not well enough differentiated from flat areas, resulting in an ambiguous perspective.

### **View IX: Roches moutonnées seen from the junction of the Harper and Avoca**

On 4 April Haast set out to explore the "sources of the main branch of the Harper River" (Haast 1866: 35), another tributary of the Rakaia. When he reached the junction of the Avoca River with the Harper, to the southeast Haast saw "a large opening ... leading along the western slopes of the Craigieburn Range towards the Canterbury Plains" (Haast 1866: 41–42), which was filled with a number of what he called "huge roches-moutonnées". However, earlier in his report, Haast noted the "peculiar form" of some of the mountains and hills in this location, which were "commonly called sugarloaves" (1866: 40). Several were "perfect cones, rounded on all sides", which he attributed to "the effect of several glacier branches coming from different directions", laterally eroding them. Glaciologist Stefan Winkler concurred, stating that "the 'sugarloafs' are laterally shaped by ice streams when they acted as obstacles forcing the ice to separate into different channels".<sup>34</sup> In his summary of Haast's original ideas on glacial geology, Burrows asserted that the geologist recognised that a "distinctive landform type" found in Kā Tiritiri o te Moana (the Southern Alps), the 'sugarloaf', was evidence of the "Great Glaciation" (Burrows 2005: 135). This was despite Haast erroneously classifying it as a "kind of roche moutonnée".<sup>35</sup>

Haast was impressed by these cones, some of which he described as being "so perfect in form that they have been mistaken for volcanic craters by the settlers" (Haast 1866: 35). He made a small sketch (Fig. 15B) that included one of these cones in the left mid-ground, which he labelled Sugar Loaf Hill but which is now an unnamed hill close to a geographical feature called The Redoubt. He also sketched the outlines of a number of other glacially sculpted hills using pencil and painted in the whole of the framed area. However, when the sketch is compared with the Google Earth Pro view (Fig. 15A) from the same vantage point on the flank of Mt Fitzwilliam on the western side of the Avoca at 43°9'42"S, 171°32'3"E, or a photograph (Fig. 15A inset) by John Johns, taken from a high spot on the eastern side of the river, it is apparent that Haast significantly modified the shapes, heights and possibly the positions of the five orange-yellow peaks, known from left to right as Sugar Loaf Hill, Goldney Hill, Little Knuckles, Laings Hill and Mt Hennah (Burrows 2005: plate 37). The profile of the Craigieburn Range has also been exaggerated, with the major ridge descending in the wrong direction.





**Figure 15.** View IX: Roches moutonnées seen from the junction of the Harper and Avoca **A**, virtual view generated in Google Earth Pro from close to the vantage point of Haast's sketch of the sugarloaf hills. Inset: *Confluence of the Harper and Avoca Rivers* (detail). John Johns, date unknown. Museum of New Zealand Te Papa Tongarewa 0.041983 **B**, *View of the roches moutonnées from the junction of the Harper with the Avoca*, watercolour and pencil on paper, 90 × 150 mm. Julius Haast, 5 April 1866. Alexander Turnbull Library C-097-130 **C**, *View of the roches moutonnées from the junction of the Harper with the Avoca, looking S.E.*, watercolour on paper, 89 × 148 mm. Julius Haast, 1866. Alexander Turnbull Library A-149-010

The landscape painting (Fig. 15C) reproduces the inaccuracies of the field sketch, but does illustrate more realistically details of the Harper River sweeping past Sugar Loaf Hill. The left (northeastern) flank of that hill has been made to look roughly scoured when compared with the sketch. Haast titled his painting *View of the roches moutonnees from the junction of the Harper with the Avoca*, even though the dominant mid-ground hill does not have the definitive shape of a roche moutonnée,<sup>36</sup> being a sugarloaf.

Why Haast would take such geomorphological liberties with the landforms he viewed from beside the Avoca is, as previously asserted, presumably due to his wish to give these particular features highly distinctive forms, so that they would be readily identified as glacially sculpted hills by informed readers of his report, and possibly also of a scientific paper he intended to write on the glaciation of the Rakaia Valley.<sup>37</sup>

## Summary

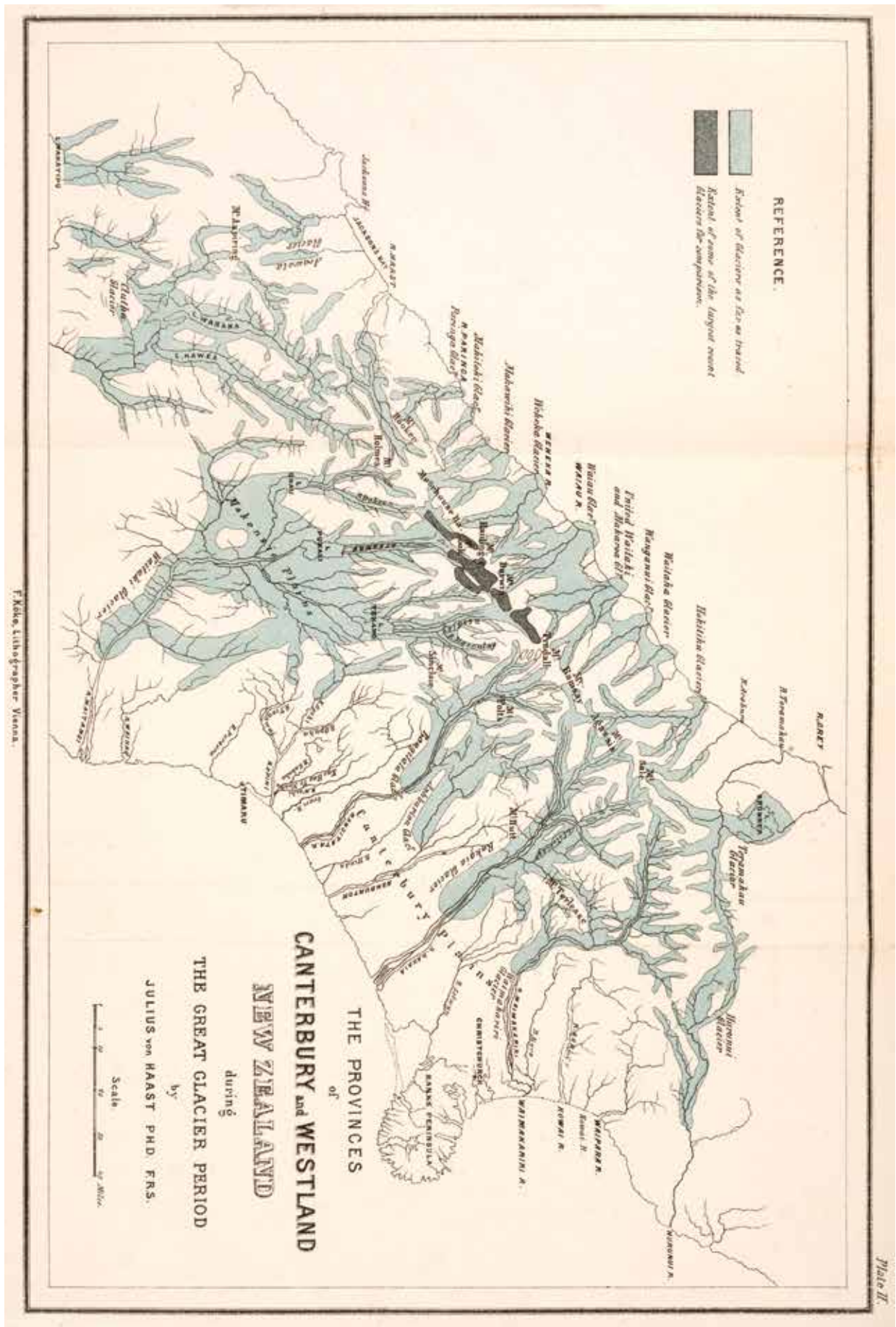
The aim of this article is to establish the extent to which Haast's field sketches of glaciers in Kā Tiritiri o te Moana (the Southern Alps) are reliable historical environmental records from the 1860s, particularly whether they accurately indicate the former extent of those glaciers.

Investigating the extent to which Haast's field sketches accurately record the state of particular glaciers in the alps in the mid-nineteenth century involved assessing how true to nature they are by comparing enduring features illustrated in the sketches with site photographs or virtual imagery. Enduring features included topographical, geomorphological and, sometimes, ecological aspects. With respect to the elapsed time involved, the extent of glacial ice could not be considered to be an enduring feature, but the position of terminal moraines could be used to indicate the extent of those glaciers. Given the limited illustration of rocks and trees in the field sketches, neither geological nor botanical features were considered when assessing the fidelity of the sketches.

As it was not practicable to assess the fidelity of every glacial sketch made by Haast, the research project involved an exploratory study of the veracity of the Rakaia scenes that later illustrated his official report in the form of lithographs derived from landscape paintings based on the field sketches. This involved assessing nine field sketches and the corresponding paintings. The former enabled the accuracy of Haast's field sketches to be considered, and the latter, the extent to which transforming field studies into finished works of art involved exercising artistic licence. All of the nine views include either glaciers or glacially formed features such as roches moutonnées or sugar loaves.

Three of the views were compared with only recent site photographs taken from close to Haast's vantage points. Four views were compared with only virtual views generated in Google Earth Pro, also from close to Haast's vantage points. The remaining two views were compared with both site photographs and virtual views.

In most of the field sketches, the topography of landforms such as mountains, hills, valleys, gullies and riverbeds is accurately rendered, although peaks are sometimes steepened and/or elevated. In one sketch the mid-ground topography is modified to better expose glacial features and in another sketch the field of view is horizontally compressed to fit the landscape onto the paper. In two other sketches, non-ice glacial features are significantly modified to make them more dramatic in appearance. On the whole, enduring features are faithful to nature except for when Haast had a different agenda, such as inserting a peak to acknowledge an earlier explorer, drawing attention to particular glacially-formed landforms, or when he encountered a practical constraint, such as fitting a very wide panorama onto a sheet of paper.



**Figure 16.** *The Provinces of Canterbury and Westland during the Great Glacier Period*, map included in Julius von Haast, *Geology of the Provinces of Canterbury and Westland* (1879: map II), inserted after p. 370. Lithographer: F. Köke, Vienna

With regard to the landscape paintings, Haast generally faithfully reproduced the accurately sketched mid and background topographical features. His use of a more extensive colour palette enabled him to emphasise important geographical and geomorphological features. However, Haast also reproduced sketched features that he would have known had not been accurately rendered, such as a compressed horizontal field of view to close up the middle horizon, the shifting of mid-ground features relative to the background topography to better expose the terminus of a massive glacier, and the exaggerated forms of roches moutonnées and sugarloaves. In most of the landscapes studied, Haast painted an invented foreground, which helped to frame the view and added staffage to give the viewer a sense of the magnitude of the views.

## Discussion

Excluding Haast's portrayals of roches moutonnées and the sugarloaf hills, the general accuracy of his illustrations of enduring features in the sample provides a degree of confidence that the extents of the Rakaia glaciers, as shown in his 1866 sketches, are also accurately illustrated. This inference was confirmed in part by the research of Burrows and his collaborators in the 1970s, who presented evidence, such as the locations of age-dated terminal moraines, that Haast's portrayal of the extents of the two major Rakaia glaciers is indeed reliable.

Although the sample size in this study is small, the total population of alpine sketches is not large. There is, therefore, no reason to assume that other field sketches Haast made throughout Kā Tiritiri o te Moana (the Southern Alps) would not also be reliable environmental records. This would be particularly true of the sketches that show the extent of glaciers, as Haast wished to document their mid-nineteenth-century extent in comparison with the much more extensive glaciation that he believed occurred in earlier times, which he illustrated on the map reproduced in Figure 16, titled *The Provinces of Canterbury and Westland during the Great Glacier Period* (Haast 1879: map II).<sup>38</sup>

Based on the findings of this research project, the field sketches should, therefore, prove to be reliable environmental history records for climate scientists currently seeking to corroborate the physical extent of formerly significantly larger glaciers during the nineteenth-century using geomorphological features, such as moraines, whose embedded boulders can be objectively dated by measuring the residual concentration of certain isotopes in the sample (Schaefer et al. 2009; Putnam et al. 2012; Dowling et al. 2021).<sup>39</sup> These isotopes were originally produced when the boulders were exposed to high-energy cosmic rays on the surface of moraines.

With regard to the landscape paintings, the kinds of enhancements that Haast included are similar to those that nineteenth-century landscape painters typically used to create a more visually engaging scene that led the viewer's eyes towards the principal subject of the work. As an informed observer of "pictorial art" (Haast 1948: 836),<sup>40</sup> Haast would have known something about the liberties landscape artists took while still seeking to be true to nature. However, shifting a whole mountain several kilometres in order to include it in a view would have been beyond the typical liberties taken by most other landscapists.<sup>41</sup> It should be noted, though, that as far as the actual details of the glaciers go, Haast did not significantly embellish those aspects in his paintings. Regardless, the finished landscape paintings often better reveal the extent, volume and other features of the glaciers than the sketches do, by establishing spatial depth and through the use of more distinctive colour contrasts.



This research project proved to be both a robust and a successful test of the applicability of the spatial techniques that I had developed while investigating the fidelity to nature of Guérard's Antipodean landscape paintings, and locating the original sites of the Pink and White Terraces before they were either destroyed or submerged following the eruption of Mt Tarawera (Hook and Carey 2019). The project also confirmed the value of geospatial applications as research tools, such as PeakFinder and Google Earth Pro for locating the vantage points of field sketches, and PeakFinder for identifying painted peaks. Furthermore, the accuracy with which Google Earth Pro generated images that closely matched alpine photographs, provides a high degree of confidence that Haast's vantage points can be established, enabling the fidelity of his sketches and paintings to be assessed. It is likely that the approach utilised in this project will lead to interdisciplinary collaboration with glaciologists or climate scientists interested in what else Haast's glacial iconography will reveal.

Further work remains to be done by the author, in terms of a more extensive survey of the fidelity to nature of Haast's glacial sketches made in other catchments of Kā Tiritiri o te Moana (the Southern Alps), particularly those that illustrate the extent of those glaciers in the mid-nineteenth century. Determining Haast's vantage point in each case will be the key.

## Conclusion

On the basis of his extensive field experience in the alps, Colin Burrows concluded that paintings based on Haast's field sketches are "fair guides to the terminal positions and the general magnitude of various glaciers, but Haast's original drawings must be regarded as the most accurate" (2005: 81).<sup>42</sup> The findings of this research project into the fidelity to nature of Haast's visual records, based on comparing sketches and the corresponding paintings with contemporary site photographs or virtual views of the landscape, largely confirm Burrows' assertion.

## Glacial Glossary

**erratic boulder** – a large rock transported from its source by a glacier and deposited when the glacial ice melted.

**lateral moraine** – a large ridge of loose rocky rubble deposited on or near the sides of an alpine glacier.

**Little Ice Age** – an interval of atmospheric cooling between the fourteenth and nineteenth centuries.

**moraine** – a large ridge of relatively unconsolidated rocky rubble deposited at the terminus or sides of a glacier.

**nunatak** – an isolated rocky peak protruding above the surface of a glacier.

**Ōtiran Glaciation** – New Zealand term for the most recent major glacial period, which occurred between 75,000 and 14,500 years ago.

**proglacial lake** – body of water just downstream from the terminus of a glacier.

**Quaternary** – the current geological period, which commenced about 2.58 million years ago.

**roche moutonnée** – a rounded, exposed asymmetrical bedrock hill that was sculpted by an overriding glacier. The hill is usually elongate parallel to the direction of the original glacial flow. Typically the upstream end is smooth and gently inclined, whereas the downstream end is rough and steeply inclined.

**serac** – a tower or pinnacle of ice located on the surface of a glacier.

**striations** – grooves or scratches in rock caused by boulders at the base of the glacier grinding that rock as they pass.

**sugarloaf** – a round-topped hill formed by the action of glacial streams surrounding and overriding it.

**terminal moraine** – a mound of rocky rubble deposited at the terminus of a glacier.

**terminus** – the downstream end of a glacier.

## Acknowledgements

I would like to thank Sascha Nolden for encouraging me to undertake this research project and for archival advice; Mark Stocker for peer-reviewing this article; Andrew Lorrey for providing climate science feedback, references and an aerial photograph; Stephan Winkler for providing glaciological advice; Stephen Carey for providing geological feedback; Oliver Stead for facilitating a viewing of Haast's artworks and peer reviewing this article; Claire Viskobc and Llewelyn Jones for providing excellent quality scans; the National Library of New Zealand for discounting the price of scans; Saskia van Voorn and Miles Fairburn for sharing their watercolour expertise; Susi Bailey for her meticulous copy editing; Phil Skewes for his technical editing; Shaun Barnett for the use of two photographs; Simon Nathan for his editorial suggestions; Daniel Smith for scanning Haast's maps; Callum Marshall for the use of a photograph; Michael Klajban for uploading a photograph to Wikimedia Commons; Sergey Kamch for placing a 360° photograph on Google Earth Pro; and Ian George for the use of a photograph.

## Endnotes

- 1 The article, which was published on *SciTechDaily* on 16 August 2020, is available from <https://scitechdaily.com/new-zealands-southern-alps-glacier-melt-has-doubled-up-to-77-of-little-ice-age-glacier-volume-already-lost> [accessed 16 July 2022].
- 2 The proglacial lake developed early in the 1970s (Burrows 2005: 85).
- 3 Not all of the landscape paintings were by Haast himself; some were done by John Gully, based on Haast's sketches.
- 4 The methodology was also applied to interrogating panoramic photographs of Lake Rotomahana in order to determine the original locations of the Pink and White Terraces, which were either destroyed or submerged in the 1886 eruption of Mt Tarawera (Hook and Carey 2019).
- 5 Sascha Nolden, email communication with author, 3 May 2022.
- 6 Burrows did not read Haast's original reports until 1985.
- 7 Haast sketches are also held in two European collections: 19 sketches and three manuscript maps from the Dr Albert Schedl Collection, Vienna, were brought to New Zealand on exhibition loan by Sascha Nolden and shown in Auckland in 2008 (Nolden 2008: exhibits 88–93, 138–153); two panoramic watercolours of Kā Tiritiri o te Moana (the Southern Alps) are held in the Hochstetter Collection, Basel (Nolden and Nolden 2011: 23–25 [HCB 1.3.1 and 1.3.2]; Nolden 2016: figs 18 and 19).
- 8 The Upper Rakaia catchment actually covers an area of 2,900 km<sup>2</sup>, most of which is located in Kā Tiritiri o te Moana (the Southern Alps).
- 9 Haast named a mountain and a river in the Tasman region of the South Island after Murchison (Tee 2007: 4).
- 10 The 12 watercolours were repatriated in 1974 at a cost of £5,000 (Paul 1974: 4, 10). They are now part of the collection of the Alexander Turnbull Library.
- 11 Letter from Hooker to Haast, 18 February 1864, reproduced in Nolden et al. 2013: 65. Haast named a mountain, a glacier and a river after Joseph Hooker and the latter's father William (Tee 2007: 4–7).
- 12 Biography of John Gully, Collections Online – Museum of Te Papa Tongarewa. Available from <https://collections.tepapa.govt.nz/topic/942> [accessed 16 June 2022].
- 13 Quote in Gully (1984: 33) from a letter sent by Gully to Haast on 23 January 1866 (Alexander Turnbull Library, Haast Family Collection MS-Papers-0037-068). At the time, Gully was employed as a draughtsman in the Lands and Survey office of Nelson Province.
- 14 The names of peaks indicated by code letters would have been recorded by Haast in his field books. None of Haast's Canterbury field books have been located (Sascha Nolden, email communication with author, 27 June 2022).
- 15 Although technically he was referring to lithographs derived from the watercolours that were based on his field sketches.
- 16 Comment in one of the peer reviews of this article.

- <sup>17</sup> A planned helicopter trip to Meins Knob, where several of Haast's works could have been compared with site views, did not eventuate as the service was no longer operating.
- <sup>18</sup> The names are sourced from *Geonames* website, supplemented with identifications by members of the New Zealand Alpine Club.
- <sup>19</sup> For most of the Rakaia sketches it took several hours to locate a closely matching virtual view.
- <sup>20</sup> Haast wrote that: “[o]wing to the indefatigable zeal of my collector”, 160 bird skins, numerous geological and palaeontological samples and several thousand specimens of dried plants were brought back to Christchurch (Burrows 2005: 81).
- <sup>21</sup> Whitcombe Pass Stream is now known as Lauper Stream, although Burrows incorrectly claimed that it should be Louper Stream.
- <sup>22</sup> Haast named these glaciers after the Scottish geologists Charles Lyell (1797–1875) and Andrew Ramsay (1814–1891) (Tee 2007: 4, 7), both of whom he was in correspondence with.
- <sup>23</sup> Transcription and translation by Sascha Nolden (email communication with author, 23 June 2022).
- <sup>24</sup> Transporting peaks to different locations would have been considered an unusual practice in nineteenth-century colonial art, although Eugene von Guérard did so on occasion (Hook 2017: 1036–1038).
- <sup>25</sup> The first European to discover the pass was the Erewhon runholder and satirical novelist Samuel Butler (Low 2010: 24).
- <sup>26</sup> Only that section of the sketch and the photograph corresponding with the field of view of the painting have been reproduced in Figure 10.
- <sup>27</sup> The moraines were dated by determining the age of the lichens on the surface of each moraine, which would have begun growing only once the moraine was exposed to the atmosphere.
- <sup>28</sup> See *Dronescape* website, Lake Coleridge Survey. Available from <https://www.dronescape.co.nz/uncategorized/lake-coleridge-survey> [accessed 24 June 2022].
- <sup>29</sup> The history of the discovery and naming of the pass by Māori is described in Wikipedia, Browning Pass / Nōti Raureka. Available from [https://en.wikipedia.org/wiki/Browning\\_Pass/\\_Nōti\\_Raureka](https://en.wikipedia.org/wiki/Browning_Pass/_Nōti_Raureka) [accessed 20 June 2022].
- <sup>30</sup> Saskia von Voorn, email communications with author, 20, 21 and 25 June 2022; Miles Fairburn, email communication with author, 24 June 2022.
- <sup>31</sup> As established using both PeakFinder and Google Earth Pro.
- <sup>32</sup> Only that section of the sketch corresponding with the field of view of the painting has been reproduced in Figure 14.
- <sup>33</sup> Schist is a metamorphic rock type that has a foliated appearance and is particularly apparent around Lake Wakatipu.
- <sup>34</sup> Stefan Winkler, email communication with author, 21 July, 2022.
- <sup>35</sup> Haast was, however, clearly aware of the commonly accepted geological definition of a *roche moutonnée* (Haast 1866: 53).
- <sup>36</sup> I am indebted to geologist Stephen Carey for pointing this out.
- <sup>37</sup> No such published article has been identified, nor any such manuscript located.
- <sup>38</sup> Burrows asserted that Haast's “glacier limits were too extensive in Canterbury and not extensive enough in Westland” (Burrows 2005: 130). The limits were too extensive on the Canterbury Plains because Haast had mistaken some alluvial deposits for eroded moraines.
- <sup>39</sup> In a review of this article, dated 30 June 2022, Andrew Lorrey commented that “Burrows’ lichenometry work ... cannot be reproduced; the state-of-the-art methods use 10-Beryllium cosmogenic dating on boulders embedded in moraines”.
- <sup>40</sup> In 1879 von Haast delivered a series of six lectures on the history of pictorial art from Giotto to the van Eycks (Haast 1948: 836–837).
- <sup>41</sup> Although this strategy was not beyond the pale for Eugene von Guérard (Hook 2017: 1031–1038).
- <sup>42</sup> Burrows was referring more specifically to the paintings by Gully based on Haast's sketches but the same comment would have been applied to Haast's finished landscape paintings.

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# Julius Haast, Ferdinand von Hochstetter, New Zealand and the 1873 World Exhibition in Vienna: Mobilising Nature by Knowledge, Objects, Labels and Inscriptions

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Like Persia and the Ottoman Empire, New Zealand played a greater role at the 1873 World Exhibition in Vienna than in previous exhibitions. As one of 40 British colonies, out of which only 11 were represented in Vienna, New Zealand was determined to showcase its resources, artefacts of trade, natural history objects, maps and illustrations independently of Australia and London. The representation of New Zealand's natural history was particularly shaped by the expertise of Julius Haast and Ferdinand von Hochstetter and their on-going cooperation after their shared research trips in New Zealand from 1858–1859.

Hochstetter was involved in the organisational body of the Viennese World Exhibition and influenced its design and promotion in the press, while Haast as the director of New Zealand's Canterbury Museum contributed sensational and internationally admired unique objects. Moa skeletons were articulated and 60 birds mounted under the direction of Hochstetter. The exhibition provided them both with the opportunity and resources for ensuring their ongoing international fame, and established the authority of both naturalists among the general public. The moa skeletons were the main stars in this respect at the Vienna exhibition and contributed to the fame of both Haast and Hochstetter.

This article opens a broader perspective on the role of the Vienna World Exhibition as a third space between the “centre of calculation” (Latour 1987) in London and the supportive position of the colony and the self-promotion and media response to the activity of Hochstetter and Haast in Vienna. It shows how London's intentions to attract trade and commerce was shifted towards attention to New Zealand's physical uniqueness in terms of nature under Hochstetter's influence. Lists in catalogues and labels provided an interface between the objects on display and their perception by visitors. The article aims to give an understanding of how this medium of inscription at the exhibition connected materials, landscapes, knowledge and display as a comprehensive perspective of instructive sensations and interplay with the audience.

**Keywords:** articulating moa skeletons, catalogues and labels as mediators, dissemination of science, Ferdinand von Hochstetter, fossils, Julius von Haast, specimens on display, Vienna World Exhibition 1873

## Introduction – Perspectives

*Of all countries, the twin islands of New Zealand stood out particularly on account of the richness of the display of the enormous variety of their natural products and the marvel of a special catalogue, in English, French and German, with scientific names and further details concerning their usability and so on (Zwanziger 1874: 94).*

These were the enthusiastic words of a natural history expert in his detailed report on New Zealand's contribution to the Vienna World Exhibition of 1873 and we learn from this quote that the catalogue and “scientific names” on labels accompanying objects at the Exhibition were appreciated by an audience interested in science. In this paper further public reactions in Vienna

are examined for the first time. Firstly, by way of introduction, some well-established information on the World Exhibition in Vienna is presented, including the aims and preparations in which James Hector, Ferdinand von Hochstetter and Julius Haast were engaged as natural scientists. Their commitment to effectively displaying the moa skeletons and their promotion of the natural environment of New Zealand may be considered as decisive factors in the public success of the part of the exhibition that focused on New Zealand. Accordingly, the perceptions of the Vienna public will be discussed.

A broader perspective on world exhibitions from the point of view of a science historian will be opened up by focusing on the entanglements between nature and culture, objects and inscriptions, experts and laymen. This paper aims to develop an understanding of world exhibitions which not only promoted economic determinism, but also connected materials, landscapes, and knowledge in a comprehensive perspective. The display is seen as an interplay with the audience. An argument will be presented that not only did industry, trade, resources and the applied sciences play a significant role, but that natural objects and their inscriptions became powerful as media at the peak of collecting and musealisation. The relationship between objects and scientists can be traced according to the concept of Agency in reference to Bruno Latour (Latour 1987; Latour 1988). Lists in catalogues and labels provide an interface between the objects and their perception.

## **Vienna World Exhibition – A General View**

World exhibitions were no doubt platforms of nationalism, colonialism, imperialism, consumerism, exoticism, technical advances and sciences. Semantically and visually, monumentalism, abundance, speed, figures, statistics, expansion, and topicality were associated with each other and merged into a phantasmagoria. Interest in world exhibitions was heightened through signs of the new epoch, through steel and glass, machines and materials, coal and iron (Klemun 2011), all owing their significance to the idea of progress. Entertainment through the presentation of knowledge and identity-creating patterns of competition and comparison between nation states were striking phenomena, marking a new level of internationality. The World Exhibition in Paris in 1878, for instance, can be understood as a mechanism for the development of complex exchanges and communication on the scale of internationalism. The fact that the first International Geological Congress took place at the same time and hand in hand with the exhibition (Ellenberger 1999) is indicative of the close connection between science and politics.

The Vienna World Exhibition of 1873 was officially opened by Emperor Franz Joseph I on 1 May 1873 with a reception for 500 diplomats and officials at 12 noon, and closed to the public on 2 November 1873. It was open for 7 months. The exhibition was staged in the Prater, a park that was formerly the imperial hunting ground. It was open to the public for pleasure during the Enlightenment period (Pemsel 1989). Like a city on the outskirts of a city, in an area of 233 hectares, 16 hectares were devoted to the construction of many new buildings. In terms of space, the World Exhibition surpassed that in Paris in 1867 by a factor of five. Some 42,000 exhibitors contributed their objects and artefacts to the exhibition and 7.3 million visitors attended. According to Wesemael (2001: 52); “The concept of the exhibition as a manifestation of societies and cultures was emulated in the large-scale world exhibitions of 1873 in Vienna, 1876 in Philadelphia, and 1878 and 1889 in Paris.”

The illumination of the site was brilliant, using gas from the Austrian territory of Galicia (now Western Ukraine). It is worth mentioning that by the turn of the century the Habsburg Empire was to become the second largest oil-producing entity after the United States of America. In the Austrian press, the exhibition was hailed as a “picture of the culture of our time” ([Anonymous b] 1873: 1) and a testimony to the unity of the Empire’s ethnic groups. A contemporary stated that he was in awe of the Palace of Industry which was “a church of civilization” (Groß 1873: 3). In the Rotunda at the centre of the whole

exhibition, one of the moa skeletons was prominently exhibited. Even Emperor Franz Joseph admired them. Months after his visit, he recalled the occasion during an audience with Hochstetter. According to an entry in Hochstetter's private diary for 1 December 1873, "the emperor speaks of the giant birds of New Zealand" ("Der Kaiser spricht von den Riesenvögeln von N[eu] S[eeland]") (Holzer undated: 7).

Industry was a main driver of the exhibition, embodied in the opulent building of the German company Krupp and the machinery hall, but there was also a building for agriculture (Bömches 1874). Japan, Persia, the Ottoman Empire, and notably New Zealand, played a greater role at the Vienna 1873 World Exhibition than in previous exhibitions. This was based on the Habsburg Empire's geopolitical orientation towards the Orient, but also on the intensive knowledge-based exchange which resulted from the export of doctors, geologists and lawyers to those empires or colonies. Expeditions such as the circumnavigation of the world by the Austrian frigate *Novara*, and those completed independently by Hochstetter, who famously undertook geological surveys of parts of New Zealand in 1858–1859, also formed the foundation for global networks that manifested themselves in the Exhibition.

### **New Zealand's Intentions and the Colony's Struggle to Organise a Distinct Presentation of its Own in Vienna**

The invited nations determined the orientation of their own specific exhibitions. As one of 40 British colonies, out of which only 11 were represented in Vienna, the colonial administration of New Zealand considered it a must to participate. This was clearly stated in a letter from the Agent-General for New Zealand in London, Isaac Earl Featherston (1813–1876), to William Gisborne, the Colonial Secretary in Wellington, dated 27 June 1872, a year before the opening in Vienna:

*I have the honor [sic] to bring under the notice of the Government the subject of the approaching International Exhibition at Vienna, which promises to be on a very magnificent scale.*

*During my recent visit to the Continent, the vital importance of our Colony being properly represented on this occasion was urged upon my attention at Hamburg [sic], at Berlin, at Frankfurt, and other commercial centres. The Value to New Zealand of such an advertisement cannot, I think, be overrated.*

*The Colony has never yet had an opportunity of adequately exhibiting its natural and industrial resources; and I would therefore press upon the Government the importance of seizing the present one – the more as there seems now no hope of our getting any space allotted us in this Exhibition now taking place here ...*

*It is very desirable that the pastoral and agricultural capabilities of this Colony should be exemplified by a good series of wools, tins of preserved meat, and everything in the way of pulse and grain, wheat, barley, oats &c.*

*The natural productions of the country should be also fully represented, especially the Phormium and other indigenous fibres, together with everything calculated to show their adaptability for rope, cordage, textile fabric and paper ...*

*It will be desirable also to exhibit a carefully arranged collection of minerals, rocks, and soils, in illustration of the immense physical resources of the country that still await development.*

*Specimens of coal from various parts of the Colony, with full information as to the extent and position of the fields, and samples ... and, altogether, an exhibition of the kind I have indicated*



*would be calculated to bring the Colony into favourable notice, and to give a fresh impetus to our trade and commerce.*

*And the Government will be able to command the valuable advice and assistance of such men as Dr. Hector and Dr. Haast in the Colony, I feel that it is unnecessary for me to do more at present than to suggest, in this general way, what is necessary to be done* (The Vienna Exhibition 1873: 1).

In December 1872, a preliminary exhibition, called the New Zealand Interprovincial Exhibition, was held in Christchurch, which – through a call in the *New Zealand Gazette* (No. 48, 23 September 1872) – had attracted the active participation of New Zealand institutions, private companies and interested parties. From their contributions, the most attractive objects were selected for the Vienna Exhibition (Nathan 2015: 130–131). By 23 September 1872 “2,500 square feet of floor space” for wool, wood and coal and an “extent of wall space for the maps and plans” were considered to be necessary for “a distinct Court” (The Vienna Exhibition 1873: 1).

Philip Cunliffe Owen, the Secretary of the British Exhibition Committee asked whether the New Zealand exhibition committee wished to be subordinate to the organisation in London or whether it wanted to take the matter into its own hands. The latter was chosen and emphasised by New Zealand’s authorities “as it is important that New Zealand should retain its distinctive characters in the proposed collective representation of the Australasian groups” (The Vienna Exhibition 1873: 2).

To distance itself from both the other colonies and from the colonial power in London was an extraordinarily wise decision because, as it turned out, the other British colonies were less careful in presenting their exhibitions, as was observed in the official report published in Vienna (Grefe 1874: 10, 14, Lott 1874: 23). The Austrian press also complained that “England had no idea of how to satisfy the curiosity of the Central European Landlubbers” ([K.Th. R.] 1873).

Furthermore, the mother country was judged by the press in Vienna to be rather inactive:

*The practical Old England is tired of exhibiting. Or is the indifference of ‘Great Britain’ only a deliberate intention, in order to be able to represent the natural wealth of its innumerable colonies in raw products all the more brilliantly; does the mother veil her splendour in order to let that of the children shine all the more splendidly?* (Braun 1873: 9).

It was also important for researchers like Julius Haast to build up their international authority independently of the scientific centre in London.

A fund of £500 for expenses was provided by the New Zealand Government for the transfer of materials and exhibits from Christchurch to Vienna and for the installation (The Vienna Exhibition 1873: 2), although this sum was not sufficient. The British Government appointed Charles Clifford (1813–1893) former speaker of the New Zealand House of Representatives and Isaac Earl Featherston, the first Agent-General for New Zealand in London as commissioners, both of whom were to organise, accompany and represent the exhibition in Vienna (The Vienna Exhibition 1873: 3). Julius Haast, Hochstetter’s friend and the best authority on New Zealand botany, geology and ornithology, was disappointed at the decision, as he had expected to be nominated for the position himself, “but somehow the matter did not arrange itself, as the govt wanted me to do too much emigration business.” Haast regretted the situation, as evidenced by a letter of 10 January 1873 to Joseph Hooker (1814–1879) Director of Kew Gardens, edited by Sascha Nolden et al. (2013: 166). London, however, had the final decision on the selection of the commissioners.

## Selecting Objects and Setting up the Exhibition: The Influence of the Naturalists

Featherston, as the colony's representative, was primarily concerned with industry and trade, but soon admitted to the Colonial Secretariat that the exhibits Haast contributed were important: "I feel sure that these fossil remains will be objects of considerable interest to the general public for the New Zealand Court" (The Vienna Exhibition 1873: 6). It was not until November 1872, however, that Featherston made contact with Hochstetter in Vienna to officially request help, not neglecting to mention the personal acquaintance that had arisen during Hochstetter's visit to New Zealand:

*When you were on an official visit to New Zealand, in 1858, I had the pleasure, as Superintendent of the Province, of meeting you at Wellington; and, in common with the rest of the colonists, I have felt considerable interest in the results of your scientific researches ...*

*As arrangements are being made on so magnificent a scale for the International Exhibition in Vienna, it is the desire of the New Zealand Government that the Colony should be well represented on that occasion; and I am now taking such steps as I can to insure this object. From your knowledge of the physical character and resources of the Colony, added to your large general experience, I feel sure that you would be able to assist me materially and with your opinion and advice (The Vienna Exhibition 1873: 6).*

Hochstetter pledged his support (The Vienna Exhibition 1873: 6), as it was a thematic focus from which he himself could once again publicly consolidate his already existing authority regarding New Zealand's natural history.

Long before this Hochstetter had written to Haast on 25 February 1872 (Nolden 2013: 159) and asked about New Zealand's plans for the Vienna World Fair, and in his letter of 29 February he personally encouraged Haast to participate:

*I hope that New Zealand will be grandly and comprehensively represented. If you are able to have any influence on this, then do so, and let me know what is being done in this regard. Enclosed is a clipping showing what the exhibition building is supposed to look like, not pretty, that's for sure, but practical and of colossal proportions in the Prater (Nolden 2013: 159).*

Hochstetter was one of 216 members of the Vienna organising committee and involved in three of 26 thematic sections (*Officieller Ausstellungs-Bericht* 1873). In the list of all members of the Austrian Commission he was mentioned in his function as President of the Geographical Society ([Anonymous a] 1872: 2). He was also a professor at the Polytechnic Institute (predecessor of the Technical University) and an ordinary member of the Imperial Academy of Sciences in Vienna. Not only was he respected as an authority in Vienna on the basis of the results of the *Novara* expedition and his New Zealand book (Hochstetter 1863), but he was also an excellent networker within Vienna's academic circles (Klemun 2020). In this respect, his influence on the design of this part of the exhibition was central (which we can see especially in the letters between Hochstetter and Haast edited by Sascha Nolden 2013). Thus, Hochstetter again joyfully affirmed his support in his letter:

*I have told our general director of the exhibition all about what you wrote concerning this, and Mr Featherston also wrote to ask me for assistance, which I have promised him, as I am prepared to do anything for New Zealand, to my very end (Nolden 2013: 160).*

Hochstetter was probably also responsible for the fact that, in the run-up to the exhibition, hints appeared in the Austrian press that intensive preparations were being made in New Zealand for the

exhibition: “New Zealand will also be participating in the exhibition in a similarly active manner, where, as we learn from the ‘Littleton [sic] Times’, numerous meetings are being held to discuss and prepare the exhibition’s programme” ([Anonymous a] 1872: 1).

Clifford himself travelled to Vienna shortly before the opening on 1 May and was pleased to note that the objects had arrived by train from the port of Trieste, somewhat delayed but in one piece (*The Vienna Exhibition* 1873: 12). Prior to this, on 21 March a circular had been sent from London, soliciting contributions from England for the New Zealand section (*The Vienna Exhibition* 1873: 9), which was enriched at the last moment by the 250-specimen bird collection of James Brogden and works of art by Alexander Brogden (*The Vienna Exhibition* 1873: 11). The birds had to be mounted in Vienna and it is not clear how and when these specimens were collected in New Zealand (McAllan 2007: 72). At the last moment, and too late, authorities in London interfered in an irritating and time-delaying manner, asking for more objects in England via the circular. This resulted in delays, which caused different information about the register of objects to be published in the official catalogues of the Vienna World Exhibition, a catalogue for the whole British Empire produced in London, and the “catalogue of all objects in the New Zealand Court in three languages” (*The Vienna Exhibition* 1873: 11). The catalogue for the New Zealand exhibition, published in Vienna in German, French and English ([Anonymous a] 1873) is based on the catalogue that was organised in New Zealand (Appendix. Descriptive Catalogue 1873). But it differed from the official catalogue, where the bird specimens of New Zealand were mentioned, because of the troubles mentioned above.

That the giant moa had not yet arrived at the opening on 1 May (Kingstone 1873: 3) was not reported by Clifford, the commissioner, to New Zealand. But the shortcoming was registered in Vienna in Austrian press reports about the New Zealand Court (Kingstone 1873: 3). The jury for the prizes had already made its decisions and in July Hochstetter had to intervene by asking Franz Hauer, Director of the Imperial Geological Survey in Vienna (Nolden 2013: 162) and member of the jury, to visit the New Zealand exhibition again. Haast was subsequently awarded a medal for his exhibits (Fig. 1) as was reported in the press: “Haast, Dr., Austria [sic], Vienna, exhibition of the characteristic skeletons of the bird genus moa, geognostic survey in New Zealand [Haast, Dr., Österreich[sic], Wien, Ausstellung der charakteristischen Skelette der Vogelgattung Moa, geognostische Aufnahme in Neu-Seeland.]” ([Anonymous c] 1873: 15). The “Commander’s Cross of the Order of Franz Josef with and without Star” was awarded to Featherston, as “grossbrit. Commissär für Neu-Seeland [Great Britain’s Commissioner for New Zealand]” ([Anonymous] 1874: 3) in January 1874, although he was not present in Vienna.

Until the arrival of the skeletons, a footprint of a moa replaced the bones. Even this caused a sensation — a mysterious, preserved trace, which tempted an observer to also discuss Māori as an endangered ethnic group owing to the British colonialism so despised in the Austrian press:

*What we come to now, however, is a species of bird that is already quite extinct. It is the giant moa. Nothing of it remains, other than a print of its foot, which pressed itself thousands of years ago in mud now hardened into sandstone. This sandstone slab with the footprint of the extinct giant bird, which inspires many thoughts, comes from Poverty Bay and is intended by the Auckland Institute as a gift for Professor Hochstetter. In a few weeks, the skeleton of this antediluvian, probably flightless bird, painstakingly assembled by Dr. Haast from individual bones found, will also be exhibited. Likewise, the aborigines of the country have to be put on the list of extinction ... All in all, New Zealand forms one of the most interesting parts of the exhibition and is all the more worth a visit, as the journey there is not connected with the dangers of a 3,000 mile long sea voyage (Kingstone 1873: 3).*



**Figure 1.** Certificate from the Viennese International Exhibition of 1873 for Julius von Haast. Dated Vienna, 18 August 1873, signed by Archduke Rainer Ferdinand of Austria and Wilhelm von Schwarz-Senborn. Printed by Rudolf von Waldheim, Vienna; letterpress in red and black, with signatures in black ink, on paper, 423 x 592 mm. MSO-Papers-0171-17, Alexander Turnbull Library

This discourse about the extinction of birds was introduced to the Austrian public by Hochstetter's well known and greatly admired book about New Zealand (Hochstetter 1863: 458). The English presentation in the catalogue for the Vienna World Exhibition particularly promoted migration, but this aspect did not go down well in the Viennese press. Rather, there was a warning against it, and the portrayal of the pleasant climate in New Zealand was ridiculed for this reason: "But the British government uses the exhibition to give very extensive information about the conditions in New Zealand ... and hopes to increase the population of that Australian island" ([Anonymous d], 27 June 1873: 9).

With regard to natural history research, however, Vienna, as the venue of the World Exhibition, became the third player between London and the colony performing the role of a neutral mediator. This was the result of the on-going friendly scientific relations between the actors Hochstetter and Haast since the former's stay in New Zealand in 1858–1859. The connection supported the Austrian critique of British colonialism in the press.

The arrangement of the exhibition was based on a memorandum drafted by James Hector, the chief scientist for the New Zealand Government, but finalised by the agent in charge of Australia and New Zealand, Phillips Bevan (The Vienna Exhibition 1873: 11), much to Hochstetter's displeasure. Hochstetter oversaw setting up the articulation of the moa skeletons and bird specimens, while Haast, as the Director of Canterbury Museum, contributed the very attractive skeletons, maps and birds.

Hector's memorandum made detailed suggestions in advance for the arrangement of the exhibits in Vienna, and this was taken into account. The order was significant and demonstrated the economic priorities: (1) Wool, (2) Woollen Goods, (3) Phormium, (4) Grain, (5) Coals, (6) Minerals and Ores (including gold), (7) Woods, (8) Miscellaneous Objects Preserved Meats, Native Tanning Barks, Photographs, Moa Skeletons, Plans and Maps. For the moa skeletons item, although it appeared towards the end of the list, it was nevertheless admitted that the skeletons of those birds "will form a striking centre-piece for the New Zealand Court" (The Vienna Exhibition 1873: 4–5). This assumption was actually fulfilled, and the skeletons and mounted birds became the attraction par excellence at the exhibition in Vienna.

James Hector, an experienced traveller in Canada as a member of the Palliser expedition, Director of the Geological Survey of Otago (from 1861), and, since 1865 Director of the Colonial Museum in Wellington, was well prepared for this task. He produced a geological map especially for the Vienna exhibition (Nathan 2014: 96). Difficulties arose, however, in shipping the items to Europe, since the objects were divided between different shipping lines (The Vienna Exhibition 1873: 5). The objects provided by Haast from Canterbury Museum, which included the attractive moa skeletons, 60 birds, minerals, maps and photographs, were to be sent directly to Hochstetter at the Polytechnic Institute. Official support was expected by the Premier of New Zealand, George Marsden Waterhouse (1824–1906), who wrote to one of the commissioners: "It would also be advisable to enlist the good offices of Professor Von Hochstetter in favour of the New Zealand exhibits" (The Vienna Exhibition 1873: 5). But much more was expected of Hochstetter by Waterhouse:

*I understand there are many articles in the Museum and other public places of deposit in Vienna which would greatly enhance the appearance of the New Zealand exhibition if they could be obtained on loan; and as Dr. Von Hochstetter still, I believe, takes much interest in New Zealand, he would doubtless, if asked, give valuable assistance to yourself and Sir Charles Clifford at the Exhibition. His services would be especially valuable in the preparation of any portions of the New Zealand Catalogues requiring a scientific knowledge connected with the Colony, and in the revision of the translation of the Catalogue into the German language (The Vienna Exhibition 1873: 5).*

## **Installation of the Exhibition: Designing Nature**

Although the natural scientists Hector, Haast and Hochstetter were effectively involved in the run-up to the exhibition, they were ultimately not completely successful. The organisation of the New Zealand exhibition was determined by hierarchical structures, differences between centre and colony, and influenced by diverse interests, such as the focus on trade. This context undermined the realisation of the key scientific intentions of the naturalists, especially Hochstetter's, who wrote to Haast on 26 June 1873:

*As far as the rest of the New Zealand exhibition is concerned, I had a number of battles with Mr Bevan who was given the task from London of arranging it, without even knowing New Zealand. The exhibit did not go according to my taste. But your skeletons will make a major improvement and give the New Zealand section a lift, making it far more interesting (Nolden 2013: 162).*

Hochstetter complained that "Mr Bevan, who does not know New Zealand at all, was certainly not the right person, despite his best efforts, for the arrangement of the New Zealand section, which left much to be desired, nor for the representation of New Zealand's interests." (Nolden 2013: 162). Hochstetter's assertion was based on autopsy — having seen New Zealand with his own eyes — the traditional



argument of travellers. “In Vienna, all the timber was mixed up” (Nolden et al. 2013: 172), Haast later wrote disparagingly about the work that was done on the arrangement of the objects. This was about the timber that had been specially procured in Canterbury for the exhibition in September 1872 by Joseph Armstrong on behalf of Haast (Nolden et al. 2013: 164).

Hochstetter was authorised by Hector’s memorandum and by the Colonial Secretariat to set up Haast’s three moa objects and to get Haast’s 60 bird skins mounted (The Vienna Exhibition 1873: 5), but not to arrange the rest of the specimens at the exhibition. We can nevertheless assume that he had a significant influence on the reservation of sufficient space and on the design. It was Hochstetter who directed the attention towards nature. Featherston felt assured that Hochstetter himself will “appreciate the desire and exertion for his friends and coadjutors in science, Dr. Hector and Dr. Haast, to render the New Zealand exhibits useful and attractive from a scientific point of view” (The Vienna Exhibition 1873: 7). This scientific attitude included his expertise as a geologist who had been educated to describe, draw and judge the landscape (Klemun 2014).

But what had Hochstetter actually done regarding the moa skeletons? In a letter to Haast, he comments in detail on his work:

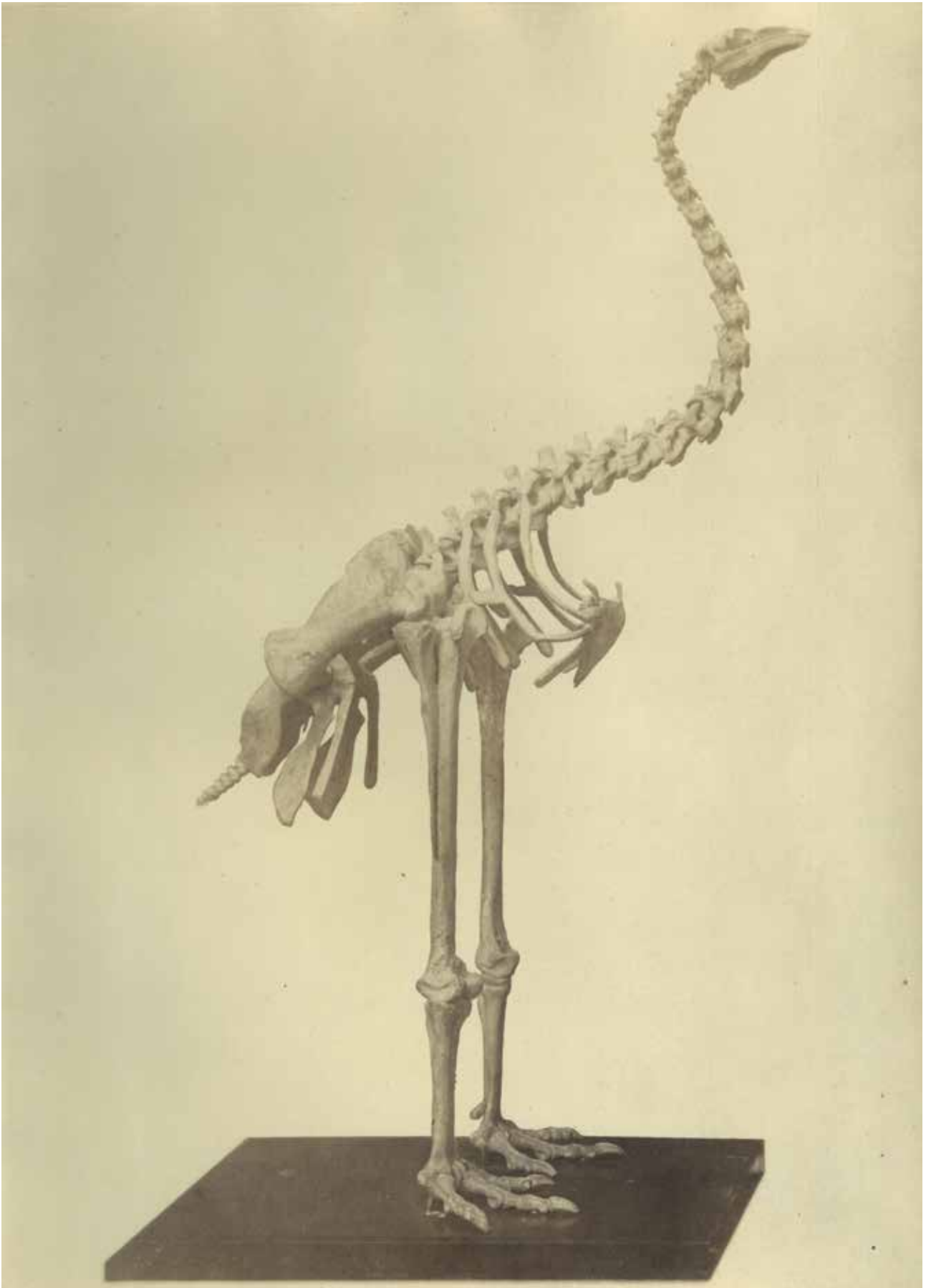
*I am pleased to be able to write to you that the moa skeletons are standing upright before me, a truly magnificent sight. Dinornis giganteus stands 9 feet and 9 inches tall in Viennese measurements, and I am sure that nowhere in the world, sit venia verbo - if I am permitted to say so, there stands anything quite like it except with you in Christchurch. The task was a colossal one, but I was pleased to do it for you. I had every bone, vertebrae, skull and everything restored by a skilled plaster modeller, so the skeleton is now complete and the bones which were in an extremely brittle state are therefore protected from further decay. I set up Dinornis giganteus in stride like yours, and I will place Dinornis giganteus with the other two to complete a remarkable tableau. All four birds will be placed on a black painted pediment and placed together on a 1.5 foot high platform covered in a reddish brown cloth. On the same platform I will place the four stuffed kiwi, in between the skeletons. ... The birds will be placed in such a way that one may walk right around the group, and next to it, in a prominent position, will be your maps and photographs of the province (Nolden 2013: 161).*

Hochstetter’s ambition to produce these reconstructions so faithfully required an extraordinary effort, as he wrote to Haast in a letter of 26 June:

*I have now spent four quiet weeks working on the bones and skeletons every day, together with five other people, and I am no end pleased that I have just managed to have them finished before I go on a three week excursion to the Alps with the Crown Prince (Nolden 2013: 161).*

Great attention was given by Hochstetter to the reconstruction and completion of the bones with plaster casts and their arrangement in order to ensure maximum visibility. In 1861 he had already given a lecture on the extinction of the large flightless birds in a Darwinian manner, using the reconstruction of a moa skeleton and the construction of a plaster model (Fig. 2) (Hochstetter 1862). Both were prepared by Gustav Jäger, a Darwinian scholar in Vienna, who described the procedure of articulating them in detail (Jäger 1863). This publication gave Hochstetter support in this matter. He was no specialist in anatomy but was eager to work on the articulation of the bones for the Vienna World Exhibition.

Hochstetter was disappointed with press reports on the skeletons, because “these things lie completely outside the horizon of our ordinary reporters” (Nolden 2013: 163). In response to many questions from the public, Hochstetter affirmed in a detailed article that three skeletons were indeed made of “real bones” (Hochstetter 1873: 4), and that only the fourth one was a cast, based



**Figure 2.** The articulated moa skeleton, by Gustav Jäger, exhibited at the World Exhibition in London 1862, the Novara Museum in Vienna 1862–1867, the World Exhibition in Vienna 1873, and in the Geological Survey in Vienna. Jäger 1863

on a find he had made together with Haast in a cave in 1859 (which was in the possession of the Geological Survey in Vienna).

Hochstetter based the mounting of moa specimens on those exhibited by Haast at Canterbury Museum. Seven articulated moa skeletons were already the centrepiece of that Museum in 1871 (Haast 1948: 623). Haast was founder and Director of the Museum and when a new building was opened in 1870 the Museum's collection of moa continued to grow. Haast exchanged bones with other museums, and they were a resource which facilitated his growing authority as a scientist in this field (Barton 2000).

The decisive factor for Hochstetter was that the skeletons were mounted and made the reality of the full-size animals comprehensible. Moreover, he positioned them in the middle of the New Zealand Court in the centre of the room in order to dominate the narrative about New Zealand (Fig. 3). This was not the first time that a reconstruction of an extinct giant had been viewable in Europe. At the World Exhibition in London in 1862 two specimens of moa were exhibited as part of the presentation of the Austrian *Novara* expedition (Scherzer 1862: 83). Subsequently, the skeletons were displayed in the Novara Museum 1862–1867 in Vienna. Moa fossils had already generated great attention among researchers and the general public in many other cities, especially in Paris and London. But now a group of four specimens surrounded by kiwi were to be exhibited in Vienna.

Moa bones first came to the scientific world's attention in 1839 (Hochstetter 1863: 446), after John Rule, an ex-naval surgeon from Sydney sold a piece of bone to the comparative anatomist Richard Owen in London, who immediately exhibited it as part of the leg bone of a gigantic bird. London was seized with fever of the moa bones, and Owen saw the bone as an opportunity to establish the reliability of his Cuvierian functionalist methods. They were based on the principle of correlation of parts, which states that all organs in an animal's body are deeply interdependent. Further debates and findings about moa skeletons in New Zealand gave Haast the status of an international expert, distancing him from merely serving the centre in London, as Barton argued (Barton 2000: 261).

As a third space between Owen in London, who in Latour's terminology acted as a "centre of calculation" (Latour 1987), and Haast in New Zealand, who as a scientist on the periphery had previously played a supportive role for the centre, Vienna now acquired a symbolic role underlining Haast's and Hochstetter's ongoing significance and fame. It was no coincidence that the press in Vienna emphasised that London did not yet have such a complete skeleton as Vienna had, and the press was full of praise for this one:

*In the exhibition of the British colony of New Zealand is one of the greatest curiosities of the Palace of Industry. This is the skeleton of the giant bird Moa from the Canterbury Museum at Christchurch, which the latter is exhibiting under the direction of an Austrian geologist of repute, Dr. Julius Haast, a pupil of Hochstetter ... (Dr. H. 1873: 1).*

The most informative and detailed articles came from Hochstetter's own pen. In this article signed only as "Dr. H." in September, he very skilfully put his own and Haast's work in a proper light. For example, he emphasised that it was his idea to "arrange for the submission of bird figures for the World's Fair" (Dr. H. 1873: 1). Hochstetter and Haast were celebrated in the press as a duo.

Hochstetter had organized a miniature volcano made of sulphur for the exhibition in the Ministry of Education section (Fig. 4). It consisted of a static model, but the material had "come about experimentally through nature itself" ([Anonymous e] 1873: 4). An anonymous visitor praised



**Figure 3.** The New Zealand Court at the World Exhibition in Vienna 1873, “Photographen Assoziation”.  
Österreichische Nationalbibliothek/Austrian National Library

this presentation by Hochstetter and, in the context of volcanoes, he also referred to Haast’s moa skeletons, which he praised as also being particularly suitable phenomena for representing changes in the earth’s surface.

### Hybrid and Identified Objects between Nature and Culture

The moa skeletons acted as hybrid objects that captivated scientists and the general public alike. On the one hand, they raised unresolved palaeontological questions which Hochstetter discussed publicly (Dr. H. 1873: 1), and on the other hand, they fascinated people because of their monumentality and uniqueness. They broadened the public’s view of the general phenomenon of extinction in the animal world, they enabled Māori legends to be integrated into natural history narratives, and they intertwined human history with natural history. The skeletons were objects that could also publicly advertise the importance of palaeontology as a young science. It was noticed that hardly any palaeontological collections were exhibited, other than in connection with suites of rock samples that served to explain the geological maps of New Zealand. One exception was the moa bones on display, according to one journalist, who described them as the “most striking” feature of the exhibition ([Anonymous e] 1873: 4).

Sensation, novelty and instructive entertainment were supplied by the skeletons, which were analogous to the botanical star of the exhibition, *Welwitschia mirabilis* Hook. F., recently discovered by the Austrian botanist Friedrich Welwitsch in Angola, and exhibited in the agricultural hall of the colonial power Portugal. That species also exhibiting a great age as “remnant from an earlier extinct flora” [als “Überrest aus einer früheren untergegangenen Flora”] (Zwanziger 1874: 137; Klemun 2022: 11f).

Naturalists and journalist particularly appreciated the fact that the abundance of materials and specimens on display were labelled with accurate descriptions in terms of content and taxonomy. The corresponding labels for the objects had been prepared in Westminster, as reported by the Agent-General to the Colonial Secretary:

*In pursuance of your instructions, I have employed skilled draftsmen to prepare suitable show-cards (twelve inches square) to accompany all the principal exhibits, each of them having a*



**Figure 4.** Model of a volcano made of sulphur by Hochstetter in cooperation with Müller and Opl at his brother's soda factory. Geologische Bundesanstalt Wien/Austrian Geological Survey

*conspicuous heading to distinguish the Colony, and a concise description of the object, with the name of the exhibitor, in English, German and French* (The Vienna Exhibition 1873: 11).

Hochstetter also stressed, in a letter to Haast regarding the display of the moa and the birds, that “the whole thing will have a large inscription stating: ‘The flightless birds of New Zealand, the extinct moas and the still living kiwi’. Exhibited by Canterbury Museum Christchurch, New Zealand, Director Dr Julius Haast. The birds will also have their own individual labels.” (Nolden 2013: 161).

The unmistakable identification of natural objects had become a sign of professionalism in collections, museums and botanical gardens and everyday practice. Correct information was guaranteed by labels, whose information was based on the standardised naming of natural objects with the scientific designation of the species (Latin binomen) practised since Carl von Linné (1707–1778). This was an expression of a worldwide process of access to nature standardised by internationalised practice, which was essentially Eurocentric. The common names of the plants, animals, stones or fossils on these labels, like “the flightless birds” in the respective local language were a concession to the non-academic public. The labels had a contemporary character in their consistent execution, depending on the material (tin, porcelain, wood, enamel, cement, metal, cast stone, aluminium, zinc), language, script, typeface and political local reference. Unlike the spoken word, which ran and runs throughout time, the typeface on the labels “lived from the simultaneity of the surface, as from the synopsis of the overview” (Krämer et al. 2012: 16).



Labels are not only a signifier in relation to the signifying natural object (the significat) (Lacan 2003), but material carriers of a signifying concept that classifiers chose in relation to scientifically negotiated agreements. They are medial messengers of referential contexts that favour different signifying and pointing characters through writing, materiality and colour. Popularly, they were analogised with citizens, who were “all provided with baptismal certificates and legitimation cards” (Anonymous 1863). It was the labels that travelled as concrete knowledge, mediated through the catalogues and even in newspaper articles (Zwanziger 1874: 94). The labels networked the horizons of meaning. The high print run of 500,000 copies of the German catalogue also played its part (Anonymous b 1872: 11).

### **The International World Exhibition as “Statistics Come to Life”**

There are three objectives that the contemporaries in the press mentioned as the aims of the exhibition: to boost sales (business); competition between the states, including a show of performance by means of the objects; and sensationalism by means of news ([Anonymous f] 1873: 1). These were realised at the exhibition via different media in order to attract the attention of the public. Accordingly, three different types of communication were effective as systems of record: firstly, the lists of exhibiting companies, donors and objects in the catalogues; secondly, the visual representation of landscapes in drawings, sections, photographs and maps arranged according to states; and thirdly, the abundance of materials and specimens on display, which in the best case were provided with accurate descriptions of content and taxonomy on labels.

Extensive lists of exhibitors and objects in catalogues owed their existence to the extremely widespread statistical manuals popular since the eighteenth century. It was no coincidence that one critic of the exhibition had described “statistics as history that has come to a standstill” and meant: “in the same sense, the International World Exhibition could be described as statistics come to life” (Dr. G. K. 1873: 17). The exhibition could also be understood as a catalogue of goods [Warenkatalog]. However, the critic also feared that: “Not everyone is in a position to gauge and appreciate from the numerous individual manifestations of this colourful picture the nature and sum of the forces which have promoted progress and development here and inhibited it there” (Dr. G. K. 1873: 17).

For this very reason, the catalogue produced by the mother country provided extensive information on the colony, from which the press drew its knowledge. The daily newspapers praised the “diversity of natural products represented here” ([Anonymous f] 1873), the many types of coal, alluvial gold in 30 samples from as many locations, and the wheat and wool (Merino, Lincoln and Leicester provided by 22 growers). The information on the preparation process of New Zealand flax, and the species of wood (38 from Auckland, 82 from Wellington and 43 from the South Island, making a total of 163 species) were admired. The “rational way of setting up with bark, foliage and flowering irises [was found] ingeniously implemented.” (Dr. G. K. 1873: 17). This example vividly shows us how the numbers in the lists from the catalogues were transformed into powerful agents of the objects.

Clifford, for instance, affirmed the great appeal that the *Phormium tenax* exhibit had:

*Among the earlier arrivals I may mention an admirably arranged collection of the Phormium tenax, showing it in every process of manufacture, from the raw leaf into rope and twine of every description; and its other products, from the coarsest sacking to the most perfectly bleached table linen of the finest texture. This was exhibited by Mr. Thoren, and was much noticed (The Vienna Exhibition 1873: 12).*

The press in Austria mainly repeated in compressed form the data on trading power and wool exports to England: “Of the exhibited objects, the gold quartz with platinum (some pieces of pure gold are also to be seen) are of particular beauty, as are individual fine types of wool” ([Anonymous g] 1873: 5; [K. Th. R.] 1873: 8). In terms of the colony’s political intentions, the representation of trade and economy at the Vienna World Exhibition was successful. For the many authentic examples of goods, such as wool, coal, wood specimens, the *Phormium tenax* (New Zealand flax) used so diversely by Māori, various natural products such as meat and cheese, these were all visible as products and showed the wealth of the colony in a wide spectrum. This aspect was emphasised especially regarding alluvial gold, coal and minerals.

## Physical Uniqueness

The geographical and physical uniqueness of New Zealand was well illustrated by topographical and geological maps, sketches, landscape representations, photographs, materials and natural objects. This is what was said about the New Zealand section of the World Exhibition:

*If we may trust the illustrations. ... The coast of New Zealand, with its dark forests surmounted by white, heavenly chalk cliffs, bears a surprising resemblance to Corsica, whose rocky cliffs, gleaming far away, tower like white colossi from the blue sea and a wreath of dark laurel and chestnut forests* ([Anonymous h] 1873: 5).

The passage attests to how the wood samples were aligned with the photographs for the visitor. At the same time, the public preferred the perspective of the European who was always accessing the world. Accordingly, Josef R Lorenz, in his article about the maps in general at the exhibition, judged Haast’s map, entitled “Reconnaissance-Map of the interior of the province of Canterbury, New Zealand, a hand drawing to the scale of 1: 253,440 (4 English miles = one English inch)”, to be the best, “the most interesting map of its kind” for the press among the “maps of all nations exhibited.” (Lorenz 1873: 3). Lorenz emphasised that “undescribed areas” are here “successfully drawn schematically and with one-side illumination ... which proves to be the most effective for the overview” (Lorenz 1873: 3).

What was perceived as characteristic of New Zealand’s natural history was especially the birds and the extinction of some species:

*First of all, let us enter the room in which the products of the most peculiar flora and fauna of all parts of the world are open to inspection, and above all, let us look at the birds on display. Who knows how long it will take for the news to reach Europe that the last specimens of the bird species we have just been looking at have recently died out. The first thing that catches our eye is a group of two New Zealand owl parrots with pearly green plumage. They are strange birds. By day they hide in root holes under the ground and only emerge at night to eat titu berry or fern roots they dig up. They rarely use their wings and are therefore hunted by the natives with dogs. Furthermore, we notice three specimens of the wingless kiwi, which also leads a nocturnal life and feeds on insects, worms and seeds. Both kiwis and owl parrots are in the process of extinction. But now we come to a bird species that is already completely extinct. It is the giant moa* (Kingstone 1873: 3).

The image of the Māori people in New Zealand presented at various world exhibitions has changed since their major appearance at the exhibition in London 1851 (Auerbach 2008). Māori people and artefacts were transformed from being curious entities to scientific specimens (Auerbach 2008). They were used to demonstrate what was perceived as progress made under the influence of

the Europeans. Māori provided a particular colour to New Zealand's identity. Many newspapers in Austria discussed the phenomenon of Māori in the same breath as the extinction of the moa (Kingstone 1873: 3). The aversion to British colonialism was evident in many Austrian columns (Bacano 1873: 1–2).

## **Conclusions**

The analysis of New Zealand's part in the organisation of and preparation for the Vienna World Exhibition in 1873, has shown the powerful ambiguity between the imperial centre in London and the supportive position of colonial contributors. It made obvious how a third space in between, the Vienna World Exhibition, undermined the controlling authority by shifting the focus from trade of the colonial centre to that of nature in the colony. This perspective was also semantically tangible in the newspapers. The moa skeletons and New Zealand's uniqueness were highlighted in the press. The agency of the admired, debated and researched fossil moa skeletons was important not only for claiming scientific authority for Haast and his patron Hochstetter, but also for Hochstetter, as an architect of the exhibition. It was he who articulated the skeletons and in the right manner, giving them and himself authenticity and credibility among the Viennese public. The carefully crafted arrangement of the display and the professional narrations articulated by labels went hand in hand.

The focus on media (inscriptions, labels, list in catalogues, and drawings or photographs) provided an understanding of how knowledge was disseminated. The role of instructive entertainment had its foundations in lists and registers presented in catalogues. All these inscriptions travelled from those documents to the exhibits and thence to the newspapers. The different functions of the media were established by the distinct types of inscription practices connecting objects and their agency between knowledge and perception. Hector, Hochstetter and Haast had global connections as friends and scientists who exchanged their knowledge over many years. These relationships underlined the importance of natural history objects at the exhibition and also strengthened their status in society and science, which was reinforced by the press. The exhibition manifested not only objects but also networks between New Zealand and the Habsburg Empire, as documented in the press.

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# Searching for the “von”: Details on the Elevation of Julius von Haast to the Austrian Nobility

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The article deals with one aspect of Sir Julius von Haast’s biography in detail: his elevation to the Austrian nobility in 1875. Haast, who by this time had been living in New Zealand for almost 20 years, was knighted by Emperor Franz Joseph, not so much for his outstanding services to the exploration of New Zealand, but more for his outstanding donations of objects to Austria (especially moa skeletons). Henceforth, he was entitled to call himself “von” Haast. Particular attention is paid to the influence of Haast’s colleague and friend Ferdinand von Hochstetter in the historic process of Haast’s ennoblement.

**Keywords:** Austrian nobility, coat of arms, Ferdinand von Hochstetter, Imperial Order of the Iron Crown, Julius von Haast

## Introduction

The German-born geologist Sir Johann Franz Julius von Haast (1822–1887), was highly decorated for his scientific achievements although he had not originally pursued an academic career and probably only attended a few lectures at the University of Bonn (Kirschbaum 2022). After receiving the degree of Doctor of Philosophy from the University of Tübingen in 1862<sup>1</sup> (arranged by his friend Ferdinand von Hochstetter) and getting elected as a fellow of the British Royal Society in 1867 (Müllerott 1966; Maling 2017), Haast was awarded various titles of nobility from European countries such as Great Britain and the Austro-Hungarian Empire. In fact, he received the Austrian knighthood, which entitled him to call himself “von Haast”, 11 years before being invested with the British knighthood in recognition of his achievements as a New Zealand commissioner for the Colonial and Indian Exhibition in London (Maling 2017).

This biographical detail about Haast – his ennoblement by the Austrian Emperor Franz Joseph I (1830–1916) – has been continuously mentioned in research, but so far without going into greater detail (see for instance Gebhardt 1969: 224; Maling 2017). Based on the archival documents in the repository of nobility files [Adelsarchiv] of the Austrian State Archives [Österreichisches Staatsarchiv], the historical process that led to the award of the title of nobility to Haast will be examined more closely. Julius von Haast’s correspondence with his colleague and friend Ferdinand von Hochstetter (1829–1884), prepared by Sascha Nolden, will be of particular importance (Nolden 2013: 164 onwards).

## Austrian Nobility in General

The Austrian nobility was a historic status group within the Habsburg Monarchy that was officially abolished in 1919 after the fall of the Austro-Hungarian Empire in November 1918. On 3 April 1919, the Austrian National Assembly decided to abolish the nobility by passing the Law on the Abolition of Nobility [Adelsaufhebungsgesetz].<sup>2</sup> The last aristocratic status elevation in Austria was when Emil Homan Ritter von Hermiberg (1862–1945), Minister of Public Works, was elevated on 11 November 1918 to the rank of baron (Anon 1959)<sup>3</sup> – one day before the new Austrian First Republic was proclaimed in Vienna on 12 November 1918.

In historical perspective, the Austrian nobility – like the nobility of other monarchical European countries (Demel 2005; Hechberger 2010) – arose from the feudal system of the Middle Ages (Hoke 1996: 62–64) and was characterised by great diversity in terms of ranking and linguistic, ethnic and religious affiliations (Winkelbauer 1992; Mat’ a 2019). This was reflected in the diversity of the dual monarchy [Doppelmonarchie]. Austrian nobility law was also extremely complex (see for instance Binder-Krieglstein 2000). Therefore, only pertinent aspects of this legislation playing a decisive role in the ennobling of Haast will be discussed here.

First of all, it is important to note that there were significant differences regarding the various ranks of nobility. In general, a distinction was made between higher nobility and lower nobility in the historical Austrian nobility (Frank-Döfering 1989). The Austrian higher nobility was divided into two main ranks: The titles of Prince/Princess (Fürst/Fürstin) and Count/Countess (Graf/Gräfin) were at the top of the aristocratic hierarchy, in contrast to the titles of the lower nobility. Three different levels of titles could be differentiated: Simple nobility – with or without the addition noble of (Edler/Edle von) – followed by Knight (Ritter) and finally the title of Baron/Baroness (Graf/Gräfin). In general, historic research has found that from the sixteenth century onward, the Habsburg policy of ennoblement resulted in quite an “inflation of titles” (Mat’ a 2019: 122). Especially those with a “kighthood increasingly became a ‘pool’ of ennobled social climbers”, as Mat’ a stated (Mat’ a 2019: 123).<sup>4</sup> Over the centuries, the mounted warriors of the Early Middle Ages became an aristocratic and even social class that could be found in all monarchies of Europe and had already lost its traditional military function in Early Modern History (see for instance Hechberger 2010 or Göttert 2011).

It should be noted that “for newcomers to the aristocracy, only the two lower ranks, and only in exceptional cases the rank of baron, generally came into contention” (Kučera 2012: 52).<sup>5</sup> This statement applies to the bourgeois newcomer Julius von Haast who was conferred a knighthood and thus placed on the second lowest level of possible aristocratic ranks (see further details below).

It is of special interest at this point, how someone could be ennobled in concrete terms. In principle, a title of nobility could be acquired in two ways: either by transferring an existing title (hereditary transfer) or by conferring a new title of nobility (Binder-Krieglstein 2000: 37–56). In theory, any legally free person in Austria, including women<sup>6</sup>, could apply to be ennobled (Kučera 2012: 53). In addition, there was the possibility for certain groups of people to obtain nobility almost automatically and free of charge based on predefined criteria. These were either long-serving military personnel or the holders of certain Austrian orders. In this context one speaks of a so-called “systematic” nobility (Waldstein-Wartenberg 1964/65: 127f; Binder-Krieglstein 2000: 51f; Županič 2011a: 136ff). Against this background, it is possible to say: “The idea that ennoblement was the result of a decision by the ruler is not entirely wrong, but it certainly does not cover all variants. The Danube monarchy offered a wide range of opportunities to acquire titles” (Županič 2011a: 136).<sup>7</sup>

Specifically, there were the members of four orders that came into consideration for ennoblement:

1. The Austrian Imperial Order of the Iron Crown (Kaiserlicher Orden der Eisernen Krone).
2. The Austrian Imperial Order of Leopold (Kaiserlicher Leopold-Orden).
3. The Military Order of Maria Theresa (Militär-Maria-Theresien-Orden).
4. The Order of Saint Stephen (Königlich-ungarischer Sankt-Stephans-Orden) (Měřička 1974; Ortner and Ludwigstorff 2017; Županič 2021).

By far the most common way of being raised to nobility was to acquire the Imperial Order of the Iron Crown (Županič 2011a: 138; Kučera 2012: 53) as was the case with Haast. A special feature in

Haast's case, however, was that he was not an Austrian national. First of all, a few difficulties had to be surmounted, as discussed in the next section.

The award of one of these four orders made it possible to apply for ennoblement in one of the three lower ranks of nobility, ie to become a nobleman, knight or baron. After such an application, the title of nobility was usually granted without any problems and without a detailed examination procedure (Kučera 2012: 53). The title of nobility was thus the result of an entitlement arising from a specific legal regulation or statute of an order. The ennoblement was therefore not based “on the ruler's decision, but was merely the consequence of an administrative process that was started after the generally known conditions (e.g. acquisition of an order, years of service) by submitting an application to the responsible authorities” (Županič 2011a: 136f).<sup>8</sup>

At the end of the process, the aristocratic title was awarded along with a newly created aristocratic coat of arms (Jäger-Sunstenau 1984; Göbl 1992). In the archive, this process found its way into the so-called nobility files (Adelsarchiv) of the General Administrative Archives (Allgemeines Verwaltungsarchiv) which is an institutional subunit of the Austrian State Archives (Goldinger 1960; Hutterer and Seitschek 2019: 147–151).<sup>9</sup> Although there was never a special authority for ennoblement in Austria, there was a stable institutional anchoring of the nobility agenda within the Austrian state administration (Kučera 2012: 55). Officially responsible was the supreme aristocratic authority in the Austrian court chancellery (Österreichische Hofkanzlei) and, in the nineteenth century, the Imperial Royal Ministry of the Interior (k. k. Ministerium des Innern) (Goldinger 1960). However, this institutional turn did not mean a fundamental reorientation in the practice of ennoblement: “The actual process of conferring nobility was basically not affected. The ministry responsible only took over the former position of the court chancellery” (Kučera 2012: 58).<sup>10</sup> The supreme aristocratic authority was not only master of the procedure conferring a title of nobility, but also took responsibility in managing the nobility files (Adelsarchiv). That is the reason why separately filed series of various documents were and are found here, for example on the dismissal of aristocrats, the extinction of noble families, noble family trees, noble orders or noble foundations.

## **Julius von Haast: How to Become an Austrian Knight**

The ennoblement of Julius von Haast was preceded by systematic lobbying by his friend and colleague Ferdinand von Hochstetter with whom he had been close friends since Hochstetter's stay in New Zealand in 1858–1859 (Johnston and Nolden 2011, see also Johnston et al. 2012 as well as Johnston and Nolden 2014). This crucial role played by Hochstetter has already become clear through the more than 1000-page biography of Julius von Haast published in 1948 (Haast 1948, see below), written by Julius' son, Heinrich von Haast (1864–1953). Finally, the letters from Hochstetter to Haast, edited in an exemplary manner (and also translated into English) by Sascha Nolden as part of his doctoral thesis in 2007, are of particular interest (Nolden 2007; see also Nolden 2013). In addition to the documents in the Austrian State Archives, these letters form the central basis for tracing Haast's entry to the Austrian nobility.

In the course of his life, Haast received several high awards from European countries, including the Habsburg monarchy. As early as 1865, Haast was awarded the Knight's Cross of the Imperial Order of Franz Joseph [Kaiserlicher Franz-Joseph-Orden] by the Austrian Emperor Franz Joseph (Ortner and Ludwigstorff 2017) (Figs. 1, 2 and 3).

Franz Joseph founded the order in 1849 as a distinction for merits in military and civil matters. Hochstetter praised this in a letter to Haast dated in May 1865 (Fig. 4):





**Figure 1.** Miniature version of Haast's Order of Franz Joseph, awarded in 1865. Alexander Turnbull Library, Curios-005-013/019



**Figure 2.** Portrait of Haast wearing the insignia of the Order of Franz Joseph. Alexander Turnbull Library PA2-2514



**Figure 3.** Miniature version of Haast's Order of the Iron Crown, awarded in 1874. Alexander Turnbull Library, Curios-005-013/019

*Victory!*

*Congratulations! Member of the Order! Congratulations!*

*You are a Knight of the Order of Francis Joseph and the medal is already on its way to the Austrian Embassy in London for you, and will be forwarded to you by the British Embassy. Sincerest congratulations from me and my wife. The matter has now been successfully achieved and I will allow myself to drink champagne to the health of the decorated one, as Petschler<sup>11</sup> is just dining with me. And to your prince! Hip hip Hurrah! (Nolden 2007: 253–257).<sup>12</sup>*

Hochstetter had already played a decisive role in the background for this award to Haast. As he had written in March 1865:

*The Order of Franz Joseph is secured for you, but a strange coincidence has held up the matter. The first application to the Lord High Chamberlain was intercepted by Fenzl's servant, to whom he had given the letter, as the matter was taking too long for me. I went to the master in chancery, Hofrat Raimond<sup>13</sup>, and found to my surprise that he had not received the document, so it had to be written a second time.*

*I for my part do not doubt that the matter will be successfully settled, as the Councillor assured me, and so I hope to be able to congratulate you on the Knight of the Order of Francis Joseph by the next mail (Nolden 2007: 251–253).<sup>14</sup>*

And Hochstetter added meaningfully in this context: “Two friends who stand by one another can do a great deal for each other” (Nolden 2007: 251–253).<sup>15</sup>

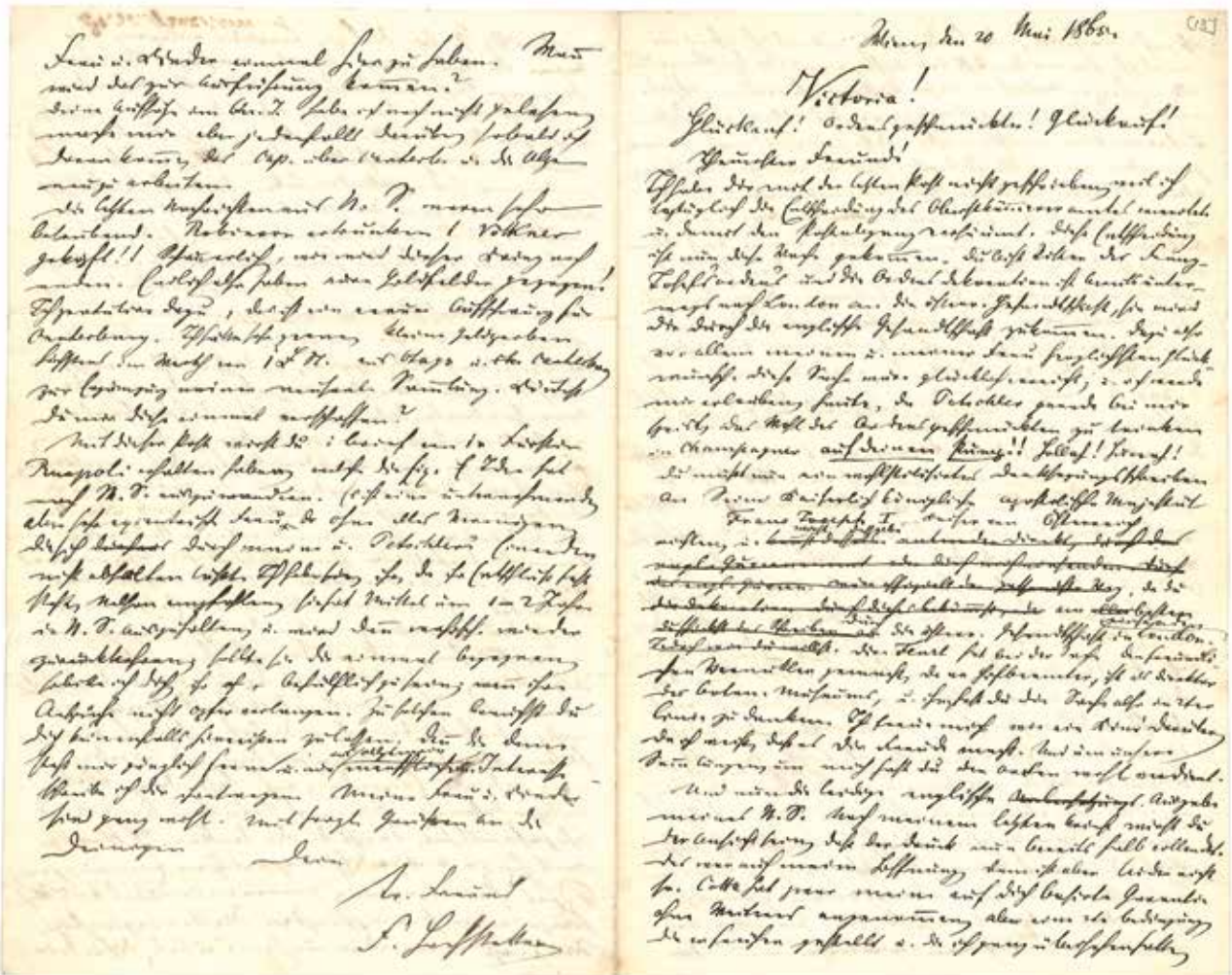


Figure 4. Letter from Ferdinand von Hochstetter to Julius von Haast congratulating him on the award of the Order of Franz Joseph in 1865. Alexander Turnbull Library MS-Papers-0037-183-13

The immediate reason for receiving the order was Haast’s engagement in the geological exploration of New Zealand, especially his consideration of Emperor Franz Joseph in the nomenclature of newly discovered geographical features. In 1865, Haast named a New Zealand glacier after the Austrian Emperor: the Franz Josef Glacier (Kā Roimata ō Hine Hukatere) in Westland National Park – euphorically acclaimed by Hochstetter:

*I can only approve of the fact that my friend Haast, no matter how much some German geographers strive against it, followed the custom of the English and Americans, who – everywhere they plant their flag in foreign lands – immortalise the names of their compatriots in the geography of the country (Hochstetter 1868a: 57).<sup>16</sup>*

Hochstetter saw this as an expression of a genuine “national sentiment” as well as “the righteous pride, honouring a nation, in the names of its eminent men” (Hochstetter 1868a: 58).<sup>17</sup>

However, the Franz Joseph Order was not associated with any elevation to nobility, as Hochstetter – obviously in response to Haast’s enquiry – clarified in November 1865:

*As far as the knighthood is concerned, you are knight of the Order of Francis Joseph, but there is no nobility attached to this order so you may not call yourself ‘von,’ and one cannot apply for a knighthood on the basis of the Order of Franz Joseph; any step taken by me in this direction*

*would be futile. The knighthood for you still lies in the future's wheel of fortune. Happy is he, who still has something left to strive and wish for* (Nolden 2007: 261–264).<sup>18</sup>

From then on, Hochstetter and Haast constantly occupied themselves with the subject of Haast's ennoblement over the following years. Then, in 1873, it seemed the time had come. Heinrich von Haast describes the events of that year in flowery words as follows:

*At the time of the Vienna Exhibition of 1873, Haast and Hochstetter had been in correspondence about the possibility of his being knighted by the Emperor Franz Joseph. Haast had sent many contributions to Imperial Institutions ... But Emperors, like other fountains of honour, need some motive power before the fountain plays. Three or four moas in the Imperial Museum would be worth more than a name on a glacier in the New Zealand bush. And so Hochstetter suggested that Haast should dedicate the moa skeletons and collection of New Zealand birds to the Imperial Museum at Vienna* (Haast 1948: 775).

Although Haast had submitted New Zealand objects for the Vienna World's Fair held in the Viennese Rotunda in 1873, appropriately under the motto "culture and education" (Pemsel 1989), the basis for his ennoblement can be seen elsewhere – despite the fact that Emperor Franz Joseph himself was astonished by the pair of moa skeletons from the Canterbury Museum (Wolfe 2019). Hochstetter had been excited about moa since the late 1850s (for instance Hochstetter 1862) and closely followed their way into the Museum. In 1868, he reported on the display of six skeletons in Haast's newly founded Canterbury Museum in the meetings of the Geological Survey of Austria and called these moa skeletons absolute "highlights" (Hochstetter 1868b).

It was Hochstetter who proposed, under the impression of the "moa success" at Vienna World's Fair, that Haast should donate moa skeletons to Austria – not least to make his way into Austrian nobility. As Hochstetter wrote on 29 August 1873 (while the Vienna World's Fair was still running): "In regard to the moa skeletons and the bird collection, I stick to my proposal that you should donate them to the imperial museums and I will vigorously represent your interests" (Nolden 2007: 326–328).<sup>19</sup>

Following his friend's advice, Haast finally donated moa skeletons to the Austrian Imperial Collections in 1873–1874.<sup>20</sup> It is interesting that these skeletons were initially stored in the Viennese Hofburg and were only accessioned and inventoried in 1876, when the Imperial Natural History Museum was officially founded.<sup>21</sup> Incidentally, Hochstetter could hardly hide his pride in this acquisition; shortly before his death he pointed out that the Natural History Museum in Vienna along with Canterbury Museum in Christchurch, had the world's largest and most complete collection of moa skeletons (Hochstetter 1884).<sup>22</sup>

In any case, in 1874 Haast received the Order of the Iron Crown 3<sup>rd</sup> Class, explicitly for donating these moa skeletons. In the official order letter from the Office of the Count (Obersthofmeisteramt) of 14 March 1874 one reads:

*Following the receipt of the most humbly presented application, His Imperial and Royal Apostolic Majesty, with the highest resolution of the 11<sup>th</sup> of this month, has most graciously deigned to bestow on you the Order of the Iron Crown third class in recognition of your scientific achievements. With the same supreme resolution, His Imperial and Royal Apostolic Majesty approved the acceptance of the three moa skeletons offered from you as a gift to the Imperial Natural History Court Museum. For this valuable enrichment of the intended court collection, the undersigned Imperial-Royal First Obersthofmeister hereby expresses his sincerest thanks* (Nolden 2007: 329, footnote 1260).<sup>23</sup>

Haast's donation fell into some sort of institutional “transit phase“. Although today's Natural History Museum Vienna was underway by 1874 it was not formally founded until 1876 (Riedl-Dorn 1998). So with the course already set in 1874 Hochstetter actively tried to acquire significant objects such as moa from New Zealand.

For Haast, however, the journey to his aristocratic title did not end there. Generally, entry into the Austrian nobility was automatically associated with the award of the Order of the Iron Crown – as previously described. One problem, however, was that Haast was not an Austrian citizen but regarded as a foreigner, and the admission of a foreigner to the Austrian nobility was only possible in exceptional cases and represented a special favour to the person (Županič 2015). Once again it was Hochstetter who played the decisive role in removing these obstacles. As Hochstetter wrote to Haast in a letter dated 10 November 1874:

*Last week I spent a whole morning driving from Pontius to Pilate and have to ask you for patience in this matter, which is not as simple as you imagine. It will happen but be patient. Firstly, I had to have a copy of the imperial decree made and secondly an imperial petition is needed, as you are a foreigner and it is a very rare exception for a foreigner to be elevated to the Austrian knighthood. So I will now have to go to various persons to make this possible, and only once I have the imperial resolution in hand, which on top of this also has to be accompanied by the permission of the English government (the matter first has to go to London), as I believe, if I am not mistaken, that you are now a British subject, as I recall that you wrote to me once that you were now an ‘English subject’. Only when this has been done will I be able to put in the application to the ministry of internal affairs for the raising to knighthood, the cost of which as I found out amounts to 200 gulden for a simple elevation of rank, that is Ritter von Haast, whereas a predicate such as ‘Schlagentweit von Sakunlunski’ costs 175 gulden more. I will put in the royal petition once I know whether I can do so in your name, as the signed letter papers you sent arrived all crinkled and were the wrong format for a royal petition so I could not use them (Nolden 2007: 333–336).<sup>24</sup>*

Finally, on 16 December 1874, Hochstetter spoke personally to Emperor Franz Joseph in the matter of Haast's ennoblement.<sup>25</sup> Hochstetter reported on his actions and the occurrences during his audience with Franz Joseph in a letter to Haast on 12 January 1875:

*Today I mainly wanted to let you know that I had an audience with His Majesty on 16 December in regard to your knighthood business, and that I submitted a memorandum to His Majesty asking for you, as a foreigner, to be raised to the Austrian knighthood as an exceptional case on the basis of the Order of the Iron Crown (Nolden 2007: 336–338).<sup>26</sup>*

Franz Joseph responded to Hochstetter's proposal saying that Haast would be knighted on the basis of the Order of the Iron Crown: “His Majesty was very gracious and thought that it should be possible” (Nolden 2007: 336–338).<sup>27</sup>

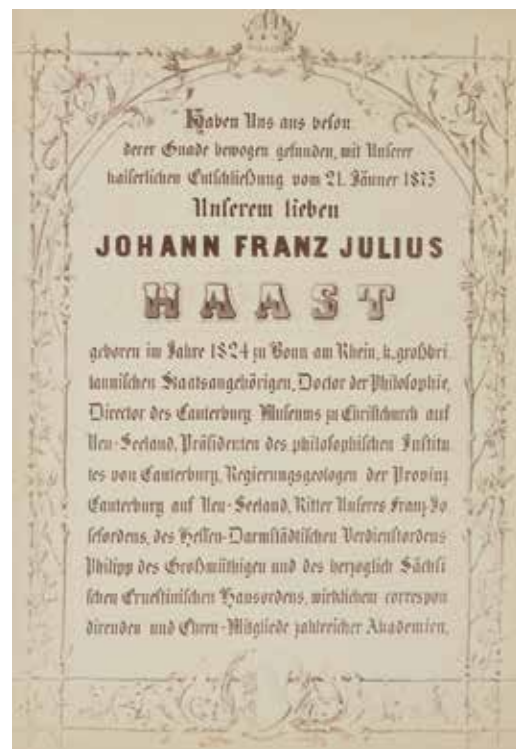
However, things seemed to drag on a bit longer, not least because Haast needed permission from the British Government to accept a foreign title (Haast 1948: 776). In Austria, Hochstetter was persistent. On 28 January 1875, he had another audience with Franz Joseph. And as part of this meeting, facts were established, as Hochstetter was able to report to Haast on 31 January 1875:

*I just want to let you know very briefly that on 28 of January I had another audience with His Majesty, and that the Emperor in his kindly manner personally informed me that he had fulfilled my wish, so that despite the fact that you are a foreigner an exception would be made and you*



would be raised to the status of a knight of the Austro-Hungarian Empire, on the basis of your Order of the Iron Crown (Nolden 2007: 338–339).<sup>28</sup>

Against this background, Hochstetter assured Haast that he “will undertake the next steps for the diploma and coat of arms etc, and by the time you arrive here everything will be sorted out”.<sup>29</sup> Finally, he could close relieved, with the assessment: “So this matter has now been assured” (Nolden 2007: 338–339).<sup>30</sup>



**Figure 5.** Pages from Julius von Haast’s Austrian diploma of knighthood of 1875. Alexander Turnbull Library MS-Papers-0037-326B





## Insignia of Nobility: Haast's Coat of Arms

Each new Austrian knight was assigned his own family coat of arms by the nobility authority in the Ministry of Interior. As before, the authorities also took their time issuing a coat of arms, as Hochstetter complained:

*I already wrote to you in my last letter that the knighthood business is now all in order, and in the meantime you have surely received the official notification, and the other day, once the Coat of Arms question was settled, I engaged myself in the matter of getting the diploma made, for which the official tax amounted to 175 and fiscal stamp duty to 5 gulden. Other additional costs were 10 gulden for the design of the coat of arms, and special issuing approximately 20-30 gulden. As the gentlemen in the peerage archive also take months over the painting and writing, the diploma will not be ready in time to send it to you before you leave, so you will therefore be able to receive it in person (Nolden 2007: 339–340).<sup>31</sup>*

In July 1875, the process was finally completed, the diploma of knighthood signed and issued. Hochstetter accepted it as Haast's authorised representative and immediately wrote to his friend in New Zealand: "I hasten to notify you of the fact that I just received your completed knighthood diploma yesterday, which I had been expecting every day for months" (Nolden 2007: 340–343).<sup>32</sup> Hochstetter was quite satisfied with the design of the diploma: "The diploma is grand and splendidly executed, which will surely astonish you and become an ongoing memento in your family for your children and children's children" (Nolden 2007: 340–343).<sup>33</sup> However, he also had one specific criticism, but this could not dampen his positive overall impression:

*I am just not quite satisfied with the description of the coat of arms, for despite my repeated elucidation the restored moa in the right panel of the shield has become 'an extinct wingless kiwi bird in natural colour'; apart from this everything is perfectly in order and correct and you may certainly be proud of this fine diploma, which is of course signed personally by His Majesty. Hereby the matter is now fully accomplished and I hope to your fullest satisfaction (Nolden 2007: 340–343).<sup>34</sup>*

Haast's coat of arms chosen by the heraldic painters of the nobility authority (see also Göbl 2004) deserves a brief discussion; the original description from the nobility authority can be found in the appendix. Especially the shield in the centre, encased on the left and right by blue and red helmets, is of particular interest (Fig. 7). Here, special symbolic items have been drawn that are typical of New Zealand – at least in the eyes of the heraldic painters:

- A black, red-tongued double-headed eagle on yellow ground grows on the shield head. This double-headed eagle was one of the oldest iconic symbols of the Holy Roman Empire, taken over by the Habsburg dynasty in the sixteenth century (Diem 1995: 109 ff).
- In the left blue field there is a wavy tide, in the background an ascending volcanic mountain range and the star constellation known as the Southern Cross.
- To the right of this there is a wingless antediluvian bird (described as a kiwi, but obviously a moa based on the short beak), standing on sandy soil.
- A mine tunnel is marked on the bottom of the shield. Here a miner kneels and works with mallet and iron; in front of him stands a pit light.
- Below spreads a blue band with the motto: "Vitam Impendere Vero" (to stake one's life for the truth) in golden lapidary script.

A short addition at this point; for the great promoter of Haast and tireless booster in the process of Haast’s ennoblement, Ferdinand von Hochstetter, it took until 1884 before he too was elevated to the Austrian nobility. This prompted Hochstetter to comment as early as 1875: “My Hamburg title of nobility is of course a mistake, because in Germany every ‘von’ is turned into a ‘Baron’” (Nolden 2007: 339–340).<sup>35</sup> In 1884, shortly before his passing, Hochstetter too was conferred the title of an Austrian knight. In contrast to Haast’s coat of arms, Hochstetter’s coat of arms looked relatively simple and used far fewer motifs (Fig 8). The helmets, however, were more richly decorated.

## Summary and Conclusion

In 1875, Haast, who by this time had long been living in New Zealand, was knighted by the Austrian Emperor Franz Joseph, less for his outstanding services to the exploration of New Zealand than for his donations of highlight objects to Austria, in particular moa skeletons. The key person in the background was Haast’s close friend since the days spent together in New Zealand, Ferdinand von Hochstetter, who had even spoken personally to the Emperor on the subject of Haast’s ennoblement.

In this period, in any case, elevations to the nobility of commoners like Haast had long since ceased to be a rarity in the Austro-Hungarian Empire. In fact, a large number of commoners were raised to the Austrian nobility in the course of the nineteenth century. Between 1792 and 1918, the Habsburg monarchy “in contrast to Prussia or Bavaria, the company pursued a generous policy of nobilisation” (Bruckmüller and Stekl 1995: 178). This feudalisation of the bourgeoisie was not only intended to



**Figure 7.** The original design of Julius Ritter von Haast’s family coat of arms with the motto *Vitem Impendere Vero*. Austrian State Archives, Vienna



**Figure 8.** The original design of Ferdinand Ritter von Hochstetter’s family coat of arms with the motto *Mente Corde Manu*. Austrian State Archives, Vienna

honour achievements in the military, administrative, economic, or cultural spheres. It was always also about creating dynastic loyalty (Bruckmüller and Stekl 1995: 178).<sup>36</sup> Admission to the nobility took place on the basis of previous orders being bestowed, mostly without major examination of the arguments (Kučera 2012: 53). Statistics on ennoblement between 1848 and 1898 indicate that 65% of new baron titles and 94% of the new titles of knighthood were granted on the basis of an order (Županič 2011b: 107). A new nobility had emerged (Županič 2019).

This inflation of noble titles – Kučera (2012: 53) speaks of a “flooding” (Überflutung) – forced extensive reform in the early 1880s. Around 1884, for example, the articles with regard to automatic ennoblement were abolished for the majority of Austrian orders such as the Imperial Order of Leopold and those of the Imperial Order of the Iron Crown (Županič 2011b: 107). For Ferdinand von Hochstetter it was just possible, since he was knighted in January 1884 as a consequence of receiving the Imperial Order of Leopold. Nevertheless, obtaining a title of nobility generally appeared desirable until the end of the monarchy – in the words of Županič (2016: 551):

*Although the title of nobility had lost much of its former glory in the Austro-Hungarian Empire as a result of its frequent issuance in the second half of the 19th century, it was still a symbol of the nobility, it was still a symbol of social advancement and identification with the monarchy, the emperor and the system of government.*<sup>37</sup>

The efforts of Hochstetter and Haast to obtain an Austrian title of nobility has to be discussed in this historical background. It therefore was less a personal ambition than the outwardly directed crowning of a scientific career under the general circumstances of a monarchic system (for further discussion see for instance Fasora et al. 2019). This fits especially for the Austro-Hungarian Empire, where the nobility was able to “maintain a dominant position in society and politics” to the very end of the dual monarchy (Vocelka 1988: 542).

Although the Austrian nobility was abolished in 1919, the von Haast family continued to use the name in New Zealand – as did a few other families in the country (and similar to the situation in Germany). Consequently, the biography of Julius von Haast written by his son in 1948 was published under the name of Heinrich von Haast, and this name appears on his death certificate as his formal surname.<sup>38</sup>

## **Acknowledgements**

My explicit thanks go to Simon Nathan, who drew my attention to the relevant passages in the biography of Heinrich von Haast, to Sascha Nolden for his careful proof reading of the manuscript and to Mathias Harzhauser for sharing relevant information concerning the moa skeletons in the inventory of the Geological Department at the Natural History Museum Vienna.

## **Appendix: Description of Haast’s Coat of Arms**<sup>39</sup>

### **Wappen-Beschreibung**

Ein in die Länge getheilter Schild mit Schildeshaupt- und [Schildes]Fuß. Im rechten blauen Felde eine gewellte Fluth, im Hintergrunde als Küste ein aufsteigendes Vulkangebirge. In dem rechten Winkel mit schrägrechter Achsenstellung das südliche Kreuz, im linken rechten Felde ein flügelloser vorsündflutlicher Vogel, genannt Kivi in natürlicher Farbe einwärtssehend und auf Sandboden stehend. Das Schildeshaupt ist golden, aus der Theilung wächst ein schwarzer rothbezungter Doppeladler hervor. In dem Schildesfuß ist ein Gebirgsdurchschnitt mit verschiedenfarbigen schräglinkslaufenden Schichten dargestellt, in deren mittleren schwarzen Kohlenschichte ein



mit bergmännischer Verschallung und Abzugsgraben in der Mitte versehener Stollen verzeichnet erscheint, in welchen auf dem linken Fuße kniend ein Bergmann nach rechts gewendet mit Schlögel und Eisen arbeitet; vor ihm ein Grubenlicht. Auf dem Hauptrande des Schildes ruhen zwei gekrönte Türmerfahnen, von dem rechtsseitigen hängen blau mit Gold, und vom linken rothe mit Silber unterlegte Decken herab. Jede der Helmkrone trägt einen geschlossenen Adlerflug. Der zur Rechten ist vorne von Gold über Blau hinter in gewechselten Tinkturen quergetheilt. Jene zur Linken vorne von Roth über Silber hinter gewechselten Tinkturen quer getheilt. Unterhalb verbreitet sich ein blaues Band mit der Devise: „Vitam Impendere Vero“ in goldener Lapidarschrift.<sup>40</sup>

## Endnotes

- 1 For the original file of the Dean’s Office of the University of Tübingen (“Julius von Haast (1822–1887). Dekanatsakte zur Verleihung der Doktorwürde der Philosophischen Fakultät”) see [http://idb.ub.uni-tuebingen.de/opendigi/UAT\\_131\\_0012b\\_9](http://idb.ub.uni-tuebingen.de/opendigi/UAT_131_0012b_9) [accessed 14 July 2022].
- 2 Staatsgesetzblatt Nr. 211/1919: Gesetz vom 3. April 1919 über die Aufhebung des Adels, der weltlichen Ritter- und Damenorden und gewisser Titel und Würden.
- 3 Röhnsner Z. 2009. Die letzte Standeserhebung der Monarchie. *Archivale des Monats*, 1.2.2009. In: Österreichisches Staatsarchiv: *Archivalien des Monats – 2006 – 2018*. Archiv zur Nachlese aus der Website des Österreichischen Staatsarchivs bis 2018. Available from: [https://services.bka.gv.at/oesta/archivalien/Archivalien\\_des\\_Monats\\_2006-2018.pdf](https://services.bka.gv.at/oesta/archivalien/Archivalien_des_Monats_2006-2018.pdf) [accessed 2 June 2022].
- 4 Original: “der Ritterstand wurde zunehmend zu einem aus nobilitierten Aufsteigern bestehenden ‘Pool’”.
- 5 Original: “für Adelsneulinge in der Regel nur die zwei unteren, in Ausnahmefällen noch der Freiherrenstand, in Betracht kamen”.
- 6 Ennobling of women was no exception in the Habsburg monarchy. A further study in this context – similar to the one already available for the nobilization of Jews (Drewes 2013; Županič 2016) – is still pending.
- 7 Original: “Die Vorstellung, dass die Nobilitierung das Resultat einer Entscheidung des Herrschers war, ist zwar von Möglichkeiten zum Titelerwerb.”
- 8 Original: “nicht aufgrund der Entscheidung des Herrschers, sondern war lediglich die Konsequenz eines Verwaltungsprozesses, der nach der Erfüllung der allgemein bekannten Bedingungen (Erwerb eines Ordens, geleistete Dienstjahre) durch die Antragstellung bei den zuständigen Behörden gestartet wurde”.
- 9 See Österreichisches Staatsarchiv: Archivinformationssystem, Bestandsgruppe Adelsarchiv: <https://www.archivinformationssystem.at/detail.aspx?ID=1698> and Seitschek S. *Forschungstipps Adelsarchiv*. Available from: <https://www.oesta.gv.at/dam/jcr:5ad02a07-5ce2-4dde-98d7-8738414f0b2a/Adelsarchiv.pdf> [accessed 2 June 2022].
- 10 Original: “Der eigentliche Prozess der Adelsverleihung war davon aber grundsätzlich nicht betroffen. Das zuständige Ministerium übernahm nur die frühere Position der Hofkanzlei.”
- 11 Carl Petschler (1820–1882) was a merchant at Vulcan Lane, Auckland, who supported the Novara Expedition in Auckland (Nolden 2007: 172, footnote 821).
- 12 Alexander Turnbull Library, MS-Papers -0037-183-13: Ferdinand Hochstetter to Julius Haast, Vienna 20 May 1865; quoted after Nolden (2007: 253–257) Original: “Victoria! Glückauf! Ordensgeschmückter! Glückauf! Du bist Ritter des Franz-Josefsordens und die Ordens Dekoration ist bereits unterwegs nach London an die österr. Gesandtschaft, sie wird Dir durch die englische Gesandtschaft zukommen. Dazu also vor allem meinen u. meiner Frau herzlichsten Glückwunsch. Diese Sache wäre glücklich erreicht; u. ich werde mir erlauben, heute, da Petschler gerade bei mir speist, das Wohl des Ordensgeschmückten zu trinken in Champagner auf Deinen Prinz!! Hollah! Hurrah!”
- 13 Hofrat: an Austrian administrative title that could be translated to “court counsellor”. The title is still extant today within Austrian public service.
- 14 Alexander Turnbull Library, MS-Papers -0037-183-12: Ferdinand Hochstetter to Julius



Haast, Vienna 20 March 1865; quoted after Nolden (2007: 251–253). Original: “Der Franz Josefs Orden ist Dir sicher; aber ein eigenthüml. Zufall hat die Sache verzögert. Der erste Antrag an den Oberstkämmerer wurde von dem Diener Fenzel’s [sic], dem er den Brief übergeben, unterschlagen; da mir nun die Sache zu lange dauerte, so gieng ich zum Referenten Hofrathes Raimond, u. hörte zu meinem nicht geringen Erstaunen, daß er das Aktenstück nicht erhalten; so mußte es zum 2tenmal aufgesetzt werden, an einer günstigen Erledigung ist bei mir wie der Hofrath wiederholt versicherte nicht zu zweifeln, u. ich hoffe Dir mit nächstem auch zum Ritter des Franz Josefs Ordens gratuliren zu können.”

- <sup>15</sup> Alexander Turnbull Library, MS-Papers -0037-183-12: Ferdinand Hochstetter to Julius Haast, Vienna 20 March 1865; quoted after Nolden (2007: 251–253). Original: “Zwei Freunde, die gegenseitig füreinander einstehen, können viel füreinander auswirken u. bewirken.”
- <sup>16</sup> Original: “Ich kann es nur billigen, dass mein Freund Haast bei dieser Namengebung, so sehr auch manche deutsche Geographen dagegen eifern, der Sitte der Engländer und Amerikaner gefolgt ist, welche überall, wo sie in fremden Ländern ihre Fahne aufpflanzen, die Namen ihrer Landsleute auch in der Geographie des Landes verewigen.“
- <sup>17</sup> Original: “den gerechten, eine Nation nur ehrenden Stolz auf die Namen ihrer hervorragenden Männer“.
- <sup>18</sup> Alexander Turnbull Library, MS-Papers -0037-183-16: Ferdinand Hochstetter to Julius Haast, Vienna 16 November 1865; quoted after Nolden (2007: 261–264). Original: “Was den Ritterstand anbelangt, so bist Du Ritter des Franz Josefs Ordens, aber Adel ist mit diesem Orden nicht verbunden, also ‚von‘ kannst Du Dich nicht schreiben, man kann auch auf Grund des Franz J. Ordens nicht um den Ritterstand einkommen, jeder Schritt in dieser Beziehung von meiner Seite wäre vergeblich. Der Ritterstand liegt für Dich noch im Glücksrad der Zukunft, u. wohl dem, welchem noch etwas zu wünschen u. zu erreichen übrig bleibt.”
- <sup>19</sup> Alexander Turnbull Library, MS-Papers -0037-186-08: Ferdinand Hochstetter to Julius Haast, Ischl 29 August 1873; quoted after

Nolden (2007: 326–328). Original: “*In Betreff der Moa-Skelette u. der Vogelsammlung bleibe ich bei meinem Vorschlag, daß Du dieselben den Kaiserlichen Museen widmest, ich werde gewiß Deine Interessen dabei aufs kräftigste vertreten.*”

- <sup>20</sup> Alexander Turnbull Library, MS-Papers -0037-186-08: Ferdinand Hochstetter to Julius Haast, Ischl 29 August 1873; quoted after Nolden 2007: 326–328 and Alexander Turnbull Library, MS-Papers-0037-186-07: Ferdinand Hochstetter to Julius Haast, Vienna 22 June 1874; quoted after Nolden (2007: 329–331).
- <sup>21</sup> See explanation of Mathias Harzhauser (Department of Geology and Palaeontology of the Natural History Museum Vienna) who deals with this donation and explains how this donation was reflected in the collections of the Natural History Museum Vienna in recorded presentation from Haast Symposium, 1 May 2022. Available on [www.canterburymuseum.com](http://www.canterburymuseum.com).
- <sup>22</sup> Hochstetter did not forget to mention his and Haast’s efforts in this context (Hochstetter 1884: 281): “However, the museum owes one of the most important acquisitions to my friend and former travel companion in New Zealand, Dr. Julius Ritter von Haast, director of the Christchurch Museum; I mean the magnificent array of skeletons of the extinct giant birds of New Zealand (moa for the natives). [Eine der bedeutendsten Acquisitionen aber verdankt das Museum meinem Freund und früheren Reisebegleiter auf Neuseeland Dr. Julius Ritter von Haast, Director des Museums zu Christchurch; ich meine die grossartige Reihe von Skeletten der ausgestorbenen Riesenvögel Neuseelands (Moa der Eingebornen)]”.
- <sup>23</sup> Alexander Turnbull Library, MS-Papers -0171-3-02, Haast family papers: Von Seiner kaiserlichen und königlichen Apostolischen Majestät Obersthofmeisteramte to Julius von Haast, Vienna 14 March 1874; quoted after Nolden (2007: 329, footnote 1260). Original: “Über hierämtlichen allerunterthänigsten Vortrag haben Seine kaiserliche und königliche apostolische Majestät mit allerhöchster Entschließung vom 11. d. M. Ihnen in Anerkennung Ihrer wissenschaftlichen Leistungen den Orden der eisernen Krone III. Klasse al-

lernädigst zu verleihen geruht. [...] Mit derselben allerhöchsten Entschliessung haben Seine kaiserliche und königliche apostolische Majestät die Annahme der von Ihnen dem k.k. naturhistorischen Hofmuseum als Geschenk offerirten drei Moa-Skelete zu genehmigen geruht, für welche werthvolle Bereicherung, der gedachten Hofsammlung, der unterzeichnete k.k. Erste Obersthofmeister Ihnen hiemit den verbindlichsten Dank ausspricht.”

<sup>24</sup> Alexander Turnbull Library, MS-Papers -0037-186-10: Ferdinand Hochstetter to Julius Haast, Vienna 10 November 1874; quoted after Nolden (2007: 333–336). Original: “Ich bin vorige Woche einen ganzen Vormittag von Pontius bis Pilatus gefahren u. muß Dich in dieser Sache, die nicht so leicht ist wie Du Dir vorstellst, um Geduld bitten. Sie wird werden, aber Geduld! Erstens mußte ich mir eine Abschrift des kaiserl. Dekretes verschaffen Zweitens ist ein Majestätsgesuch nothwendig, da Du Ausländer bist; u. Ausländer nur ganz ausnahmsweise in den österreich. Ritterstand erhoben werden. Da muß ich nun noch bei verschiedenen Persönlichkeiten Gänge machen, damit das möglich wird; u. erst mit der kaiserl. Entschließg. in der Hand, die über dieß noch von einer Erlaubniß der englischen Regierung (die Sache muß vorher nach London) begleitet sein muß – ich glaube doch nämlich wenn ich recht bin Du bist jetzt engl. Unterthan; da ich mich erinnere, das Du mir einmal geschrieben, Du seiest nun ‚english subject‘. – Kann ich die Eingabe um Standeserhöhung beim Ministerium des Innern einbringen, deren Kosten sich, wie ich erkundigte sich auf 200fl belaufen für einfache Standeserhöhung d. h. Ritter von Haast, während ein Prädikat wie z. B. Schlagintweit-von Sakunlunski noch 175fl mehr kostet. Das Majestätsgesuch werde ich einreichen, sobald ich weiß, ob ich in Deinem Namen einkommen kann, die übersandten von Dir unterschriebenen Briefpapiere kann ich nicht anwenden, da sie ganz zerknittert ankamen, u. für ein Majestätsgesuch nicht das richtige Format haben.”

<sup>25</sup> Alexander Turnbull Library, MS-Papers -0037-187-01: Ferdinand Hochstetter to Julius Haast, Vienna 12 January 1875; quoted after Nolden (2007: 336–338).

<sup>26</sup> Alexander Turnbull Library, MS-Papers -0037-187-01: Ferdinand Hochstetter to Julius Haast, Vienna 12 January 1875; quoted after Nolden (2007: 336–338). Original: “Heute wollte ich Dir hauptsächlich mittheilen, daß ich wegen Deiner Ritterstandsangelegenheit schon am 16 Dez. in Audienz bei Sr Majestät war, u. in einem Promemoria Snr Majestät das Gesuch vorgelegt, Dich als Ausländer ausnahmsweise auf Grund des Eis. Kronordens in den Ritterstand zu erheben.”

<sup>27</sup> Alexander Turnbull Library, MS-Papers -0037-187-01: Ferdinand Hochstetter to Julius Haast, Vienna 12 January 1875; quoted after Nolden (2007: 336–338). Original: “S. Maj. war sehr gnädig, u. meinte die Sache werde sich wohl machen lassen ...”

<sup>28</sup> Alexander Turnbull Library, MS-Papers -0037-187-02: Ferdinand von Hochstetter to Julius Haast, Vienna 31 January 1875; quoted after Nolden (2007: 338–339). Original: “Nur in aller Kürze will ich Dir mittheilen, daß ich am 28ten Jan. abermals eine Audienz bei Sr Majestät hatte, u. daß mir der Kaiser in sehr liebenswürdiger Weise selbst mittheilte, daß er meinen Wunsch, daß Du ausnahmsweise als Ausländer in den Ritterstand des österr.- ung. Kaiserstaates erhoben werdest, – auf Grund des eisernen Kronordens – erfüllt habe.”

<sup>29</sup> Alexander Turnbull Library, MS-Papers -0037-187-02: Ferdinand von Hochstetter to Julius Haast, Vienna 31 January 1875; quoted after Nolden (2007: 338–339). Original: “werde ich die weiteren nöthigen Schritte wegen Diplom, Wappen, etc. thun u. bis Du hierherkommst, ist jedenfalls Alles in Ordnung”.

<sup>30</sup> Alexander Turnbull Library, MS-Papers -0037-187-02: Ferdinand von Hochstetter to Julius Haast, Vienna 31 January 1875; quoted after Nolden (2007: 338–339). Original: “Also diese Angelegenheit ist jetzt aplomirt.”

<sup>31</sup> Alexander Turnbull Library, MS-Papers -0037-187-03: Ferdinand Hochstetter to Julius Haast, Vienna 21 March 1875; quoted after Nolden (2007: 339–340). Original: “Ich schrieb Dir schon in meinem letzten, daß die Ritterstandsangelegenheit in Ordnung ist, Du hast unterdessen jedenfalls auch die offiz. Zuschrift erhalten, u. dieser Tage, nachdem auch die Wappenfrage erledigt, bin ich um die Ausfertigung des Dip-

loms eingeschritten, dessen offiz. Spesen Taxe 175, Stempel 5fl betragen, Nebenausgaben für Wappenentwurf 10 fl u. besondere Ausstellung 20-30 fl circa. Da sich die Herrn im Adelsarchiv mit Schreiben u. Malen auch noch Monate Zeit lassen, so wird das Diplom wahrscheinlich nicht fertig werden, um es Dir noch vor Deiner Abreise zuschicken zu können, Du kannst es dann selbst in Empfang nehmen.”

- <sup>32</sup> Alexander Turnbull Library, MS-Papers -0037-187-04: Ferdinand Hochstetter to Julius Haast, Vienna 25 July 1875; quoted after Nolden (2007: 340–343). Original: “Da mir nun gestern endlich Dein fertiges Ritterstandsdiplom, das ich seit Monaten täglich erwartet habe, zugekommen ist, so beeile ich mich Dir dieß zu notifiziren.”
- <sup>33</sup> Alexander Turnbull Library, MS-Papers -0037-187-04: Ferdinand Hochstetter to Julius Haast, Vienna 25 July 1875; quoted after Nolden (2007: 340–343). Original: “Das Diplom ist ein Prachtstück, von glänzender Ausführung, das Dich gewiß überraschen wird, u. ein bleibendes Andenken in Deiner Familie für Kinder u. Kindes-Kinder bilden wird.”
- <sup>34</sup> Alexander Turnbull Library, MS-Papers -0037-187-04: Ferdinand Hochstetter to Julius Haast, Vienna 25 July 1875; quoted after Nolden (2007: 340–343). Original: “Nur mit der Wappenerklärung bin ich nicht ganz einverstanden; trotz meiner wiederholten Erläuterungen ist der restaurierte Moa im rechten Wappenfelde zu einem ausgestorbenen flügellosen Kiwi-Vogel ‘in natürlicher Farbe’ gemacht worden, sonst ist aber Alles in vollständiger Ordnung u. Richtigkeit u. Du darfst wahrhaft stolz sein auf das prachtvolle Diplom, das natürlich von Sr Maj. eigenhändig unterschrieben. Damit wäre nun Diese Angelegenheit vollständig, u. wie ich

hoffe ganz nach Deinem Wunsche erledigt.”

- <sup>35</sup> Alexander Turnbull Library, MS-Papers -0037-187-04: Ferdinand Hochstetter to Julius Haast, Vienna 25 July 1875; quoted after Nolden (2007: 339–340). Original: “Mein Hamburger Freiherrntitel ist natürlich nur mistake, weil man ja in Deutschland aus jedem ‚von‘ einen Baron macht.”
- <sup>36</sup> Original: “betrieb im Gegensatz zu Preußen oder Bayern eine überaus großzügige Nobilitierungspolitik”.
- <sup>37</sup> Original: “Obwohl der Adelstitel infolge seiner häufigen Erteilung in der 2. Hälfte des 19. Jahrhunderts in Österreich-Ungarn einen großen Teil seines ehemaligen Glanzes eingebüßt hatte, war er noch immer Symbol des gesellschaftlichen Aufstiegs und der Identifizierung mit der Monarchie, dem Kaiser und dem Regierungssystem.”
- <sup>38</sup> Comment from Simon Nathan, 7 June 2022.
- <sup>39</sup> Österreichisches Staatsarchiv, Allgemeines Verwaltungsarchiv, Adelsarchiv, Hofadelsakten, Allgemeine Reihe, Karton 328, Nr. 328.21, Haast, Johann Franz Julius: Wappenbeschreibung, unfol. For a first translation see Haast (1948: 777–778).
- <sup>40</sup> A slightly different description of the coat of arms can also be found in Haast’s diploma of knighthood: Österreichisches Staatsarchiv, Allgemeines Verwaltungsarchiv, Adelsarchiv, Hofadelsakten, Allgemeine Reihe, Karton 328, Nr. 328.21, Haast, Johann Franz Julius: Ritterstandsdiplom für Julius von Haast (Konzept), unfol. See the diploma in Alexander Turnbull Library, MS-Papers-0037-326B: Ritterstandsdiplom für Julius von Haast; quoted after Nolden (2007: 341, footnote 1289).

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# Working from Overseas: The New Zealand Naturalist and Collector Julius von Haast and European Scientific Societies on the Other Side of the Globe

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This paper examines the institutional networks in which the New Zealand naturalist Sir Julius von Haast (1822–1887) involved himself and provides novel insights into the strategies and scientific-diplomatic practices with which scientists from overseas collaborated with their colleagues in Europe. In the second half of the nineteenth century, learned societies based in imperial metropolises were one of the most influential modes of scholarly organisation. They provided the infrastructure to validate knowledge, facilitate cross-continental exchange and channel the discussion between their members to the outside world. Overseas members, such as the German-born naturalist Julius von Haast, who left Europe for the British Crown Colony of New Zealand in 1858 and pursued his career there, benefitted from the associations' resources. Besides the prestige of becoming a member, scientists working abroad used the societies' publication series and their networks for their knowledge exchange, to facilitate bilateral cooperation, or as a means of showing presence from a distance. Due to their on-site expertise, and access to field sites and sources, they compensated for their inability to participate in decision-making processes and meetings in person in Europe. For imperial scientific societies, in turn, the integration of overseas members not only provided them with a loyal educational class in the remote parts of the empire, but it became a means of scholarly acculturation to how science was practised in European capitals. By studying Haast's correspondence with selected scientific societies, this paper analyses the characteristics, claims and functions of his international membership and communication network as well as the extensiveness of knowledge exchange processes. Particular attention will be paid to the intermediating role of naturalists working at the intersection of personal benefits, local needs and imperial policies in the southern hemisphere.

**Keywords:** communication, cross-continental collaboration, empires, Julius von Haast, naturalist, New Zealand, scientific societies

## Introduction

In November 1866, the German-born Austrian-naturalised earth scientist Ferdinand von Hochstetter stated before the k. k. Geographical Society in Vienna:<sup>1</sup>

*Frequently, I had the opportunity to report in the meetings of the k. k. Geographical Society on the interesting results obtained by the researches of my friend and former travelling companion in New Zealand, Dr Julius Haast, in the southern Alps of New Zealand .... Through the repeated expeditions which the province [Canterbury] has equipped under his leadership since the year 1861 ... geographical order is gradually coming into the mountain chaos .... I can only approve that my friend Haast in this naming ... has followed the custom of the English and Americans, who everywhere, where they plant their flag in foreign countries, immortalise the names of their compatriots in the geography of the country (Hochstetter 1866–1867: 57).*

That was 8 years after Julius Haast (1822–1887) first set foot on the soil of the British Crown Colony of New Zealand. He was a 36-year-old German immigrant and at that time still without an academic title, accreditation, or noble rank. A lot had happened since then; Haast became friends with Hochstetter

(1829–1884), who had landed in Auckland aboard the Austrian frigate *Novara*, which was on a global scientific voyage (e.g. Veit-Brause 2006; Basch-Ritter 2008). On behalf of the provincial governments of Auckland and Nelson, Haast and Hochstetter travelled in both the North and South islands together in 1858 and 1859, conducting geological and topographical surveys (Burrows 2005; Johnston and Nolden 2011). As a vital element of the colonial rule, maps and knowledge about mineral resources served the interests of British settlers and their political representatives in the provinces.<sup>2</sup> They were also beneficial in the armed conflicts between imperial troops and Māori, fuelled by doubtful land sales to settlers. After Hochstetter's return to Vienna in late 1859, Haast's scientific career gained traction and in 1861 he was appointed provincial geologist in Canterbury. Through the mentorship of his friend, Haast received an honorary doctorate from the University of Tübingen in 1862 and, just 5 years later, he was elected a Fellow of the prestigious Royal Society of London.<sup>3</sup> At the same time, he was instrumental in the founding of Canterbury Museum in Christchurch and was appointed its curator soon after. Under his dynamic leadership, the Museum became one of the finest natural history museums in the southern hemisphere (Haast 1948; Langer 1992; Nolden 2016a).

As the aforementioned quote from Hochstetter illustrates, Haast remained present in the European learned communities through his correspondence, friendships and memberships of scientific societies, even though a 2-month ship passage separated him from them. He was to leave the Antipodes only once, in 1886–1887 for the Colonial and Indian Exhibition in London. Likewise, Haast represented the European scientific communities by collecting New Zealand items and performing research tasks, exchanging specimens and knowledge, and, similar to diplomatic missions, acting as a point of contact for naturalists travelling to the southwest Pacific Ocean. He also inscribed the scholarly relationship with the “Old World” into the geography of the colony, by naming more than 100 mountains and other features after his English, German and French sponsors and colleagues (Reed 2010). Even if this means that “sometimes ... good, i.e., significant and euphonious [Māori] names have to give way to new ones”, as Hochstetter (1866–1867: 57) critically noted.

This paper analyses the European institutional networks in which Haast was involved, the resulting career strategies, and ways of cross-continental cooperation between imperial centres and scholars working on the other side of the globe. It examines the scientific-diplomatic practices and knowledge Haast used to bring himself into play as a multi-loyal agent in various geopolitical settings, societal frameworks, and disciplinary contexts. Which mutual benefits, resources, and means of scholarly acculturation did affiliation with European learned institutions involve? In this regard, was Haast an exception or an archetype for other naturalists working in remote parts of an empire?

Scientific societies were significant players in the flourishing world of nineteenth century associations. Bringing together professionals, practitioners and sponsors (i.e. university professors, curators, collectors, science patrons), these societies saw themselves primarily as communication hubs. Periodicals and regular meetings gave them a stable identity and structure. Members hosted popular lectures, built up large collections, initiated expeditions and volunteered for large-scale cooperative projects. A sophisticated system of literature exchange connected the associations' journals and book series with the publications of related societies worldwide. While scientific societies initially played a major role in nationalising the research landscape in Europe, from the 1880s onwards they became driving forces for establishing new forms of internationalism and cross-border collaboration such as a vibrant congress culture and transnational scientific organisations (Fox 2016). They thus linked scholars, institutions, practices and geographies within which research was conducted.

However, there was no single model for scientific societies. Major differences between societies existed, among others, in their range of exclusivity, public and/or private sources of funding,

the geographical reach of membership, the involvement in science popularisation and level of collaboration among members. While societies situated in European metropolises were often divided into scientific disciplines, those in the provinces and overseas colonies were characterised by a higher degree of interdisciplinarity and institutional hybridity, sometimes combining the tasks of a learned society, a museum, or even an institution of higher learning. Of special significance were societies established in imperial capitals and promoted by the sovereign. The distribution of their members between centres and peripheries resembled geopolitical zones of influence, characterised by a consensus on shared bodies of knowledge and culture. While corresponding members originally comprised researchers working in the provinces, they were later joined by colleagues from overseas as colonial empires expanded. Closely linked to the state administration and its imperial goals, the societies offered powerful support for managing inner-imperial diversity (Gascoigne 1998: 16–33). While empires relied on a variety of scientific, spatial, social and administrative knowledge gathered, surveyed and exchanged by learned societies, these, in turn, gained merits and funding by fulfilling imperial tasks such as advising officials or conducting expeditions. These societies thus became vital embodiments of statehood and territoriality (Mattes 2020).

A comparison of the (science) policy agendas of European empires and the learned societies associated with them, shows some significant differences. While, for example, trade interests, economic resources and land use issues were prominent in the British Empire (Cain and Hopkins 2016: 33), initiatives and profit-sharing by private beneficiaries such as the colonial official and geographer Gustav Nachtigal (1834–1885) played a major role in the German Empire (Conrad 2011: 21–23). In the Habsburg Monarchy, territorial-expansive and civilising-integrative claims on the Balkan Peninsula went hand in hand. “Indirect attempts of colonisation” (Holub 1884: 23), such as in Central Africa or the Ottoman realm, should serve both economic and scientific goals (Sauer 2012). Of particular importance were the Habsburg diplomatic missions, consulates and naturalists from overseas. They were involved as institutional or individual members of scientific societies and, on behalf of Viennese authorities or fellow scientists, collected specimens and information. These empire-wide learned associations provided the environment in which Haast sought to prove himself and boost his career in New Zealand.

In the following, I will analyse the relationship between Haast and the European scientific societies on three levels. The first section deals with the network of associations to which Haast sought affiliation, his promoters and door openers, and the goals of his membership. Second, I will investigate how the scientific societies and their fellows, and Haast personally, benefited from his involvement and the resulting bilateral collaborations. The last section discusses the typology of naturalists working from overseas, their significance for the access and validation of knowledge, and their strategies to balance the inability to participate in decision-making processes in Europe. For this purpose, I have evaluated the journals of selected scientific societies as well as the correspondence between Haast and these societies or their boards, respectively.

### **Haast’s Network of Scientific Societies**

Although there is no evidence of Haast’s membership in learned societies before he arrives in New Zealand, it is not unlikely that he heard public lectures and joined a popular scientific association after his school years in Bonn, when Haast gained some knowledge of geology and mineralogy (Langer 1992). Documented, however, is his election as a corresponding or foreign member of the k. k. Geographical and k. k. Zoological-Botanical societies in Vienna at the beginning of 1862 (Nolden et al. 2016: 51–52). Haast’s nomination, however, went back to May of the previous year, since the admission of candidates from abroad required their prior approval by the Ministry of Foreign Affairs.



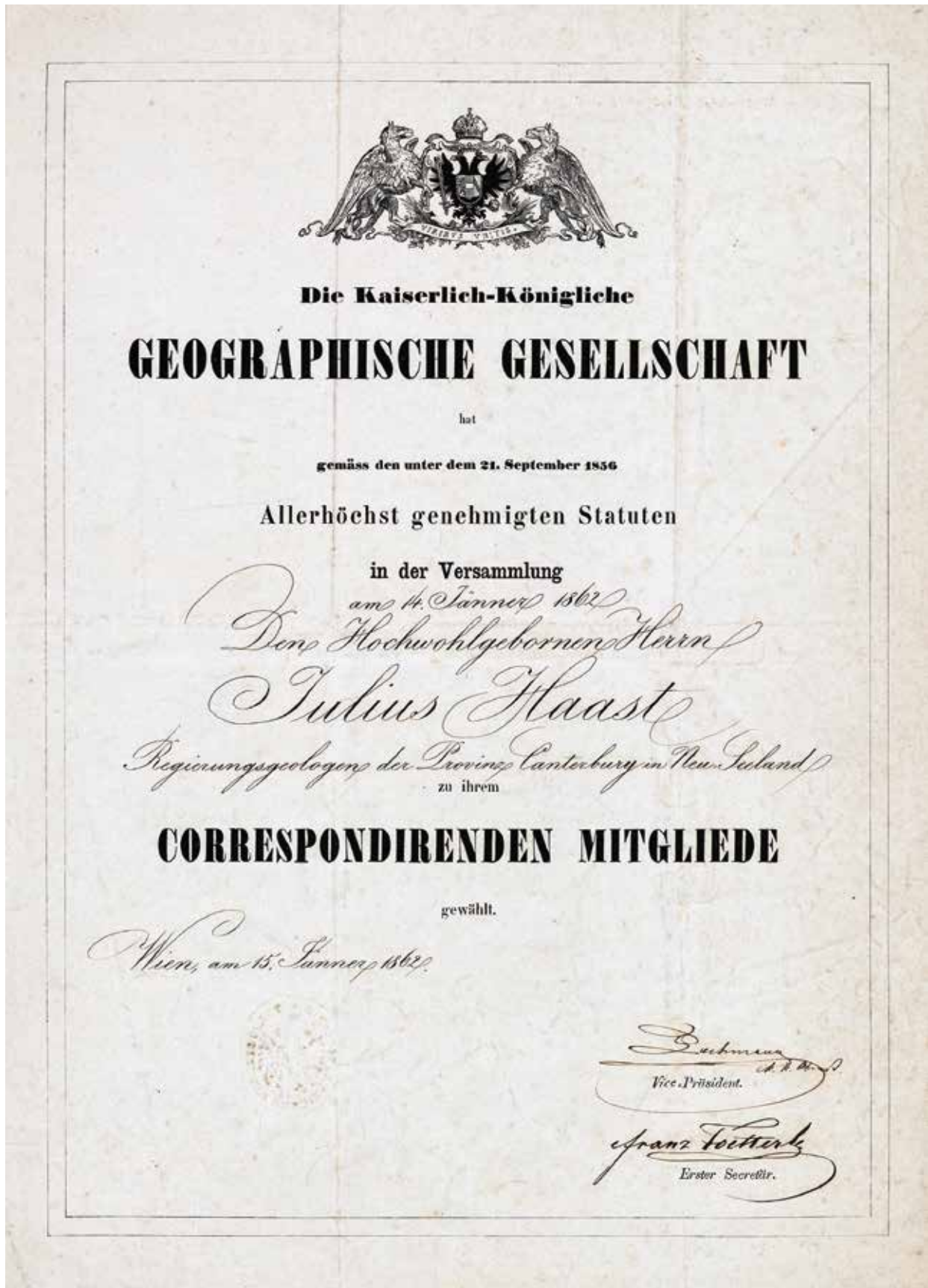
Both societies were founded in the 1850s on private initiative as empire-wide associations, but later received the privilege of the sovereign to use the title and some rights of a state agency. As private-public partnerships, the geographical and zoological-botanical societies reinforced the consensus between the authoritarian state and the rising civil society and made science a holistic, integrative and imperial endeavour (Mattes 2020). By simultaneously practicing and popularising research, they stood in opposition to the prestigious and more exclusive Imperial Academy of Sciences in Vienna, which only admitted exceptional “self-taught” naturalists to its ranks.<sup>4</sup>

In the early 1860s, Haast’s academic status better fitted the more internationally and socially diverse geographical and zoological-botanical societies, which, due to the lack of government subsidies, collected membership fees to fund their activities. The societies consisted of state officials, including scientists, ministerial bureaucrats, diplomats, teachers and military officers, as well as private collectors, aristocrats and businessmen (Drobesch 2006). Of their 700 and 1,100 members respectively, about a quarter lived abroad and less than 5% were in the British Empire. For the Geographical Society (1862), Haast was the only representative in the southwest Pacific Ocean besides the German-born scholar Ferdinand von Mueller (1825–1896), Director of the Royal Botanic Gardens in Melbourne (Moore 1997), and thus a great asset. In contrast, the Zoological-Botanical Society (1862) had more than a dozen members in the Antipodes, including in New Zealand Carl Fischer (died 1893), Charles Heaphy (1820–1881) and Arthur Purchas (1821–1906).

In seeking nomination to the learned societies in Vienna, Haast was sponsored by Hochstetter, who went door to door for his “student” (Hochstetter 18 October 1863, cited from Nolden 2013: 96) and found support among the former *Novara* travellers Bernhard von Wüllerstorff-Urbair (1816–1883), at that time president of the Geographical Society, and Georg von Frauenfeld (1807–1873), secretary of the Zoological-Botanical Society. Helping his nominations were the field trip reports, observations, and natural history specimens sent by Haast to Hochstetter and Frauenfeld. The former thus gained significant inputs for the completion of his monumental work *Neu-Seeland* (1863). The *Novara* travellers also presented and discussed Haast’s findings in the associations’ meetings and gave him a voice in the publication series. When Hochstetter was elected president of the Geographical Society in 1866, he still reminded Haast to keep him updated to “highlight [his friend’s] achievements in the [Society’s] annual report” (Hochstetter 20 November 1866, cited from Nolden 2013: 132).

Haast’s memberships were not only prepared in writing but also post-discussed, with diplomas playing a key role. They were sent overseas by the imperial societies for a fee, and Haast requested them through his mentor (Figs. 1 and 2). In his endeavours for scientific employment and merits in the Antipodes, they represented a symbolic capital and were proof of Haast’s relations and scholarly accreditation in Europe. In the wake of science professionalisation, i.e. the emergence of academically trained professionals and their distinction from amateurs, these membership diplomas were aimed to compensate for Haast’s lack of university education. Moreover, no official approval was required for their issuance. In the course of Hochstetter’s efforts to get his New Zealand friend an honorary doctorate, he had to ask Haast several times for a curriculum vitae:

*The seat of the German Geological Society is in Berlin and I will nominate you as a member, if you like, but they do not issue an actual diploma .... The diploma of the [Vienna] Geological Survey has been written a second time and sent to you .... You will also receive a diploma from the Zoological & Botanical Society. Unfortunately, I am not getting any results in the matter of the doctoral diploma, as I am missing your curriculum vitae. A short biographical description and academic record are needed everywhere* (Hochstetter 18 December 1861, cited from Nolden 2013: 65).



**Figure 1.** Julius Haast’s membership diploma from the Viennese Geographical Society. It states: “The Imperial-Royal Geographical Society, in accordance with the statutes approved by the highest authorities on 21 September, 1856, elected the most esteemed Mr. Julius Haast, Government Geologist of the Province of Canterbury in New Zealand, as its Corresponding Member at the meeting on 14 January, 1862. Vienna, 15 January, 1862. (Eduard) Pechmann, Imperial-Royal Colonel, Vice-President; Franz Foetterle, First Secretary.” Alexander Turnbull Library, MSO-Papers-0171-03



**Figure 2.** Julius Haast’s membership diploma from the Viennese Zoological-Botanical Society. It states: “The Imperial-Royal Zoological-Botanical Society in Vienna has appointed the well-born Mr Julius Haast in New Zealand as a member. Vienna, 18 March, 1862: Dr. Moriz Hörnes, Vice-President; August Neilreich, Vice-President; Georg Ritter von Frauenfeld, Secretary.” Alexander Turnbull Library, MSO-Papers-0171-04

Haast also owed his 1864 admission to the German Academy of Natural Scientists Leopoldina to the Viennese geoscientific community. The Leopoldina had been established in the seventeenth century and, due to the lack of frequent meetings, traditionally interacted by correspondence (Gerstengarbe et al. 2016). The Director of the Imperial Geological Survey, Wilhelm von Haidinger (1795–1871), held an influential position within the Leopoldina and successfully implemented part of his institutional reform programme there in 1870–1871, which had previously been rejected at the Viennese Academy. This included, among others, opening up the academy to the public, launching collaborative undertakings and lowering barriers to electing new members (Mattes and Corradini 2022). In part, the conflict between advocates and opponents of these demands arose from different views of how to see oneself as a scientist, which in the case of the survey was shaped by fieldwork experience providing participation models and career opportunities even for academically untrained practitioners. To strengthen his position, Haidinger increasingly nominated loyal followers as Leopoldina members during the 1860s. Many of them, like Frauenfeld, had previously been rejected as members at the Viennese Academy or were not admitted to the election based on their curriculum vitae (Klos 2022). Haast, who was already a corresponding member of the survey, perfectly matched Haidinger’s goals. In his official letter of thanks for receiving the Leopoldina diploma, Haast (28 June 1866) not only enclosed a portrait photograph and a “list of [his] titles, offices” and memberships but also informed the Leopoldina president Carl Carus (1789–1869) that he had named the New Zealand peak Mount Carus (today Mount Bryce, 2,182 m) in his honour. At this time Haast distinguished himself

– in addition to the associations already mentioned – as a member of the Zoological and Linnean societies of London, the Geological Society of Berlin, the Royal Society of Dublin, the Geological Society of Edinburgh and the Royal Society of Victoria (Australia). According to their prestige, he began with those in London, continued with those in Vienna and Berlin, and finally mentioned the associations in Ireland, Scotland and the British overseas colonies.

Haast's affiliation to Viennese institutions and the Leopoldina served as a springboard for admission to the more exclusive gentlemen's societies of London, which were less socially permeable and in part did not distinguish between ordinary and corresponding members. There even Hochstetter, as he complained regarding his recently published book *Neu-Seeland*, was "totally ignored ... since they do not take notice of German publications" (Hochstetter 16 March 1864, cited from Nolden 2013: 101). In the meantime, Haast in New Zealand had adopted British citizenship and geopolitically refocused his efforts. To get his foot in the door, he used similar communicative strategies as in Vienna and targeted the associations situated in Scotland and Ireland first. Frequently, Haast addressed his correspondence involving observations, travel reports, booklets of his Nelson explorations, or offers of literature or object exchanges, directly to influential (board) members or even the societies' presidents. Out of tentative exchanges of letters and supplements for natural history collections shipped to Europe, lifelong friendships developed. Not only knowledge and project ideas were shared, but they quite openly discussed Haast's next career steps (Haast 1948: 449).

His key advocate in England was Joseph Dalton Hooker (1817–1911), a botanist at the Royal Botanical Gardens in Kew, who was eager to study alpine plants from New Zealand's South Island (Endersby 2008). As an influential figure and later president of the Royal Society, he first facilitated Haast's admission to the Linnean and Geological societies of London in 1864 and similarly acted as his promotor in subsequent awards and honours. Already 2 years earlier, Haast (13 September 1862, cited from Nolden et al. 2013: 27) let Hooker know in confidence that "many of the continental societies have done me the honour of electing me as a member & corresponding member & if elected a fellow, I shall do my best, by contributions (papers & collections), to show my gratitude". In addition, Haast thanked his mentors by nominating them as honorary members of newly established learned societies in New Zealand.

By 1865, Haast felt ready to become a fellow of the prestigious Royal Society of London and gained once more Hooker as his promoter, who reported to him regarding the nomination process:

*I went to Sir Ror (Roderick) Murchison, (Director-general of the British Geological Survey) about the Royal Society Fellowship & found him quite favourable .... I then went to (the geologist) Prof. (Andrew) Ramsay, who most kindly promised to have your certificate prepared, signed & presented next year for suspension. He says however that you must not expect to get in the first year of your candidature .... I need not say that I will do all I can for you, but the strength of your claim must be Geological & be vouched for by practical Geologists (Hooker 3 May 1865, cited from Nolden et al. 2013: 84).*

Ultimately, it would be 2 years until all obstacles were cleared and Haast was elected. Later admissions to learned associations beginning around 1870 were primarily dedicated to scholarly recognition in his old homeland, including being appointed corresponding member of the Bavarian Academy of Sciences (1868) and the Senckenberg Society for Nature Research in Frankfurt am Main (1871). Most of these later memberships were either currency in exchange for sources and scientific data or honours for Haast's life-long service to science.



This leads us to a preliminary assumption; Haast's membership in European societies relied on traditional networks of correspondence (Nolden 2016b). With the expansion of colonial empires, these bilateral exchange relationships grew into cross-continental flows of knowledge, publications and specimens, which societies brought together by providing infrastructure for scholarly communication (Grove 1994; Butlin 2009). Although Haast's membership network appears to be very diverse in terms of geographies and disciplines involved, his admissions were granted due to only a handful of influential figures. The Viennese Geographical Society, to which later mentors such as Hooker and Murchison already belonged at the time of Haast's entry, may have served as a significant resource for networking purposes. Building on his contacts in Vienna and London, Haast became a fellow of a dozen learned societies in the United Kingdom, Germany, France and Sweden in subsequent years, followed by an increasing number of honorary memberships in the 1880s (Fig. 3, Table 1). In particular, Haast's skilful use of correspondence as a form of science diplomacy, i.e. keeping open the channels of communication to various parties, identifying common goals and establishing sustainable cross-continental partnerships, made him a multi-loyal fellow as well as a welcome overseas agent of several European associations and scholars.



**Figure 3.** Date of admission of Julius von Haast to European scientific societies



**Table 1.** Selection of European scientific societies of which Julius von Haast was a member, years of admission and types of membership.

Year of admission	Society (Location)	Type of membership
1862	Imperial-Royal Geographical Society in Vienna	corresponding member
1862	Imperial-Royal Zoological-Botanical Society in Vienna	corresponding member
1863	German Geological Society in Berlin	corresponding member
1863	Geological Society of London	corresponding member
1863	Royal Dublin Society	corresponding member
1863	Edinburgh Geological Society	corresponding member
1864	German Academy of Natural Scientists (Dresden, since 1878 Halle)	member
1864	Linnean Society of London	member
1865	Horticultural Society of Mainz	corresponding & honorary member
1867	Royal Society of London	member
1867	Société de Géographie (Paris)	corresponding member
1868	Bavarian Academy of Sciences (Munich)	corresponding member
1868	Botanical Society of Regensburg	corresponding member
1869	Berlin Society of Friends of Natural Science	honorary member
1871	Berlin Society of Anthropology, Ethnology, and Prehistory	corresponding member
1871	Senckenberg Society for Nature Research (Frankfurt)	corresponding member
1872	Société nationale des sciences naturelles et mathématiques de Cherbourg (France)	corresponding member
1876	Zoological Society of London	corresponding member
1881	Garden Society of Gothenborg	honorary member
1883	Geographical Society of Leipzig	corresponding member
1883	Ornithological Society of Vienna	honorary member
1884	Royal Geographical Society of London	honorary member
1886	Royal Society for the Encouragement of Arts, Manufactures & Commerce (London)	corresponding member

## Strategies of Mutual Benefit

The involvement of naturalists from the southern hemisphere in the scientific communities of European empires was not based on a one-sided relationship of dependence, but on mutual benefits. Even if their exchange of letters and the individual collaborations that developed from it relied on friendship, they followed strategic considerations, and personal and imperial goals (Home and Kohlstedt 1991). For overseas members, these associations served as a means of acculturation of how science was practised in the imperial centres. At the same time, strengthening the ties to foreign members helped keep the emergence of independence efforts at bay. Unifying norms, values, and attitudes thus were in the foreground. These included the use of English, German, or French as a language of science communication and consensus on the integrity of the respective empire, the legitimacy of its government and its political-cultural claim to supremacy.

Scholarly acculturation, however, can also be observed at the epistemic level. An integration of naturalists from overseas fostered the emergence of “thought collectives” (Fleck 1979: 160) based on a

common reference to the same bodies of knowledge and culture, e.g. theories, terminology, methods and handbooks. In the case of Haast, it was not a university education in Bonn, but the personal training by Hochstetter, the time spent together in New Zealand and his later involvement in the European scholarly communities that provided a durable common framework. Standard literature written in Europe, such as Hooker's *Handbook of the New Zealand Flora* (1864–1867), in the completion of which Haast himself had played a decisive role through his collections sent to London, became his constant “travelling companion” and basis for his study of New Zealand nature (Haast 18 May 1865, cited from Nolden 2013: 85). Such cross-continental collaborations in colonial science networks, studied by Barton (2000) based on the example of Haast and moa fossils, ensured also that new as well as existing Māori knowledge gathered through Haast was incorporated into European scientific holdings and epistemes (Cooper 2011).

For naturalists from overseas, membership in European associations could serve several needs. Firstly, it provided access to the resources, spaces and networks of societies. Even if personal admission to libraries, collections and lectures was not possible from a distance, members received requests for duplicates of publications and specimens as well as, regularly, the societies' journals, allowing them to follow up on lectures and current debates. They thus gained greater autonomy from their correspondence proxies in Europe and their colleagues in the colonies. Secondly, learned societies gave their international members a voice in their communities in Europe, both by publicly reading out their letters during meetings and by publishing their submissions. Associations validated the research outcomes of their overseas members, identified them as scientific knowledge and integrated them into existing knowledge. The public dissemination of their findings and explorations in Europe could stimulate the implementation of their research projects in the colonies and bring financial support from the societies, state, or private stakeholders. Third, an affiliation to scientific societies meant academic prestige and accreditation of practical expertise that went beyond university-trained scholarship. This was especially true for collectors working overseas. They played a major role in supplying European museums, sometimes on behalf of research facilities, sometimes on their own initiative in return for payment or honour. However, such collectors rarely published their research on their own.

Likewise, scientific societies benefitted in numerous ways from members working from overseas. Firstly, the members were indicators of the international standing of societies and considered their local representatives on-site. They embodied the diversity of European empires and their global civilisational and expansive claims. Therefore, members were often given prominence in the societies' reports, and, if they permanently returned to Europe, were elected to their board. Secondly, as local experts, they provided scientific evidence of specimens and artefacts discovered abroad. This was central to the increasing claims to objectivity in science during the nineteenth century, which involved local verifiability of data (Daston and Galison 2007). Thirdly, members from overseas maintained the continuous inflow of objects for imperial collections (Henare 2005; MacKenzie 2009). Besides representational needs, these were fundamental to all research and their acquisition was essential for keeping pace with the increasing international demand for these scientifically precious specimens. European research facilities, in turn, sent stocks of specimens to New Zealand to complete the natural history collections there or to introduce non-native species through acclimatisation societies.<sup>5</sup>

For the scientific evaluation of the specimens, their rarity and state of preservation were more important than the quantity received. Haast, who had become one of the main interfaces in the trade in natural history and ethnographic objects from New Zealand to Europe in the 1870s–1880s, was well aware of this. For example, the Senckenberg Society for Nature Research, which operated a natural history museum, thanked its member Haast in 1880: “The shipment, consisting of 60 specimens of New Zealand birds, skeletons, and plants, has far exceeded our expectations in richness and rarity” (Blumenthal 6 June 1880). To ensure his chances of being granted an Austrian knighthood, Haast, at

Hochstetter's suggestion, even dedicated three moa skeletons and a collection of New Zealand birds, exhibited at the Vienna World's Fair of 1873, to the Imperial Natural History Museum. In the end, however, it was a gift of anthropological objects, especially Māori skulls,<sup>6</sup> presented before Crown Prince Rudolf by Hochstetter, which won the emperor's favour to approve Haast's elevation to knighthood.<sup>7</sup> With Hochstetter's appointment as director of the newly established Natural History Museum, the exchange relations between Christchurch and Vienna increased to the benefit of both sides. While, in the following years, duplicates from Vienna significantly boosted the holdings of Canterbury Museum, which in total had grown to 150,000 labelled specimens at the time of Haast's death (Royal Geographical Society 1887). The New Zealand collection of the Vienna Natural History Museum became the largest outside Oceania. Accordingly, Hochstetter wrote in 1876:

*So we are working in the same direction at opposite ends of the globe .... I am now asking you [Haast] a favour and I will be in a better situation to fulfil your wishes. The director of [the Zoological] department, [Franz] Steindachner, and I are particularly keen on acquiring marine mammals, fish, and lizards .... but also complementing and completing our moa collection. I am also looking for anything ethnographical and prehistoric, human skulls, etc. is now doubly valuable to me, so do aim to put together for me whatever you can in the next few years. Steindachner offers complete skeletons of lions, tigers, giraffes, aurochs, etc., and whatever else he has by way of duplicates, and I will have these things packed and placed ready for you (Hochstetter 15 May 1876, cited from Nolden 2013: 175).*

In addition to such individual cross-continental collaborations, partly within the framework of research facilities, new forms of international cooperation emerged in the 1870s. These were cooperative undertakings, led by learned associations, requiring the voluntary participation of many contributors, and often involving the pooling, coordination and standardisation of observations, measurements, and objects (Kohler 2006). This shift from extensiveness to an intensiveness of international exchange, which was accompanied by a gradual replacement of established media such as correspondence networks, scholarly travels, meetings and the exchange of papers by joint ventures, also affected the status of the associations' corresponding members (Crawford 2009). Cooperative projects such as organising expeditions or exhibitions, building joint collections or handbooks, and maintaining research infrastructure gained in importance over the more traditional role of societies as communication hubs.

The traditional model of corresponding members, who occasionally took up the pen, obtained the society's periodicals for a fee and served as living proof of the society's transnational reputation transformed gradually into a system of proactive agents, spread over the whole globe. As partly mobile informants, they conducted collecting activities on-site, prepared expeditions, or, as participants, promised a higher success of the undertakings due to their local knowledge and language skills. Haast, too, was certainly more than a simple corresponding member for most European scholarly communities; initially, as a contributor to the book projects there such as Hochstetter's *Neu-Seeland*, as the main interface for specimens from Oceania and finally as the New Zealand Commissioner for the Colonial and Indian Exhibition in London (1886), paving the way for the founding of the London Imperial Institute as a museum of the whole British Colonial Empire.

### **Intermediating Role of Naturalists Working Overseas**

"My demands are not great and I have – I am now 25 years old – a healthy and strong body. If I do reasonably well in the country [New Zealand], I think I'll stay there forever", wrote the German zoologist Wilhelm Haacke (16 December 1880) in a letter to Haast. Having earned his doctorate under the renowned scientist Ernst Haeckel, Haacke (1855–1912) emphasised the high level of competition and poor career prospects in his home country as reasons that would ultimately lead

him to go abroad to New Zealand and South Australia for several years. Young naturalists who set out on overseas trips from the imperial centres and tried their luck on the other side of the globe usually had career opportunities in mind. The fieldwork experience, cross-continental networks and evidence in the form of specimens and information gathered for their projects or those of their European mentors, were considered door-openers for academic employment and recognition in their former home countries.

Towards the end of the nineteenth century, with the increasing saturation of the academic labour market in the German and Habsburg empires, long-term individual journeys along global migration flow flourished besides traditional modes of probation for young researchers such as the participation in pre-planned expeditions. Since these countries (initially) had no overseas territories and thus did not represent immediate competition for other European colonial powers, scientists from Austria and Germany often obtained positions in the British colonial administration. These included, for example, the Schlagintweit brothers, who travelled India and Central Asia on behalf of the East India Company (Brescius 2019), or earth scientists in the service of the Imperial Geological Survey of India such as Karl L. Griesbach (1847–1907), Fritz Noetling (1857–1928) and Ferdinand Stoliczka (1838–1874) (Schedl and Hofmann 2005; Flügel 2013). In this regard, the high status of scientific university education in German-speaking countries, close ties between their learned societies and those in London, and the international recognition of the Vienna and Berlin Geological Surveys were certainly beneficial.

However, there was a difference between working overseas for a limited period of time or establishing a new existence abroad. Haast was only one of several German-speaking scholars, such as the zoologist Robert Lendlmayer von Lendenfeld (1858–1913) or the taxidermist Andreas Reischek (1845–1902), who travelled to the southwest Pacific (Stoffel 1993; Mückler 2012). Haast as a British citizen remained there for the rest of his life and almost certainly had a more successful scientific career than if he had remained in the country of his birth. Living in the Antipodes as a naturalist was based on different expectations, goals and career strategies. Researchers like Haast married, settled down and became supporting pillars of everyday scientific life in the colonies. They were not only entrusted with research assignments by the government, but also participated themselves in the establishment of local scientific institutions – often based on experience they had brought with them. Nevertheless, relationships of dependence and aspirations of autonomy from their European proxies were often closely connected.

Due to language skills and involvement in various networks of knowledge, these pioneering naturalists took on intermediary roles and acted as brokers and facilitators of public-private partnerships that straddled various levels of imperial polity. Haast, too, apart from his promotion of German immigration and appointment as German Consul in New Zealand in 1880, displayed diplomatic skills in dealing with his various partners and profited, albeit indirectly, from the armed conflicts between the British settlers and the indigenous population that escalated in the early 1860s (Moon 2021: 153). Through his non-British origin, he had an advantage in his relations with the Māori. For example, he could travel to otherwise inaccessible territories and exchange knowledge with them in personal conversations (Bade 1993; Cooper 2011). In turn, Haast used this to bring himself into play with his European partners. For example, he wrote to Hooker in 1865:

*Now I have examined thus Libocedrus very carefully & found that your description [in the handbook] agrees very well, the wood is very soft, as my Maoris said, like boiled potatoes, but it shows that it is not an alpine state, but only the manner of growth on swampy ground. ... Maori name for Libocedrus Kawhaka .... I cut today close to my tent in a thicket near the river bed a coniferous tree, which the Maoris call Pakihirimu .... I can not find anything in the*

*Handbook which leads me to believe that you know it, I shall send specimens .... Near Lake Kanieri .... I found often 15 feet above the bed, lots of shells of Unio, but all broken at the side. ... I took one up, examined it & observed to my Maoris, that there were marks like those of the teeth of rats. They answered me that this was well known to them & dug up a rat hole, where many more were found (Haast 31 May 1865, cited from Nolden et al. 2013: 90).*

In case of inquiries, Haast (9 June 1869, cited from Nolden et al. 2013: 142) acted as a communicator and, for example, “wrote to [his] friend [Reverend James] Stack, missionary of the English Church living amongst the natives to get [him] the necessary information” for Hooker. Haast’s position as a scientific intermediary in the British Crown Colony was certainly helped by his rather holistic approach as a naturalist, covering several fields of (practical) research such as geology, geography, zoology, botany and ethnography. His career combined the activities of a professional collector with those of a provincial science manager, geared towards high imperial honours in science and politics (Caudel 2007). Thus, Haast did not hesitate to act as a local informant and gladly pulled the strings to establish political and scientific contacts. This can be seen as an attempt to gain ground on his competitors within New Zealand, particularly his Scottish-born friend and at times opponent James Hector (1834–1907). Being 12 years younger than Haast, he came to the Antipodes for a geological survey of Otago in 1862 and quickly climbed the ladder of the Crown Colony’s scientific institutions (Nathan 2015).

In 1865, Hector was appointed inaugural Director of the New Zealand Geological Survey. This and his other appointments such as the manager of the New Zealand Institute placed him in the British Crown Colony in a position above Haast, who acted largely at the provincial level. An important factor may also have been Haast’s offices and networks in New Zealand learned associations. He co-founded the Philosophical Institute of Canterbury in 1862 and the Canterbury Acclimatisation Society in 1864, among others. By nominating his European mentors as honorary members of New Zealand associations, he made himself an interface between the scientific communities in the Antipodes and Europe. The Viennese pipe-carver and fossil collector Franz Sikora (1863–1902), spent over 14 years in Madagascar providing Habsburg and British research facilities with specimens but received scant recognition for his effort which underlines the significance of European promoters for opening up sustainable career opportunities for their mentees abroad.

In short, naturalists such as Haast served as bridge builders between local, colonial, imperial and other European stakeholders and thus, on an individual level, also became hubs for inter-imperial exchange and transfer (Barth and Cvetkovski 2015). To successfully implement their plans, they were able to leverage scientific, political and economic sources both locally and in Europe. As collectors, these naturalists working from overseas could be more effective than the rather expensive expeditions, dispatched from the imperial centres (Nielsen 2012; Leshem and Pinkerton 2019). Thanks to their on-site expertise, and access to field sites and sources, they represented a secure investment for the ambitions of European associations and, due to their targeted use of correspondence as a diplomatic tool, balanced the inability to participate in decision-making meetings on the other side of the globe.

## Conclusion

Haast’s scholarly career relied to a significant extent on European communities and its learned institutions. His rise from an unknown autodidact to a highly decorated scientist is hardly thinkable without the colonial framework, the political situation in New Zealand and Haast’s collaborations with European partners grounded on joint benefits. Shared field and collaborative experiences forged sustainable social bonds between Haast and his fellow countrymen and colleagues working in Vienna.



These relationships were formalised with his entry into the inclusive learned societies established there in the 1850s. Individual correspondent relationships and, from today's point of view, irresponsible use of cultural and natural history heritage material formed the springboard for Haast's admission to the prestigious British associations. These multiplied his networking activities, channelled cross-continental exchange and accredited his scientific work.

In this respect, Haast's biography can serve as a model for a better understanding of other naturalists working in colonial environments. The persistence and success with which Haast pursued his career as well as the extent to which he and Hochstetter exchanged the natural history and anthropological collections of the Canterbury and Vienna museums, however, is unique. Important to colonial rule, practical fieldwork such as geological surveying and mineral prospecting opened up career opportunities, even for non-academic contributors. This was especially true for non-British immigrants with a penchant for natural sciences, ambition, pre-experience as collector and a willingness to take risks. The late professionalisation of science in the Habsburg Monarchy and close connections between the imperial geological surveys in London and Vienna may have facilitated Haast's involvement in the earth science communities of these two metropolises.

Besides autodidacts such as Haast, in the second half of the nineteenth century, many young PhD candidates turned their backs on the competitive scientific labour market in the German and Habsburg empires and sought their fortunes in British colonies. They profited from the fact that the Habsburg Monarchy participated only indirectly in colonial ventures outside Europe and that the German Empire entered colonial politics after 1880. The British colonial administration thus considered German-speaking scholars more trustworthy and impartial than their colleagues from other European colonial powers such as the French and Dutch empires. In local conflicts, they could bring their origin into play as a sign of their political neutrality, thus acting more independently than many British colleagues and securing their home countries a share of the scientific profit. In this way, many of them succeeded in social advancement in the overseas and European scholarly communities, both as loyal employees of the colonial administrations and as informal agents of the learned societies in their countries of origin.

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I would like to thank Dr Norman Henniges (Berlin), Sandra Klos, MA (Austrian Academy of Sciences) and Dr Sascha Nolden (Alexander Turnbull Library) who read and commented on this essay and/or provided sources. I am also very grateful for the constructive and enriching suggestions of the editors and the two reviewers Dr Mike Johnston and Dr Ursula Rack, who helped me significantly to improve the content of the manuscript.

## Endnotes

<sup>1</sup> The status of "k. k." (Imperial-Royal) approved organisation, an honour granted to federal institutions in the Habsburg Empire before 1867, included more than a dozen societies (e.g. in the fields of agriculture, medicine, photography and meteorology) and often required an official protector from the Imperial family. This could be associated with privileges such as state subsidies or a postage exemption for correspondence with public authorities. The first k. (imperial) stood for the title of the Emperor

of Austria. The second k. (royal) stood for the title of the King of Hungary.

<sup>2</sup> It was the British settlers and their political representatives who wanted to know more about the potential resources (land, minerals) in their respective provinces. This was particularly the case in Nelson Province, where agricultural land was limited but mineral deposits seemed to be abundant. I thank Mike Johnston for this remark.

<sup>3</sup> As "our universities have only recently stopped

the practice of purchasable doctoral diplomas”, Hochstetter turned (20 September 1861, cited from Nolden 2013: 56) to the University of Tübingen, where he had received his own doctorate 10 years earlier. In his application in the name of Haast, Hochstetter (24 September 1862, cited from Nolden 2013: 84–85) enclosed Haast’s curriculum vitae and underlined his scientific achievements while undertaking geological investigations in Nelson and Canterbury, his support of the *Novara* mission and his membership in Viennese learned societies (Nolden 2016a: 75).

<sup>4</sup> One of the exceptions was the Austrian field geologist, palaeontologist and alpinist Georg Geyer (1857–1936), who, despite not having a doctorate, was elected a corresponding member of the Vienna Academy of Sciences in 1914 and a full member in 1921. I thank my colleague Sandra Klos for this remark.

<sup>5</sup> Acclimatisation societies were volunteer organisations, established from 1850 onwards, that promoted the introduction of non-native species in various places around the world. They were particularly popular in the colonies, especially in Australia and New Zealand. These societies aimed not only to complete the local fauna and flora with foreign species, but also to send useful exotic animals and plants from the colonies to the European centres.

<sup>6</sup> An on-going project on the colonial acquisition contexts at the Vienna Natural History Museum will examine its inventories from 1876 to 1918, analysing the Anthropological Department’s collections from New Zealand and Tierra del Fuego as a first step. In total, the anthropological collections comprise about 40,000 human remains, with an estimated 3,000 objects from countries with a colonial history (Austrian Press Agency 2021). In 2015, the Weltmuseum Wien, Austria’s major ethnographic museum, returned Māori bones, including a tattooed Māori head, the mummy of an infant, and skeletal parts, which the Austrian taxidermist Andreas Reischek (1845–1902) had collected and purchased. Reischek had used his good contacts with Māori to loot abandoned settlement and burial sites expressly declared tapu (sacred). In 2009 and 2011, the Austrian Academy of Sciences, the University of Vienna, the Natural History Museum, and the Vienna Pathological-Anatomical Federal Museum repatriated 47 Aboriginal skeletons to Australia.

<sup>7</sup> Hochstetter, although being of Protestant faith, had been appointed by Emperor Franz Joseph as natural science teacher to Crown Prince Rudolph in 1872. In this role, he presented the Māori skulls sent to Vienna by Haast to the crown prince.

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# The Making of a Monumental Biography

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*The Life and Times of Sir Julius von Haast* is a monumental biography in every sense. Researched and written by his son, Heinrich von Haast, it weighs 1.8 kilograms and contains 1,142 pages of text as well as several folding maps. It is one of the largest New Zealand books ever published.

Heinrich had a successful career as a lawyer and set about writing the biography in his retirement, almost 50 years after his father's death. He had access to all his father's correspondence and papers that had been retained by the family (and which are now held by the Alexander Turnbull Library). The text is a detailed chronological account of Haast's life after he arrived in New Zealand as well as the events he was involved with and the people he knew. The final chapters deal with Haast's naming of topographic features, and his recognition of widespread glaciation in the Southern Alps, alluvial goldfields and the volcanoes of Banks Peninsula.

Having completed the manuscript of the biography, Heinrich had great difficulty in getting it published, so he funded it himself and sold it by subscription.

The book is so enormous that few people would read it simply as a biography. Today its main value is as a reference book for historical issues in mid-nineteenth century science as well as an account of the development of Canterbury Museum under Haast's leadership. New research and changing concepts have modified some of the conclusions drawn by its author, but it remains the definitive account of the life and achievements of Sir Julius von Haast.

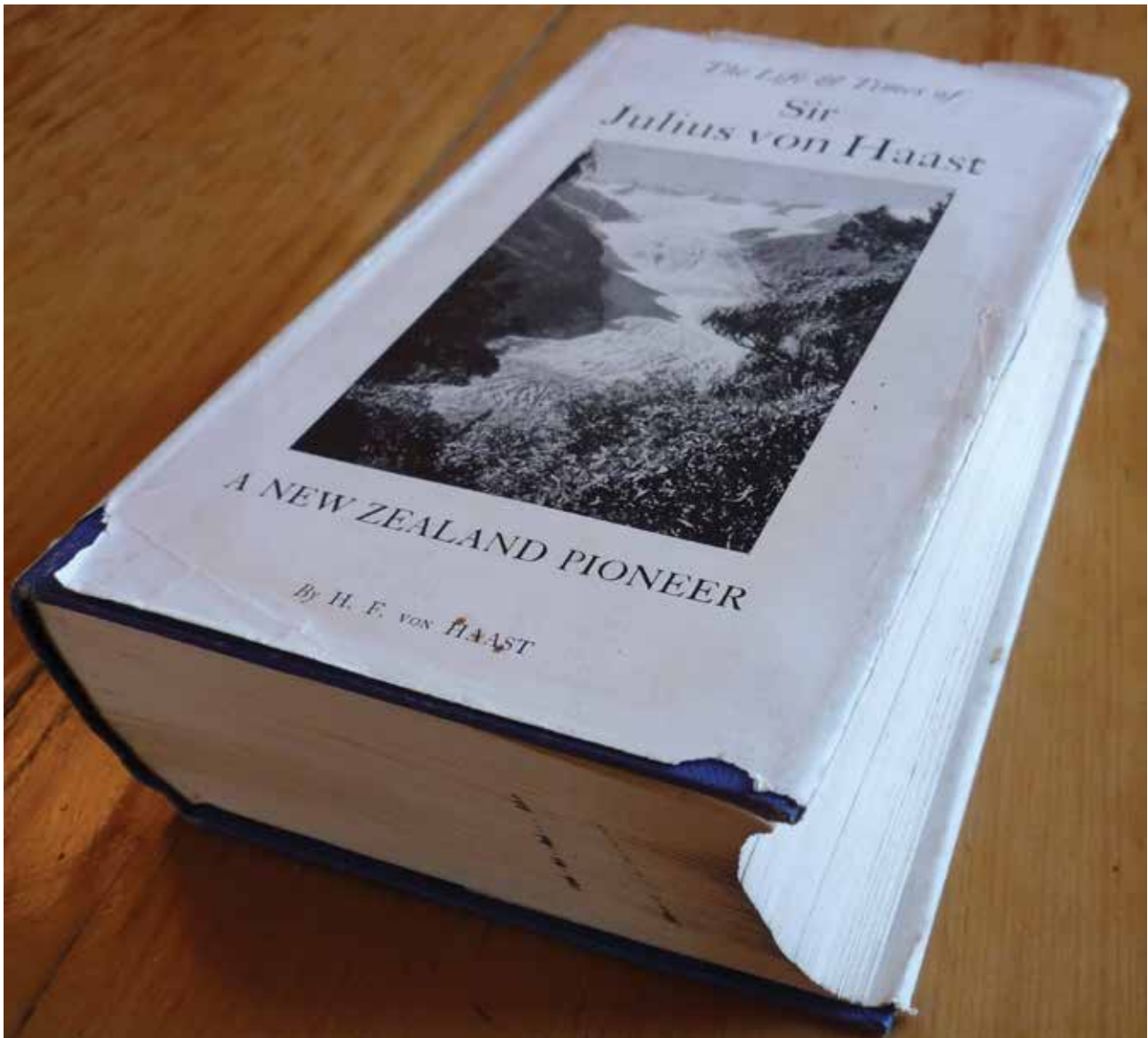
**Keywords:** Heinrich von Haast, Sir Julius von Haast, *The Life and Times of Sir Julius von Haast* 1948

## Introduction

*The Life and Times of Sir Julius von Haast* is a monumental biography in every sense. Researched and written by his son, Heinrich Ferdinand von Haast (1864–1953) and published in 1948, it weighs 1.8 kilograms and contains 1142 pages of text as well as photographic plates and several folding maps (Fig. 1). It is one of the largest New Zealand books ever published.

My first sight of the biography was as a schoolboy in the late 1950s when surplus copies were being sold off at Whitcombe & Tombs' annual sale in Christchurch. It was a bargain for 5 shillings (50 cents in today's money), but after picking it up I realised that it was too unwieldy to carry home on my bike. It was a decision I have often regretted as the copy illustrated in Figure 1 cost me a lot more when I bought it many years later.

My next interaction with the book was about 15 years ago when I was thinking about writing a biography of Haast's contemporary and rival, James Hector. I looked at the Haast biography and was immediately discouraged. It has cast a long shadow over anyone attempting to write a biography of a New Zealand scientist. I had no wish to spend the years needed to research and write such an enormous book. But discussion with fellow writers was helpful, as they pointed out that while the Haast book was respected as a reference volume, it is difficult to find anyone who has actually read it. I resolved to aim at a book that was readable, and my published book (Nathan 2015) is only a quarter the size of the Haast volume.



**Figure 1.** Photograph of the Haast biography. To give an idea of the scale, it is 7 cm thick (Haast 1948).

In this paper I want to summarise the events leading to the publication of this major biography of Julius von Haast, and to comment on how it is viewed in the twenty-first century. But firstly I need to say something about the author, Heinrich von Haast (Fig. 2) and the intellectual climate in which he was working.

### **Background of Heinrich von Haast**

Born in 1864, Heinrich was the oldest child of Julius and Mary Haast. Julius was over 40 when he was born, so Heinrich knew little of his father's German background or early explorations in Nelson and Canterbury. As a teenager Heinrich accompanied his father on some field trips, but had no desire to follow a scientific career. On leaving school, he got a job as a junior clerk, but winning scholarships allowed him to attend university in Christchurch where he studied law, graduating MA and LLB. He also attended his father's geology lectures.

When Julius was given 18 months leave in 1885 to be a Commissioner at the Colonial and Indian (Colinderies) Exhibition in London, he arranged for Heinrich to take over his position as Acting Director of Canterbury Museum. It was a big responsibility for a 21-year-old, but Julius maintained control from a distance through a stream of letters. When his father died suddenly in 1887 a few



**Figure 2.** Portrait of Heinrich von Haast (1864–1953), taken about 1933 by S P Andrew. Alexander Turnbull Library 1/2-043510-F

weeks after returning from his overseas trip, Heinrich offered his services to the Museum Board, but discovered that they had already offered a temporary position to Frederick Hutton without contacting or consulting him. This undoubtedly contributed to his antipathy to the Museum administration in later years.

Heinrich had a long legal career, starting in Christchurch, moving to London and then to Victoria, Australia, before finally returning to New Zealand in 1903 to set up his own legal practice in Wellington. He lectured in law at Victoria University College and was a senior member of the New Zealand Law Society. In later years he had considerable involvement in public affairs, including serving on the Senate of the University of New Zealand. Like his father, he was an extrovert, regularly singing and involved in theatrical productions as well as being a practised orator and after-dinner speaker (Taylor 1953).

Although he spent many years attempting to escape from the shadow of his famous father, Heinrich gradually became interested in family history. In 1929 he published two articles in the *Press* describing the long-running correspondence between Julius and Joseph Hooker, Director of Kew Gardens (*Press*, 16 November and 23 November 1929). Historian and writer James Cowan persuaded Heinrich that a full biography of his father was overdue and that he was the one to write it. When he turned 70 in 1934, he decided to retire from his law practice and start work on the biography of his father, aiming to complete it in time for the New Zealand centennial in 1940.

### **Changing Views of Sir Julius von Haast**

When Julius died in 1887 he was lauded for his pioneering scientific work as well as the establishment of Canterbury Museum, but as the years passed his reputation declined. He had always been an

unusual personality in anglophile Canterbury, with detractors as well as supporters. As there was strong anti-German feeling during and after World War One, he was quietly overlooked then and in following years. It is to the credit of the Museum authorities that his name was not erased, as happened to others of German descent. Heinrich elected to retain his name and not change or modify it as many others did.

Active criticism came from a different quarter. In the 1920s and 1930s a group of young men, mainly associated with the Canterbury Mountaineering Club (CMC), started exploring the mountainous country of Canterbury, tackling previously unclimbed peaks in the Southern Alps. In many places the best maps available dated back to Haast's explorations in the early 1860s and some of the younger generation were critical. Haast was never interested in climbing, and there were debates about the identification of some peaks shown on his maps. He normally worked with assistants, with supplies being carried in by packhorses, and this "luxury" was derided by the younger generation who carried all their supplies in heavy packs. Writer John Pascoe was an active member of the CMC, and wrote several articles for *Making New Zealand*, a series of illustrated booklets celebrating the 1940 Centennial. In his article on 'Navigators and Explorers', he denigrated Haast's exploration in Canterbury and commented that he had "sprinkled German names liberally all over the landscape. These guttural legacies survive on the map to this day" (Maclean 2003: 108–109). Heinrich was incensed and wrote a letter listing the errors and omissions in Pascoe's account. This and the associated correspondence (Alexander Turnbull Library 1940–1948) illustrate the way that Haast had become viewed by some in the mountaineering fraternity.

## Writing the Biography

Most of the information about how Heinrich tackled the research and writing of the biography comes from a talk he gave to the New Plymouth Rotary Club the year after the book was published (Haast 1949; *Taranaki Daily News*, 27 September 1949).

When he settled down to plan the project, Heinrich realised that he had little detailed information on his father's life. Despite growing up in close proximity, he had shown little interest in his father's enthusiasms and overseas connections. As a teenager, Heinrich's passion was rugby football – he captained his university team from 1886 to 1888 – and Julius disdained sport.

Heinrich started by preparing a detailed chronology of his father's life, based on months of scanning newspapers held in the basement of the Parliamentary Library in Wellington, and then expanded his search to cover records of the Canterbury Provincial Council, Canterbury Philosophical Institute and Canterbury University College, as well as published papers and reports written by his father. When Julius died suddenly almost 50 years earlier, Mary von Haast had stored all his papers and correspondence in two large tin boxes, and this formed an additional and unique research resource. Heinrich found that he had an abundance of research material, and sorting and cataloguing it took several years.

Although he had a large volume of correspondence, Heinrich noted that he could find few letters written by his father apart from those written in the last year of his life while overseas. In 1938 Heinrich wrote to the archives at Kew Gardens to see if they could find the letters Julius had written to Joseph Hooker, but only three were found. In more recent years the Kew archives have been sorted and catalogued, and over 70 letters from Haast have been located. The entire correspondence between Haast and Hooker from 1861 to 1886 has recently been transcribed and published (Nolden et al. 2013). An even larger number of letters from Haast to James Hector are held in the archives of Te Papa Tongarewa Museum of New Zealand, but were not accessible when

Heinrich was undertaking his research. The full correspondence between Haast and Hector has also been transcribed (Nolden et al. 2012). Had these letters been available to Heinrich, the final biography might have been even larger.

Heinrich planned the book to be a largely chronological account of his father's life and activities. The published book contains 72 chapters, of which about 60 cover relatively short time periods or events interspersed with chapters on more general topics, for example:

- The People of Canterbury
- Haast's Province and Problems
- Haast's Correspondents and Co-operators
- The Attitude of the Press to Science
- Companions and Collectors.

These general chapters provide an interesting background about life in Canterbury, both of the settlers and the small scientific community. Heinrich had attended Christ's College, a private boys school in Christchurch and was well connected to sons of the leading families.

The biography is really a story of Julius Haast's years in Christchurch, from his arrival in late 1860 until his death in 1887. The first half of his life, before he reached New Zealand, is covered very briefly in the first seven pages of Chapter One. Heinrich had little material to work with except family legend and obituaries, and his attempts to gather more information from Germany were largely unsuccessful. The description of the early work that Julius undertook with Ferdinand Hochstetter and subsequent exploration of Nelson in 1859 and 1860 is essentially a paraphrase of previously published accounts, more recently described by Johnston and Nolden (2011). The Canterbury story starts on page 113 when Haast arrived in December 1860 to examine the geological problems encountered in excavating the Lyttelton rail tunnel.

Work on the biography took over a decade as Heinrich was thorough and painstaking in his research. In writing each chronological chapter he appears to have gathered together every bit of information related to the time period being covered and written it up as a connected narrative. The chapters are not long (generally 10 to 20 pages), but very detailed. The writing is clear and explanatory, with non-technical language. Heinrich was skilled at synthesising information – probably reflecting his experience preparing legal briefs – but he did not summarise. If he found an interesting detail it was always included. For example, if you want to know why the spelling of the name of the Franz Josef Glacier, named by Julius, is different to the way the Emperor spelt his name, you will find an explanation in footnote 8 on page 393.

By my estimation, Heinrich probably took about a month working on each chapter. As he worked onwards, the manuscript grew progressively larger. Not having produced a book previously, nor having any editorial oversight, I suspect that he had little idea how large it had become.

The text is enlivened by personal memories of family life. Heinrich is not uncritical of his father – he mentions his impetuosity and quick temper as failings that often caused problems and antagonised those he dealt with. With wry humour he relates the attempts that Julius made to obtain recognition and honours through his overseas contacts. Julius was a gambler, but gave Mary, his future wife, a promise that he would not play for money after his marriage. Over the years he invested in various business ventures, including land, flax and sheep, on which he invariably lost money, and he had a very small estate when he died in 1887.



Although the text is predominantly narrative, Heinrich devotes space to some topics that he felt required more detailed explanation. For example, Chapter 24, 'Discovery of the Haast Pass', is followed by Chapter 25, 'Charles Cameron's claim to have discovered the Haast Pass'. The facts are laid out in detail, but the commentary makes it clear that Heinrich is acting as his father's advocate by discounting the claims made that Cameron had been over the pass before Haast and his party arrived. For further discussion of this issue, see the article by Bradshaw in this volume.

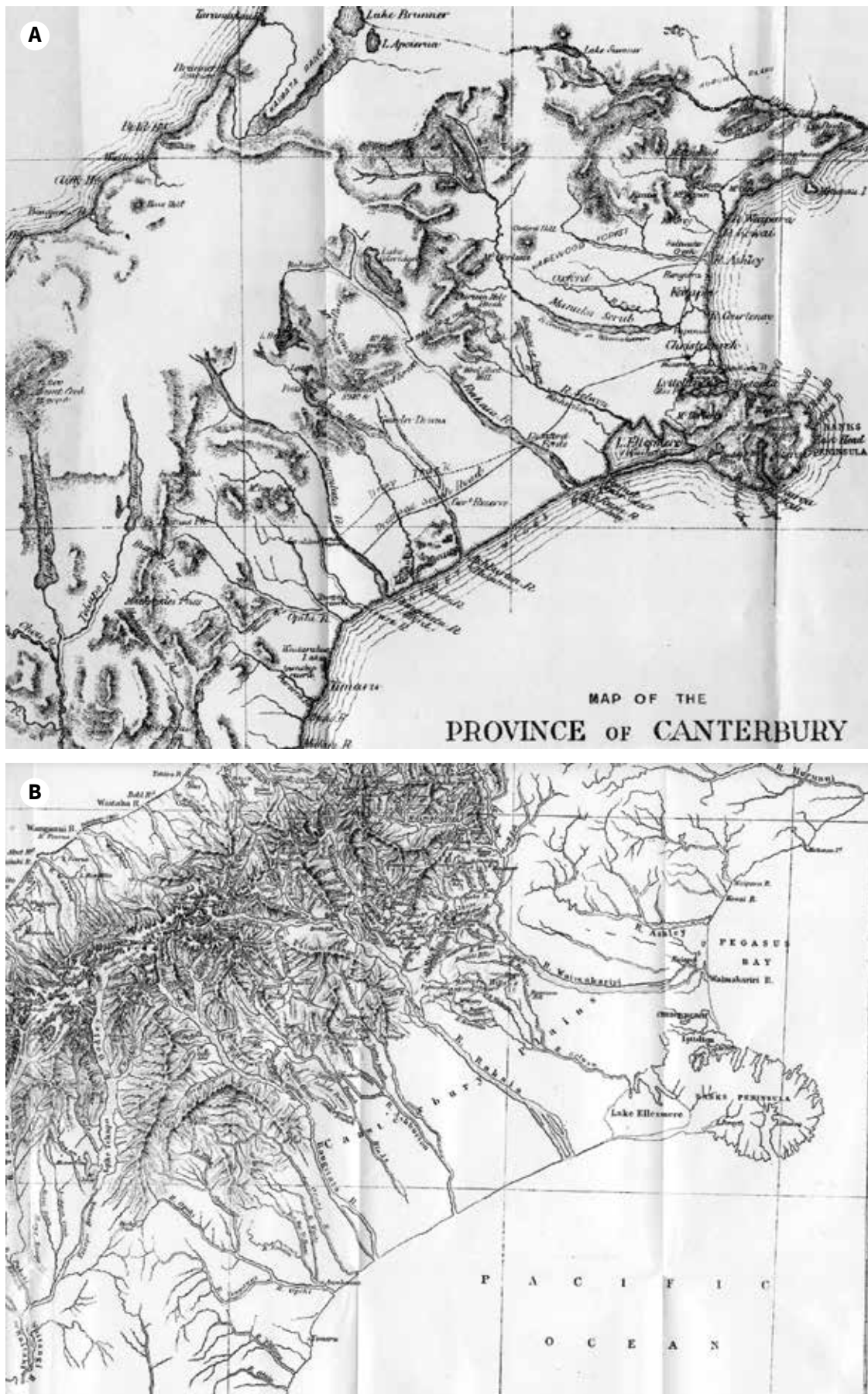
Throughout the book there are comments on Julius's friends, colleagues and contemporaries. Julius sometimes made enemies from his outspoken comments, but Heinrich tried to be fair to most of those mentioned. From my own research, I am aware of the rivalry bubbling under the surface between James Hector and Haast, but Heinrich's assessment is generous to Hector, who was often exasperated by Julius Haast and resented the success of his museum.

The last chronological chapter (67) deals with Haast's death and burial in 1887. It is followed by four chapters that deal with Haast's major achievements. Chapter 69, entitled 'Haast's Nomenclature', deals with the names that Haast had applied to geographical features in Nelson and Canterbury. One of the longest chapters, it is undoubtedly a response to Pascoe's jibe about the prevalence of German names assigned by Julius Haast. Heinrich lists the names as far as he was able. A quick scrutiny of the names shows the falsity of Pascoe's claim, as the majority of names are either British scientists or prominent Cantabrians. Chapter 70 deals with glaciation as Haast was the first to recognise the widespread impact of glaciation on the Canterbury landscape, and Chapter 71 deals with the alluvial goldfields of Westland where the distribution of gold was largely controlled by glaciation. The final chapter, 'The Volcanoes of Banks Peninsula', describes Haast's recognition that the peninsula was formed by two ancient (Miocene) volcanoes, now deeply dissected by erosion, followed by a younger period of volcanism.

Heinrich decided to include four folding maps in the book, which had been prepared by Haast but were not readily available. The first is the map of Haast's explorations in Nelson and the West Coast that the Nelson Provincial Council had not published. The other three maps are of Canterbury and parts of two of them are reproduced in Figure 3 for comparison. Map A shows the extent of topographic mapping about 1860 when Julius arrived in Canterbury. All the flatter land near the coast had been surveyed and subdivided for farming, but the steeper hill country and alpine regions were almost a blank. Map B, drawn up for the Royal Geographical Society in 1870, shows the progress in mapping the region a decade later, illustrating the complexity and steepness of the top of the topography that Haast was covering. Completing the map of the most rugged part of New Zealand was an impressive undertaking and shows that the later criticism from the mountaineering fraternity was largely unjustified.

## **Publication**

There is little information about events leading to the publication of the biography, but it appears that Heinrich had ineffectual discussions with a number of publishers. During and immediately after World War Two there was a paper shortage and few books were published in New Zealand. Potential publishers were probably doubtful about the likely sales of a book about a German scientist and the manuscript was huge. The negative response led Heinrich to decide to take the financial risk of funding publication himself and to sell copies by subscription. Avery Press in New Plymouth was contracted to undertake the printing project, and did an excellent job of printing and binding the large volume. Heinrich prepared a flier advertising the book and distributed it widely around New Zealand and overseas (Fig. 4). He set a price of 3 guineas (£3.3.0) including postage on the book – equivalent to \$NZ260 in 2022 values. The tome was published in 1948.



**Figure 3.** Comparison of sections of two of the facsimile folding maps included in the Haast biography. **A.** Map showing the extent of topographic mapping in Canterbury in 1860, about the time Julius Haast arrived. **B.** Map originally published in 1870, showing the progress in mapping, particularly in the alpine areas (Haast 1948)

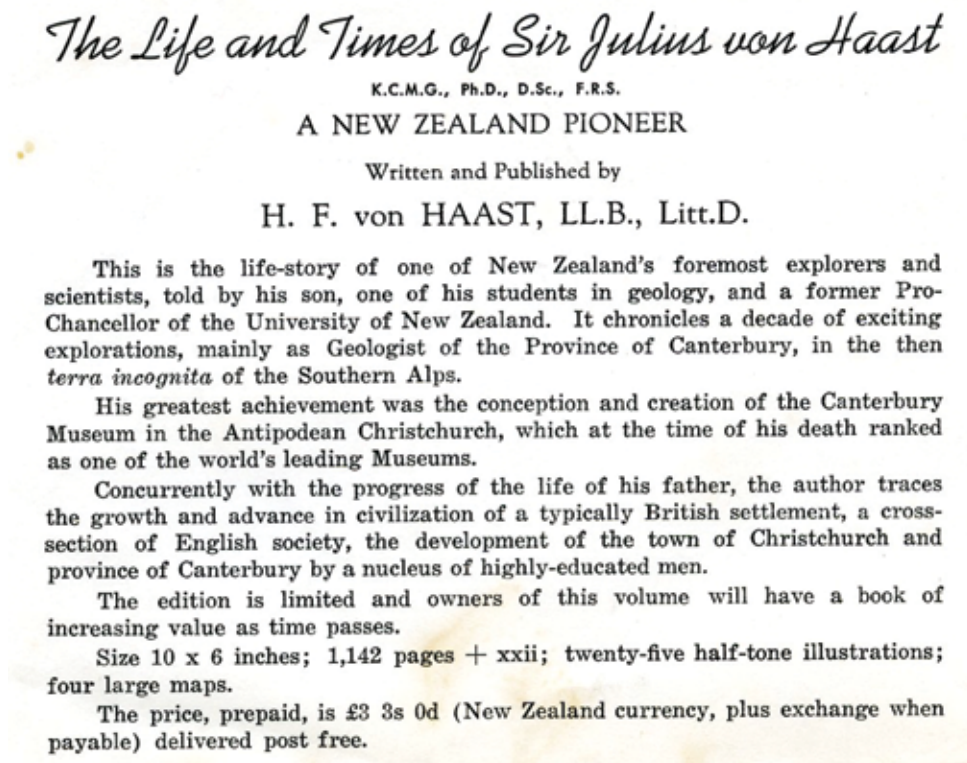
A steady trickle of orders came in, and Heinrich and his wife Mary regularly packed parcels and dispatched them by post. By 1949, when Heinrich addressed the New Plymouth Rotary Club, he reported that he had covered the cost of printing and was starting to make a profit.

Heinrich was friendly with Johannes Andersen, the first librarian at the Alexander Turnbull Library, and decided to deposit his research papers there rather than at Canterbury Museum, which he felt had failed to honour his father. After Heinrich's death in 1953 all the remaining papers of both Julius and Heinrich von Haast were handed over to the library by Heinrich's widow and form the Haast Family Collection (ATL-Group-00475). The records of Sir Julius von Haast have recently been added to the UNESCO Memory of the World register as a key collection of records relating to nineteenth-century New Zealand science.

## Reaction to the Biography

Heinrich sent copies of the book to potential reviewers locally and overseas, and their reaction was generally positive. Few biographies of New Zealand pioneers had been previously published, and it was recognised that this was an important contribution both to the history of science and to the settlement of the Canterbury region. He also submitted it to the University of New Zealand and was awarded a Doctor of Literature degree.

The one discordant note was from John Pascoe, who reviewed it for the *Press* in Christchurch. While acknowledging that the research was impressive and the factual basis of the book could hardly be faulted, he commented that "Mr von Haast tends to write too steadily as his father's advocate, filially attached to his cause; a measure of judicial detachment was needed and would have been worth the struggle" (*Press*, 2 October 1948:3). Later writers have tended to agree with Pascoe and some have called the book an example of hagiography. I believe this label is inappropriate – it is generally applied to biographies where any negative information is omitted or glossed over. This is



**Figure 4.** Part of a flyer produced by Heinrich von Haast to promote sales of the biography of his father. Alexander Turnbull Library, Haast family papers

certainly not the case with this book where the problem is information overload because nothing is left out.

Viewed from a twenty-first-century perspective, the biography has some defects. Heinrich grew up in the later part of the nineteenth century and has produced a Victorian biography. It is far too long and suffers from a lack of editorial supervision. The issue of bias is open to debate – almost all biographies are written because the author wants to tell the story of the subject. In my judgement, it is generally a fair (and exhaustive) assessment of Sir Julius von Haast, but in a few places Heinrich gets carried away and, having presented the facts, starts to act as counsel for the defence. Yet the fact remains that 75 years after its publication no-one else has written another biography of Haast, nor are they likely to try because there is little new to be said. Recent theses (Caudel 2007; Cooper 2011) and published collections of letters (Nolden et al. 2012; Nolden et al. 2013) have added information but not resulted in much change to the overall story. Heinrich von Haast's biography still stands as the definitive account of Sir Julius von Haast.

## Afterword

Heinrich was bitterly disappointed that Canterbury Museum was virtually unaltered and had been starved of funding since his father's death 60 years earlier, and that the collections had stagnated. There had been plans to build an extension as a centennial project in 1940, but this did not eventuate. In one of the final chapters of the biography, on page 974, he wrote:

*While the citizens of Christchurch see their children being taught Natural Science, for which Haast fought so strenuously, by means of the collections that he amassed with such enthusiasm and energy, they dishonour his Memory by allowing his Monument, the Canterbury Museum, to moulder away.*

The planned centennial wing, commemorating the establishment of Christchurch in 1848, was not built until 1958, several years after Heinrich's death. It was opened by the Governor-General, Lord Cobham, a descendant of one of the earliest English settlers. In his speech he commended the foresight of the colonists in establishing British cultural institutions such as a museum and university, but the name of Haast was virtually ignored (*Press*, 11 November 1958: 12). The only mention he got was in an article in *New Zealand Truth*, a popular weekly characterised by its lack of respect for authority. Under the heading 'Museum Admired but Founder lies Forgotten' Haast's work as founder of the Museum and other achievements in Canterbury were listed, but the reporter then asserted that Haast now lies, "forgotten, lonely and obscure in Avonside Church of the Holy Trinity" (*New Zealand Truth*, 25 November 1958: 22).

Haast's achievements continued to be largely overlooked, featuring in only a very small number of scientific or historical papers before the 1970s. David Galloway, a young botanist and alpine climber studying in Britain discovered a series of letters in the archives of Kew Gardens that Haast had written to Joseph Hooker describing his exploration of the Southern Alps and his botanical discoveries. The resulting paper (Galloway 1976), with extracts from the letters, reminded readers of the importance of Haast's scientific work. About the same time an article by Janet Paul (1977/78) described Haast's sketches of Canterbury mountains and glaciers which formed the basis for a series of paintings by John Gully. These two papers drew attention to the importance of Haast's work exploring and mapping some of the most rugged parts of the Southern Alps as well as his scientific achievements, and have acted as a catalyst for ongoing interest in Haast's career.

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# The Correspondence of Sir Julius von Haast

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This paper describes the correspondence of Sir Julius von Haast (1822–1887), with a focus on the primarily inward correspondence held in the collections of the Alexander Turnbull Library. The review of prior scholarly engagement with the correspondence looks at examples of letters published to date. After describing the correspondence and previous editions the concept for a project to prepare a Haast Bicentenary Edition is then presented.

The overview of the archival holdings, including their arrangement and description, gives an insight into the organisation of the collection, the hierarchical structure of the finding aids and indexing through name authority terms, and how this assists discoverability for researchers.

The review of the publication of letters comprising those published during Haast's lifetime and posthumously, initially in the biography by Heinrich Ferdinand von Haast published in 1948, and then as part of various projects since the collection was donated to the Alexander Turnbull Library, shows the added value achieved through published editions.

In outlining the concept for a project to prepare a scholarly annotated edition of correspondence, the possible arrangement is delineated, presenting letters grouped by language, correspondent, and date. Some of the tasks and requirements of the project are considered, and the options for forms of output in print editions and potential encoding for digital publication are discussed.

As the extant collection held in the Alexander Turnbull Library comprises mostly inward correspondence, the value of looking at other archival holdings for outward correspondence is noted. With the ultimate aim being to bring together the two halves of conversations, gaining a fuller understanding of correspondence networks, and contributing to a richer documentation of nineteenth-century New Zealand history of science and the life and work of Sir Julius von Haast.

**Keywords:** Alexander Turnbull Library, archives, arrangement & description, correspondence, editing, history of science, Julius von Haast, nineteenth century, publishing, transcription, translation.

## Introduction

The inward correspondence of Sir Julius von Haast (1822–1887) (Fig. 1) is held in the collections of the Alexander Turnbull Library, National Library of New Zealand, Wellington.<sup>1</sup> This corpus of correspondence has been the subject of extensive scholarly engagement, resulting in publications ranging from individual excerpts to entire editions of correspondence with individuals, but there is still more to be gleaned from this primary source material in terms of historical and biographical evidence. The review of the letters published to date and discussion of these legacy formats and prior projects, leads to a proposal for a new project to prepare archival manuscript letters for publication.

This overview of the archival holdings in the Sir Julius von Haast Collection (ATL-Group-00475),<sup>2</sup> including their arrangement and description, gives an insight into the archival organisation of the collection, the hierarchical structure of the encoded finding aid and indexing through encoded name authority terms, and how this assists discoverability for researchers.<sup>3</sup>

The legacy interfiling and sorting of letters are noted, with a lack of clear delineation between the main corpus of inward correspondence and Haast's autograph collection of letters originally addressed to others, resulting in blurred provenance and loss of original order in contravention of archival principles.

The review of the publication of letters provides an historical overview beginning with examples of those published during Haast's lifetime, when letters he wrote were published in newspapers and journals or formed the basis of articles. Posthumously, his papers moved into the custody of his son Heinrich Ferdinand von Haast (1864–1953), who eventually prepared a monumental biography of his father under the title *The Life and Times of Sir Julius von Haast*, self-published in 1948. This biography incorporated a rich selection of letters and excerpts from letters, including translations. Once the biography had been published, the papers were donated to the Alexander Turnbull Library in successive deposits between about 1948 and 1953.

Identifying the various efforts to publish selected letters and editions of correspondence since the collection was donated to the Alexander Turnbull Library gives an insight into scholarly engagement with the collection, and the contribution and added value achieved through published editions in print and digital formats.

In outlining the concept for a project to prepare a scholarly annotated edition of correspondence, the possible arrangement is delineated, following the major language subdivisions, and within each language group the arrangement by correspondent in alphabetical order, and the letters of each correspondent in chronological order. This approach would align with what was originally attempted and aimed for in the arrangement of the collection by the Alexander Turnbull Library.

The requirements of such a project to prepare archival manuscript letters for publication are then considered, including the tasks of editing, describing, transcribing, translating, annotating, proofing, formatting and encoding. The options for forms of output in print editions and encoding for digital publication are considered,<sup>4</sup> and the hosting of such a digital edition is explored.

The fact that the extant collection comprises mostly inward correspondence provides an opportunity to look at the holdings of other archival institutions and private collections, to see where Haast's outward correspondence can be identified and integrated into the edition. Any opportunity to bring together the two sides of a given correspondence will result in a deeper insight into Haast's conversations, a fuller understanding of his correspondence networks, and ultimately contribute to a richer documentation of nineteenth-century New Zealand history of science and the life and work of Sir Julius von Haast.

## **The Correspondence**

The Sir Julius von Haast Collection in the Alexander Turnbull Library, is also known as the Haast Family Collection as it includes the papers of two generations thus making the family the provenancial entity, it is a large multi-format archival collection of considerable historical research value and international significance, as recognised by the inscription in the New Zealand UNESCO Memory of the World register in 2019. The collection comprises material in many formats, including papers, photographs, drawings, paintings, maps and various objects ranging from medals to furniture (Nolden 2017).

The letters in the collection represent the complete known extant inward correspondence of Haast. The collection also includes some examples of outward correspondence, mostly to members of his

family. There are also letters addressed to others that were not written by Haast himself, which are described below as Haast's autograph collection.

Haast was a very regular and prolific correspondent and appears to have kept most of the letters he received, including personal correspondence (from family and friends), scientific correspondence (formal and informal communications between scientists), business correspondence (relating to his professional activities in a variety of capacities and roles), official correspondence (mostly from provincial and central government administration and in relation to his role as New Zealand Commissioner), and his diplomatic correspondence (comprising letters addressed to him in his consular role).

When Haast died his papers, including the correspondence, were inherited by his son Heinrich von Haast in accordance with the will, which states: "I bequeath all my medals, Diplomas, Manuscripts,



**Figure 1.** Photographic portrait of Sir Julius von Haast seated with items of correspondence. Photograph by Alexander Bassano, London, 1886. Alexander Turnbull Library PAColl-4711-1

Scientific Correspondence and presentation copies of books unto my Son Heinrich v. Haast as and in the nature of heir-looms” (Christchurch Probate Files CH1457/1887, Archives New Zealand).

The inward correspondence dates from 1858, when he arrived in New Zealand, to the last year of his life in 1887. The letters have been arranged in archival series by language. The language of the letters, English, French, German and Italian, determines this broadest delineation. It should also be noted that the Italian language letters in the Italian and other letters series actually belong to the autograph collection described below, rather than the inward correspondence, as Haast himself does not appear to have corresponded in Italian.

The letters in each series are housed in folders arranged more or less in alphabetical order according to the surname of the correspondent. This is where the work, undertaken by the Alexander Turnbull Library staff when the collection was originally processed, encountered difficulties, resulting in a range of inconsistencies.<sup>5</sup> This was largely due to the misidentification of contributors (i.e. correspondents) and the disassociation of individual pages of letters, mistakenly assumed to be fragments, and the ignoring of original identifiers annotated on the first page of letters, during the process of sorting and imposing a new order of arrangement.

The letters from a given correspondent, often spread across multiple folders, were then arranged more or less in chronological order, based on the reading or misreading of dates.

The finding aid is a legacy one, originally in the form of a typescript listing or manuscript papers inventory, which was then used as the basis for the first electronic Collection Management System known as TAPUHI introduced in 1992, and later migrated to the EMu (Electronic Museums) database rendered via IMu (Internet Museum) as Tiaki, the Alexander Turnbull Library’s online catalogue for unpublished collections (Fig. 2). Over time improvements were made to the finding aid, resulting in the increased accuracy of metadata and enhanced discoverability for researchers (Nolden 2017).

The level of description in the catalogue is mostly to folder level and includes the date range of the letters and the names of correspondents and institutions they were affiliated with based on printed letterheads.<sup>6</sup> The names of correspondents and institutions are in the form of encoded name authority index terms.<sup>7</sup> These name authority terms enable material relating to the same named entity to be linked within the Collection Management System (i.e. the finding aid), across the entire unpublished collections holdings of the Library.

Each of the name authority entries has an associated role in the descriptive record. In most instances the correspondents will have the role of Contributor, while other names mentioned in the letters are assigned the role of Subject.

Biographical information about a correspondent is captured as part of the metadata in the Biography/History field in the name record, as it applies to the collection material this name is linked to. For example, the name authority might be linked to a carte de visite portrait as Subject and to a folder of letters as a Contributor, both within the Haast Collection.

## **Haast’s Autograph Collection**

Letters Haast collected, but which were not addressed to him, have all been interfiled in the main correspondence series by the Library. Most of this material from Haast’s autograph collection can be identified as it falls outside the date range of the letters addressed to Haast and many of them are clearly addressed to others.

The screenshot shows the online finding aid for the Haast family collection. The page is titled "Haast family: Collection" and includes a search bar with the keyword "Sir Julius von Haast". The collection is identified by the reference number ATL-group-00475. The summary section provides key details: the title is "Haast family: Collection", the reference number is "ATL-Group-00475", and the date range is "1842-1948". The physical description is "Manuscripts, photographs, drawings, and curios". The extent is detailed in a table:

Quantity	Type	Details
405	b/w original photographic print(s)	
385	folder(s)	
165	drawing(s)	
96	curio(s)	
7	b/w photo-mechanical print(s)	
2	album(s)	
1	volume(s)	

The language(s) are listed as English, French, German, and Italian. The level is "Collection" and the repository is "Alexander Turnbull Library, Wellington, New Zealand". The access statement is "Partly restricted material". The biography or history section states that Sir Julius von Haast (1822-1887) created the collection from the time of his arrival in New Zealand in 1858 to the time of his death in 1887. The collection comprises correspondence, manuscripts, documents, certificates, and printed matter, including newspaper cuttings, photographs, drawings and sketches, maps, and curios. The papers are arranged in series of 'Official papers and correspondence', 'Personal correspondence', 'Manuscripts', and 'Printed material'. The letters are also divided into series by language, with most of the English language correspondence accommodated in the series 'Personal correspondence', and letters in other languages in the series 'French letters', 'German letters' and 'Italian and other letters'. The photographs consist of two albums of landscape photographs, and portraits in carte de visite and cabinet card format. The drawings, paintings, and prints part of the collection consists mainly of sketches executed in pencil, ink, and watercolour, and largely comprise Haast's working drawings from his field survey work in the provinces of Nelson, Canterbury, and Westland. Many feature panoramic views of the Southern Alps, capturing cartographic and topographic information with notes on the geological features, vegetation, and annotated place names. The collection also features curios, including medals and awards, along with porcelain and furniture. The papers of Wellington solicitor Dr Heinrich von Haast mainly relate to his work as an editor and writer, especially the preparation of the biography of his father published in 1948. The arrangement section notes that various parts of the collection were formerly described in separate finding aids based on format. The separate components have been brought together as a collection to reflect the common provenance of the material. The custodial history section states that the papers of Sir Julius von Haast were inherited by his son and biographer Heinrich Ferdinand von Haast, who donated them to the Library along with his own papers after publishing 'The Life & Times of Sir Julius von Haast' in 1948, with some residual material from his estate being deposited by his widow Mary von Haast following her husband's death in 1953. The acquisition information section notes that the collection was donated to the Alexander Turnbull Library by Heinrich Ferdinand & Mary von Haast, Wellington, 1948-1953. The processing information section states that the collection was previously dispersed among different curatorial sections based on format and described in separate groups of format-based descriptive records, were brought together in this finding aid based on common provenance in 2020. The other descriptive data section notes that the title was supplied by the Library. The note section states that the collection is inscribed in UNESCO New Zealand Memory of the World register in 2019.

**Figure 2.** Collection record of the online finding aid for the Haast Family Collection in the Alexander Turnbull Library

The autograph letters Haast collected fell into two categories: Firstly, a letter from Leopold von Buch (1774–1853) to Heinrich von Dechen (1800–1889), gifted to Haast by the latter, along with a no longer extant letter written by Alexander von Humboldt (1769–1859); and secondly, a group of 40 letters addressed to the Bonn mineral dealer August Krantz (1808–1872) in French, German, and Italian from the period 1849–1851, and a single letter written in 1887.

As mentioned above, all the Italian letters in the collection are in fact addressed to Krantz, as Haast does not appear to have corresponded in Italian with his colleagues and friends in Italy.

The autograph collection represents earlier contributors in the fields of mineralogy and the broader geosciences. It becomes apparent from a letter written to Haast by his friend and mentor Dechen in Bonn, dated 9 February 1887 (ATL MS-Papers-0037-168-2), that during his visit to Bonn in 1887 Haast had expressed a desire to bring an original holograph Alexander von Humboldt letter to New Zealand.<sup>8</sup> Dechen then sent him both the Buch and Humboldt letters. But while the lesser known Buch is now represented in the collections by the letter dated Berlin, 25 December 1851 (ATL MS-Papers-0037-166-2), there is no record of the Humboldt letter (which was dated 4 March 1853) in the extant collections of the Library.



Using this example, we are able to glean details relating to the provenance and significance of some of the material interfiled among the main sequences of inward correspondence.

“Von Buch” was the cognomen bestowed on Haast when he was elected as a Fellow of the German Academy of Sciences Leopoldina (now the German National Academy of Sciences). All fellows had cognomen at the time, and Haast was Von Buch IV. Haast was justly proud of this association, as he had previously discussed the elevation crater theory of Buch with the geologist Ferdinand von Hochstetter (1829–1884) in his early correspondence (Nolden 2013: 55).<sup>9</sup> The Buch letter allows a scholar to glean some of Buch’s humour, as he describes the personality of Sir Roderick Impey “Vanity” [Murchison] in the letter.<sup>10</sup> Dechen makes it clear in his 1887 letter to Haast, that he had chosen to gift him the Humboldt letter in this pairing as it describes the death of Buch.

The autograph collection of letters addressed to Krantz comprises letters from friends, colleagues, clients and collectors. Many of these feature lists of minerals being ordered or offered and provide a rare insight into the operations of the head of one of the most successful mineral dealerships in Europe, who had just shifted his enterprise from Berlin to Bonn in 1850, the year from which most of these letters are dated. Haast who had close connections with the firm, may have worked with Krantz prior to his move to New Zealand and certainly stayed with Krantz’s son-in-law Theodor Hoffmann during his visits to Bonn in 1886–1887. It would appear most likely that the letters were acquired at this time, probably also in the form of a gift.

Heinrich von Haast makes reference to this group of letters. He noted that:

*[A] bundle of business letters (1849–1851) to Dr. August Krantz, a dealer in minerals, first in Berlin and then in Bonn, from various mineralogists, some giving lists of minerals and prices, preserved by Haast, suggest that he was either connected with Krantz’s business or was himself a dealer in mineral specimens (Haast 1948: 3).*

This strongly suggests that Heinrich von Haast was not the person responsible for interfiling this tranche or bundle of letters with Haast’s inward correspondence and that this new order was only imposed after the collection came to the Library. It is not clear whether Heinrich von Haast made the connection between these letters and the later visit of Haast to Bonn (where he was hosted at the home of the director of Krantz’s establishment), when he was actively seeking other autograph letters for his collection. It is highly unlikely that Haast would have acquired this business correspondence from Krantz before his original departure from Europe in 1858, and packed these in his teak travelling trunk alongside the pair of duelling pistols and Masonic paraphernalia, but more likely he acquired them in 1886–1887 in Bonn.

The Italian letters addressed to Krantz are from Arcangelo Scacchi (1810–1893), Director of the Museo Mineralogico di Napoli, from the period 1849–1850 (ATL MS-Papers-0037-237-1 to -7). The French and German letters, however, are from a variety of individuals (Appendix: Table 1).

The Haast autograph collection, letters collected by Haast but addressed to others, is described here for the first time, and should be seen as a discrete sub-corpus or subseries of the Haast Collection. In considering the options for the preparation and publication of an edition of Haast correspondence below, the letters that might be attributed to the autograph collection may best be served by a standalone publication.

## Published Correspondence

Haast's letters published during his lifetime appeared in newspapers and journals. Examples of these may be found in New Zealand and Europe. Early letters to the editor were published in newspapers in Nelson during the time of Haast's first independent exploratory surveys in New Zealand following Hochstetter's departure for Europe after his geological surveys had been completed. Some of the more prominent examples are letters sent to European contacts, which were then communicated via journals in the form of published letters, articles or notices reporting on Haast's latest explorations or discoveries.

Hochstetter used excerpts from Haast's letters as communications to Viennese learned societies, and August Petermann (1822–1878) of Gotha used them for articles in the geographical journal he edited.

Heinrich von Haast first published a special article prepared for a newspaper in which he used extensive excerpts from letters by Joseph Hooker to Haast (Haast 1929). He then looked at the correspondence in detail while preparing his biography of Haast, often known by the abbreviated title of *Life & Times* (Haast 1948). In this monumental work, one of the largest biographies ever published in New Zealand, comprising over 1,000 pages, Heinrich von Haast makes extensive use of his father's correspondence. This included excerpts of letters in languages other than English, quoted as English translations. These excerpts give the biography an authenticity and immediacy, and represent the first instance of these particular letters being published. The 1948 biography is built on three major groups of sources: Haast's publications and reports, contemporary newspapers and other secondary sources, and the correspondence.

Heinrich von Haast laments the fact that he had to rely almost entirely on inward correspondence for the work, as the only outward letters by Haast were those addressed to his own family, including young children (Haast 1948: xii). Despite the one-sided nature of the material available to him, Heinrich von Haast had an enormous advantage over others working on the life of Haast at the time, who had no access to these archival primary sources, and consequently the work of Burdon has been largely overlooked (Burdon 1950).<sup>11</sup>

Since the letters were deposited with the Alexander Turnbull Library in 1948–1953 (Taylor 1962), there have been numerous examples of individual letters and selections of letters published and cited. Some examples are also found in academic theses and dissertations (Nolden 2002, 2007).

A brief survey of this literature and scholarship reveals the intrinsic research value of correspondence, as historical and biographical evidence. To mention just a few, Janet Paul, Art Librarian at the Alexander Turnbull Library from 1971 to 1980, wrote a piece on John Gully's watercolours, which are based on Haast's alpine sketches, with the title 'Twelve Water Colours of Glaciers in the Province of Canterbury, Julius von Haast and John Gully: collaborators' (Paul 1974). In that article excerpts of John Gully's letters to Haast are effectively integrated in the text. The paper was later also published in *Art New Zealand* (Paul 1977/1978). Paul also wrote an article for the *New Zealand Alpine Journal* with the title 'Painted mountains: Alpine painting in New Zealand before 1890' (Paul 1977), in which she quotes letters from John Gully to Haast to help document this key collaborative relationship between the artist and the explorer.

Also in the *New Zealand Alpine Journal*, we find an article by David Galloway, with the title 'Julius von Haast's botanical explorations' (Galloway 1976), in which a series of letters from Haast to Joseph Hooker from the period 1861 to 1867 is reproduced in a carefully prepared scholarly

edition. The paper concludes with the letter dated 26 June 1881, in which Haast asks for support to be nominated for the CMG (Companion of the Most Distinguished Order of Saint Michael and Saint George). This article is an early example of an academic repatriation of Haast's outward correspondence. The letters held at the Archive of the Royal Botanical Gardens at Kew, which had not been identified in response to the earlier enquiries of Heinrich von Haast in the 1940s, were worked on by Galloway during his time at the British Museum. More recently Simon Nathan also visited Kew in preparation of the edition of Haast-Hooker correspondence (Nolden et al. 2013).

The three extant letters by the Auckland-based Bohemian cabinetmaker Anton Seuffert (1815–1887) to Haast, translated by Frank Hoffmann, were published in exemplary fashion, with full-colour reproductions of the holographs, by Brian Peet (Peet 2008: 188–191). The letters of William Colenso (1811–1899) were published by Ian St George (St George 2019). Other scholars who have cited Haast letters in their research include Ruth Barton in her work on Haast, the moa and museum exchanges and research (Barton 2000). Examples of Haast correspondence have also been included in exhibitions (Nolden 2008).

We find that letters are an important source for gaining an understanding of relationships between individuals. In an article by Graham Bagnall (1912–1986) on the Swedish naturalist Sven Berggren (1837–1917), his letters to Haast are cited, and the contrast noted between what Berggren confided in his diary and what was committed to paper in his letters (Bagnall 1970).

In 1984 visiting Fulbright Research Scholar, Jacob William Gruber (1921–2019) completed research at the Alexander Turnbull Library and cited letters from Haast to Richard Owen in an article. Gruber noted at the time that:

*[M]anuscript collections in the Alexander Turnbull Library provide an important body of archival data for an understanding of the development of science during New Zealand's earlier decades ... [For example,] the large mass of literary material which is the relict of the life and work of Sir Julius von Haast, dutifully preserved, ordered and interpreted by his son .... Except for the occasional use of an item here and there from the collection for purposes alien to the life and work of Haast himself, the collection has been virtually ignored by scholars since its acquisition by the Library (Gruber 1987).*

Haast correspondence has been incorporated into a number of major correspondence projects, including the Darwin Correspondence Project;<sup>12</sup> the Correspondence of Ferdinand von Mueller Project;<sup>13</sup> and the John Tyndall Correspondence Project.<sup>14</sup> Letters from both sides of the correspondence between Haast and William Branwhite Clarke (1798–1878) have also been published (Moyal 2003).<sup>15</sup>

The letters of Hochstetter to Haast were presented in the form of an annotated scholarly edition, both as transcriptions and translations, as the core of the author's PhD thesis (Nolden 2007), with the English translations being subsequently published by the Geosciences Society of New Zealand (Nolden 2013).

The Hector Correspondence project, led by Simon Nathan, was an offshoot of a research project that Nathan undertook while preparing the first biography of Sir James Hector (1834–1907), published in 2015 (Nathan 2015). This correspondence project enabled a number of contributors to work with Nathan on transcribing and annotating several series of Hector's correspondence and those of his contemporaries. The project resulted in eight volumes of published letters, all of which have also been made available in digital format as downloadable pdf-files, enabling

word-searchable access to this rich archive. Five of the volumes feature Haast correspondence (Burns and Nathan 2012, Mildenhall et al. 2013, Nolden et al. 2012, Nolden 2013, Nolden et al. 2013).

As with the Hector correspondence project, where the initial output was in print form, followed by digital 'ebook'-like editions, in the Darwin Correspondence and Ferdinand von Mueller correspondence projects the initial versions have also been print editions, with the resulting output being subsequently made available on digital platforms.

Digital editions come in various forms, ranging from pdf-file format digital copies of books to fully encoded machine-readable editions on dedicated platforms.

Epsilon is the name of the digital platform developed by the Darwin Correspondence project team at Cambridge University Library. Launched to the public in 2018, it brings together the content and metadata of a number of projects,<sup>16</sup> and, relevant to this section of the paper, features a substantial number of letters addressed to Haast that are held in the Alexander Turnbull Library.<sup>17</sup>

Preparing archival manuscript letters for publication has a long tradition and some established conventions with innumerable variants, just as there are numerous approaches and rules for citation. The well-established formats were largely dictated by the needs of print editions. However, in more recent years print editions have increasingly been accompanied by digital editions (McCarthy 2018). Some of the advantages of the digital format include the ability to make adjustments and enhancements over time. Moving from digital copies of books towards editions designed for dedicated platforms has opened up the opportunity to fully utilise all that encoding and markup have to offer. One of the model exemplars of a successful project to produce a digital edition, including English translations, with full TEI markup and encoding is the Vincent van Gogh Letters Project.<sup>18</sup> The Epsilon platform also uses TEI 5 markup and xml file format for the correspondence editions.

So what does TEI 5 markup and the use of xml formatting mean in the context of publishing letters? It has to be acknowledged that since the time when the early versions of the Text Encoding Initiative standard were released, a great deal of progress has been made in ensuring that the needs of correspondence are more specifically addressed. This has been the focus and purview of a special interest group, known as the TEI Special Interest Group on Correspondence,<sup>19</sup> which has developed the *correspDesc* and the dedicated manual for the encoding of correspondence (Dumont et al. 2019–2020). Other important developments aligned with these initiatives are the aggregated search databases enabling searches across multiple correspondence projects, such as *correspSearch*.<sup>20</sup>

### **Haast Bicentenary Edition: A Proposal for a New Edition of Haast Correspondence to Mark the Bicentenary of his Birth**

Marking the 200<sup>th</sup> birthday of Haast is an opportunity to look at the potential for a project to prepare an edition of Haast correspondence. The collection of inward correspondence comprises several thousand letters, of which only several hundred have already been published.

The project would aim to build an edition of letters based on the following hierarchical structure and arrangement: language (English, French, German); correspondent (in alphabetical order); chronology (in original date order).

For the purposes of providing an example, a review of the German language letters shows this series comprises 75 folders of letters from 185 identified correspondents writing to Haast from Germany, Austria, Switzerland, Australia, New Zealand, the United States and elsewhere during the period 1859 to 1887 (Appendix: Table 2).

From the German series there are a number of groups of letters that have been researched in detail: those from Ferdinand von Mueller (Home et al. 1998–2006), Eugen von Guérard (Darragh and Pullin 2018), and Ferdinand von Hochstetter (Nolden 2013). The letters from these three correspondents have all been published in full. In the case of Mueller (MS-Papers-0037-202 to -214 etc.), the 70 letters have all been published on Epsilon as part of the Ferdinand von Mueller Correspondence Project, in both transcription and translation. The Eugen von Guérard letters were published as annotated English translations (Fig. 3), and the Hochstetter letters (MS-Papers-0037-180 to -191 etc.) as annotated scholarly translations, while the transcriptions are included in the unpublished PhD thesis (Nolden, 2007).

Another group of letters to Haast published as an annotated scholarly edition are those by Constantin von Ettingshausen (1826–1897), Franz Foetterle (1823–1876), Wilhelm Karl von Haidinger (1795–1871), Franz von Hauer (1822–1899), Guido Stache (1833–1921), Ferdinand Stoliczka (1838–1874), and Karl von Zittel (1839–1904), all of whom were scientists at the Imperial Austrian Geological Survey (Nolden et al. 2016a), and by Eduard von Suess (1831–1914) of the University of Vienna (Nolden et al. 2016b).

The letters of Andreas Reischek (1845–1902) (MS-Papers-0037-217 etc.) have also been transcribed and are included in an appendix of an MA thesis (Nolden, 2002). Many other letters written in German have also been transcribed but remain unpublished as part of the author's work in progress.

The English language correspondence comprises letters from close to 500 correspondents, including many notable contemporaries in New Zealand and eminent scientists around the world. The French series comprises 140 letters addressed to Haast by 31 correspondents (Appendix: Table 3) in 10 folders (MS-Papers-0037-153 to -162).

The Alexander Turnbull Library also holds surrogate copies on microfilm of some outward correspondence, including letters from Haast to Sir Charles Lyell (1797–1875) between 1862 and 1869, held by Edinburgh University Library (ATL Micro-MS-Coll-20-1676). These letters were transcribed and extensively annotated by Rodney Grapes (2012, 2013a, 2013b). Also on microfilm are the letters of Haast to Henry Augustus Ward (1834–1906), from the period 1876 to 1884, held at University of Rochester Library, New York (ATL Micro-MS-0086). These are both examples of outward correspondence that was unknown to Heinrich von Haast at the time when he was preparing the biography of his father.

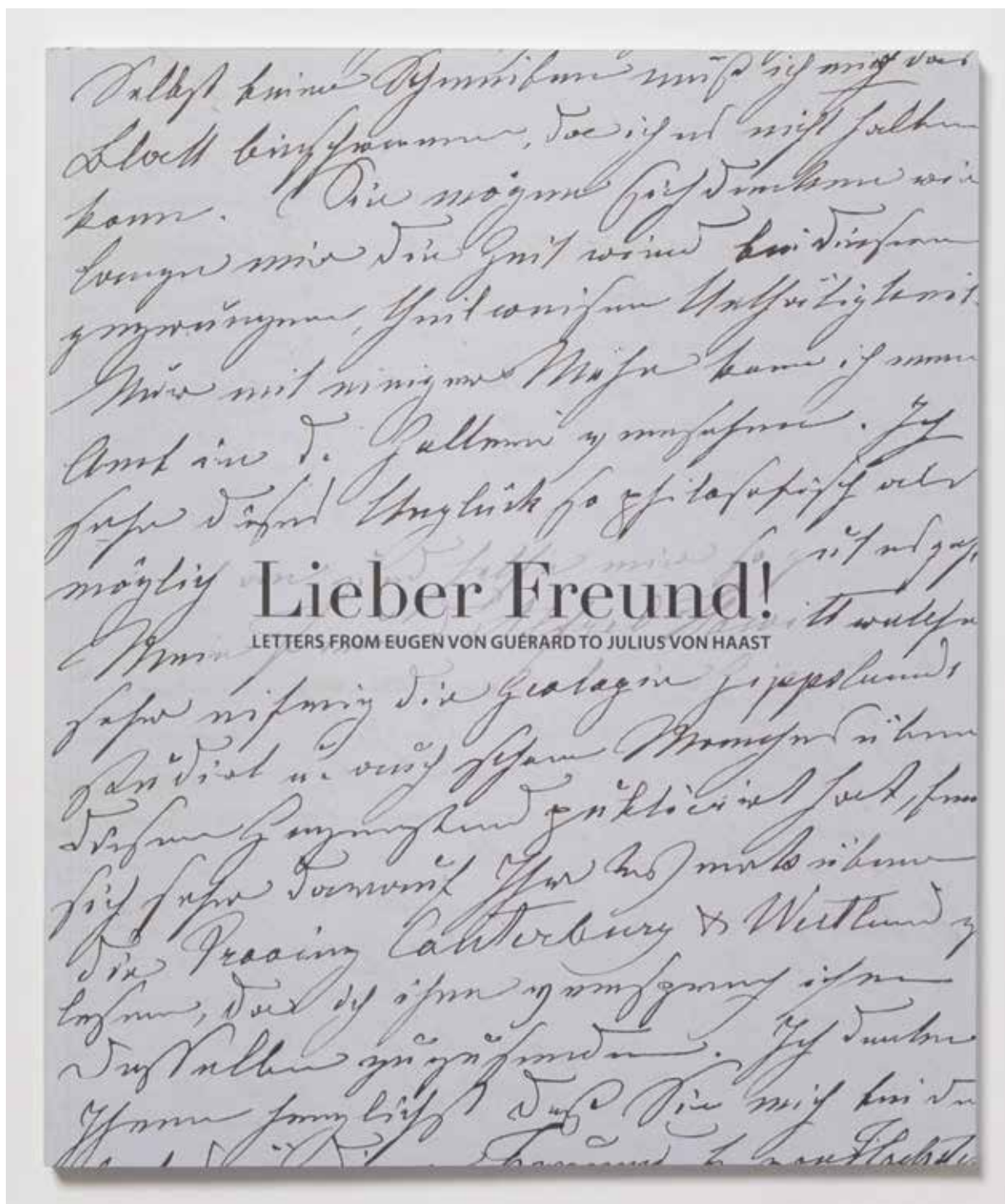
## **Preparing Archival Manuscript Letters for Publication**

On a practical level the tasks and processes of preparing archival letters for publication are both varied and challenging. Some of the key elements are:

### **Editing**

The editorial role and tasks are both central and broad ranging, from the editing of the individual letters and the resulting manuscript to oversight and management of the project or sections of the project. This might include the writing of introductory texts and possibly biographical introductions to the correspondents.





**Figure 3.** *Lieber Freund!* Letters from Eugen von Guerard to Julius von Haast front cover (Darragh and Pullin 2018)

### Describing

The letters have only been described to folder level by the Library and most of the correspondents identified. The task of describing the letters falls into two subtasks.

Firstly, the capture of metadata for each of the letters. Based on examples of Haast letters already in Epsilon, this would include: Author, Date, Place, To, Series, Language, Physical Description, Extent, Unit ID, Repository, Project ID, etc. Most of the items on this list are fairly standard metadata and simply need to be formatted consistently.

Secondly, and this is one of the entries already found in the foregoing list, is optimally completing the Physical Description. This is something that would ideally require access to the original letters (as it is impossible if accessing microfilm, and only to a limited extent possible when working with digital surrogates). Depending on the conventions to be followed for the edition, this could include a full physical description of the letters as objects, capturing the type of paper (e.g. wove, laid), watermarks, letterheads, seals, ink, annotations, folds and dimensions. Other material to be described includes enclosures and any extant envelopes, complete with postal markings (e.g. Fig. 4). This contributes a word picture of the original object, capturing and preserving something of the original which would otherwise be lost in a digital edition (noting that images or digital surrogate files are not stored in Epsilon for example).

### Transcribing

The task of transcribing the letters is one of the most challenging and interesting. Although the common factor of the project is the recipient of the letters, undertaking this task means reading the handwriting of hundreds of individuals in several languages from various backgrounds writing over a period when handwriting styles were rapidly changing from one generation to the next.

The palaeographic skills and abilities called for are rare and fast disappearing, and fewer and fewer people are accustomed to reading historical manuscript material. Consequently, for ever increasing numbers this material is indecipherable and illegible. This is almost an inherent vice in this type of archival material, perhaps comparable to the obsolescence of digital file formats making files unrenderable. The loss of informational value in holograph (e.g. Fig. 5) and manuscript material in its original form, implies that the preparation of scholarly editions is an important means of preserving cultural and historical knowledge and ensuring this remains accessible to future generations of scholars.

### Translating

It might be considered desirable to include English language translations of the French and German letters. In this case the effort required to produce this section of an edition is at least doubled. The translations need to be well planned, taking into account the language of the period when the letters were written. There is also a need for a thorough understanding of the context and subject matter of the communications, in order to convey the spirit and meaning of the original, combined with a degree of fidelity to the source language, the translation of which needs to be readable and natural in the target language.



**Figure 4.** Envelope of a letter addressed to Julius von Haast by Georgiana von Hochstetter. Alexander Turnbull Library MS-Papers-0037-191-12



GEOLOGICAL SURVEY OFFICE

14. Gladbach. 11 May 1864. —  
8 Uhr Abend

Herrn Dr. Hochstetter

Wohl bey, ich mit gleichem Anfang, so wie mein  
 Liebes Freund von einer Reise, die ich gerade beabsichtige  
 zu machen beabsichtigt ist. Ich beabsichtige die meiste  
 Zeit zu reisen, die meiste Zeit aller Tage, und ich  
 glaube, ich werde die meiste Zeit der Reise  
 genießen, wie es gewöhnlich ist, wenn man reist.  
 Ich bin sehr dankbar, daß Sie mich in dieser Hinsicht  
 schreiben, und ich werde mich sehr freuen, wenn  
 Sie mir die Nachricht geben, daß Sie sich auf den  
 Weg machen, den ich Ihnen empfohlen habe.  
 Ich werde mich sehr freuen, wenn Sie sich  
 auf den Weg machen, den ich Ihnen empfohlen habe.  
 Ich werde mich sehr freuen, wenn Sie sich  
 auf den Weg machen, den ich Ihnen empfohlen habe.  
 Ich werde mich sehr freuen, wenn Sie sich  
 auf den Weg machen, den ich Ihnen empfohlen habe.

Dr. v. Haast  
 Herr Dr. Hochstetter  
 Gladbach  
 11. Mai 1864

Figure 5. Holograph letter from Julius Haast to Ferdinand Hochstetter, dated 11 May 1864. Hochstetter Collection Basel

### **Annotating**

Working with the correspondence of the more universal scholars and scientists of the nineteenth century, whose professional engagements and interests span wide ranging disciplines, means that producing authoritative annotations requires extensive research and a network of subject matter experts to call on.

Annotations are the key to adding real value to the edition. Consistency is one of the challenges and well-established conventions for formatting are essential.

### **Proofing and formatting**

Beyond the core purpose of checking for orthographic and typographical accuracy, this is above all a consistency check and quality control exercise, while formatting for print publication is both an extension of this with potential added graphic design elements.

### **Encoding**

Converting files to xml formats and TEI markup, including validation, is the final step for digital publication.

### **Outward Correspondence**

As more and more archival holdings are made increasingly discoverable via online finding aids and catalogues, and institutions are documenting their collections in more detail, there is a gradually increasing opportunity to virtually reconnect the two sides of correspondences, often held on opposite sides of the globe.

The one-sided nature of the extant correspondence has long since been an obstacle to gaining a fuller appreciation and understanding of Haast, as Heinrich von Haast already noted in 1948:

*Nor were there letters of Haast's extant, save a few to his young children and a series written to me from England in 1886 and 1887, mostly concerned with Museum and private business. There were some thousands of letters from other scientists to be perused, but practically none of Haast's letters to them.*

He goes on to observe that “from their replies much of the more intimate side of Haast's life had to be inferred, a difficult task”, and finally, “The same difficulty occurs in scientific correspondence where the letters of Haast's correspondents but not of his own have been preserved” (Haast 1948: xii).

In setting out to produce a new edition of Haast correspondence, one of the greatest challenges and opportunities will be to determine what extant holdings of Haast's outward correspondence can be identified and potentially included in the edition. The rewards of such an undertaking are evident from the examples of the more complete, two-sided conversations between Haast and Hooker (Nolden et al. 2013), and Haast and Hector (Nolden et al. 2012), published to date.

### **Early Extant Letters by Haast**

Given that relatively so little is known about Haast's early life and career, from the period prior to his arrival in New Zealand in 1858, any correspondence from this time may be seen as being of special biographical and evidential value.

An example of this is an early extant letter, dated 18 January 1853 from Milan, which also gives Haast's permanent address at the time, as Mainzer Chaussee 45, Frankfurt am Main. This letter is addressed to Carl Thomas Mozart (1784–1858), the second son, and the elder of the two surviving sons, of Wolfgang Amadeus Mozart (1756–1791) and his wife Constanze Mozart (1762–1842). The letter is held in the collections of the Mozarteum in Salzburg<sup>21</sup> (Fig. 6).

A number of letters by Haast from the early period are held in the Staatsbibliothek zu Berlin and are discoverable in the Kalliope Union Catalogue.<sup>22</sup> This includes a series of letters to Aloys Fuchs (1799–1853). A letter held in Basel, Switzerland, from Frankfurt am Main on Steinhardt & Haast letterhead written during the year 1848 provides confirming documentary evidence of Haast's business partnership with Carl Christian Steinhardt.<sup>23</sup>

These early letters shed further light on Haast's connections and standing in musical circles and provide additional supporting evidence for his travel and movements, which have been hinted at in the literature, but remain largely unsubstantiated.

## Conclusion

The correspondence of Sir Julius von Haast has been described and reviewed, along with its various published manifestations and editions. The research value of the letters is apparent from

The screenshot displays the 'Mozart Letters and Documents - Online Edition' interface. At the top, there is a navigation bar with links for Home, Documents, Project Status, Editorial Guidelines, Abbreviations, and Impressum / License. A date stamp '18 Jan 1853' is visible in the top right corner. Below the navigation bar, a metadata table provides details about the document:

Typ, Datum: Brief, 1853-01-18	Quelle: Salzburg (AT), Internationale Stiftung Mozarteum, Bibliotheca Mozartiana	Lesfassung
Autor: Haast, Julius Johann Franz von (1822-1887)	Adressat: Mozart, Carl Thomas (1784-1858)	Transkription
Ort: Mailand	Ort: Mailand	Seiten 1 2 3 4 5 6 7 8
	Umfang: 1 Blatt (Briefbogen) mit 2 beschr. S. (27,5 x 45 cm)	

The main content area is divided into two columns. The left column contains a transcription of the letter, starting with 'Herzlich bedauernd, Ihnen vor meiner Abreise verehrtester Herr Mozart nicht mehr meinen Besuch machen zu können, weil mir dazu nicht mehr die Zeit bleibt, sage ich Ihnen auf diesem Wege ein herzliches Lebewohl.' The right column shows the original handwritten letter on aged paper, with the signature 'J. F. Haast' and the date '18 Jan. 1853' clearly visible. A ruler is placed vertically to the right of the letter for scale.

**Figure 6.** Haast letter to Carl Thomas Mozart, dated 18 January 1853, in Mozart Letters and Documents - Online Edition. Stiftung Mozarteum Salzburg



the editions published to date, and those cited in other publications have functioned as primary sources of scientific, historical and biographical information.

Working towards the proposed fully annotated edition will enable new connections to be established and the potential of aggregation and digital intersections to be more fully realised.

Preparing a new edition of Haast correspondence will enable this resource to become fully discoverable and searchable, thereby contributing to a fuller documentation of the history of science in New Zealand and the life of Sir Julius von Haast.

## Acknowledgements

The author is much indebted to Thomas A Darragh of Melbourne and Rodney Grapes of Wellington who peer reviewed the manuscript, for their most helpful comments and suggestions. Special thanks to Simon Nathan for constructive feedback and George Hook for editorial input. Acknowledgement and recognition are also given for the support of the Alexander Turnbull Library, National Library of New Zealand, Wellington.

## Endnotes

- 1 The Alexander Turnbull Library was opened on 28 June 1920. It holds New Zealand's national documentary heritage collections and is now a division of the National Library of New Zealand.
- 2 Also known as the Haast family Collection. In 2019 the Sir Julius von Haast Collection was inscribed in the New Zealand UNESCO Memory of the World register (39 Sir Julius von Haast Collection, New Zealand Register, UNESCO Memory of the World Aotearoa New Zealand [<https://unescomow.nz/inscription/sir-julius-von-haast-collection> (accessed 22/07/2022)]).
- 3 The Alexander Turnbull Library online finding aids in Tiaki, the Collection Management System is xml based, with the descriptive records EAD (Encoded Archival Descriptive) encoded and the name authority records or indexing terms are EAC-CPF (Encoded Archival Context - Corporate Bodies, Persons, and Families) encoded.
- 4 The TEI (Text Encoding Initiative) based on XML (Extensible Markup Language) format encoding.
- 5 Since the Haast papers were deposited with the Alexander Turnbull Library in 1948–1952 (Taylor 1962), the correspondence has been sorted or arranged, rehoused in folders, stored vertically in metal-edged Hollinger boxes, described to folder level and microfilmed for preservation and access.
- 6 The descriptive records generally do not tend to provide details of the number of letters or leaves of correspondence, nor the dates of the individual letters in any given folder.
- 7 The EAC-CPF (Encoded Archival Context - Corporate Bodies, Persons, and Families) encoded name authority records serve as indexing terms, within the Library's collection management system.
- 8 A holograph by definition is a manuscript handwritten by the person named as its author, and is here used to describe manuscript letters written by the signatory of the letter.
- 9 The elevation crater theory was an idea of the eighteenth century, which was revived by Leopold von Buch with supporting observations from Alexander von Humboldt. Humboldt and Buch considered basaltic volcanism to be linked to elevation craters (Elevation crater, Wikipedia, [https://en.wikipedia.org/wiki/Elevation\\_crater](https://en.wikipedia.org/wiki/Elevation_crater) [accessed 22/07/2022]).
- 10 This should not be confused as a Vanity Fair connection. The letter by Buch was written in 1853, and the caricature of Murchison by 'Ape' (Carlo Pellegrini (1839–1889)) was only published in Vanity Fair on 26 November 1870, with the caption "No. 108. Men of the day No. 14. A Faithful Friend, an eminent Savant, and the best possible of Presidents".
- 11 Randal Mathews Burdon wrote: "This study

of Sir Julius von Haast was finished in 1945, without access to the vast amount of material recently made available by Mr H. F. von Haast in his definitive biography of his father” (Burdon 1950: 135 footnote).

<sup>12</sup> <https://www.darwinproject.ac.uk/> [accessed 22/07/2022]

<sup>13</sup> Correspondence of Ferdinand von Mueller Project. <https://www.rbg.vic.gov.au/science/library/correspondence-of-ferdinand-von-mueller-project/> [accessed 22/07/2022]

<sup>14</sup> John Tyndall Correspondence Project. <https://tyndallproject.com/> [accessed 22/07/2022]

<sup>15</sup> This edition includes the letters and fragments of letters held in ATL MS-Papers-0037-045, but omits the complementary fragments and missing pages ATL MS-Papers-0037-238-11, -12, and -56.

<sup>16</sup> Darwin Correspondence Project. <https://www.darwinproject.ac.uk/Epsilon> [accessed 22/07/2022]

<sup>17</sup> The records of the Alexander Turnbull Library do not always reference when letters are published elsewhere, and it would be a useful enhancement to the records to include a note when the letters may be accessed via an external platform or database, like Epsilon.

<sup>18</sup> Vincent van Gogh Letters Project. <https://van-goghletters.org/vg/> [accessed 22/07/2022]

<sup>19</sup> Correspondence SIG, [<https://tei-c.org/activities/sig/correspondence/> (accessed 22/07/2022)]

<sup>20</sup> Dumont 2016; [<https://correspsearch.net/de/start.html> (accessed 22/07/2022)]

<sup>21</sup> <http://dme.mozarteum.at/DME/briefe/letter.php?mid=195> [accessed 22/07/2022]

<sup>22</sup> <https://kalliope-verbund.info/> [accessed 22/07/2022]

<sup>23</sup> <https://swisscollections.ch/Record/991170445825705501> [accessed 22/07/2022]

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## Appendix

**Table 1.** Autograph collection correspondents (Authors of letters addressed to others)

Adler, Friedrich (1827–1908)	Meneghini, Giuseppe Giovanni Antonio (1811–1889)
Buch, Leopold von (1774–1853)	Mosander, Carl Gustaf (1797–1858)
Cotta, Bernhard von (1808–1879)	Sandberger, Fridolin (1826–1898)
Credner, Carl Friedrich Heinrich (1809–1876)	Scacchi, Arcangelo (1810–1893)
Erdmann, Otto Linné (1804–1869)	Scheerer, Karl Johann (1813–1875)
Forchhammer, Johan Georg (1794–1865)	Senf, Carl Adolph (1800–1887)
Hessenberg, Friedrich (1810–1874)	Sismonda, Angelo (1807–1878)
Hoernes, Moriz (1815–1868)	Thaer, Albrecht Conrad (1828–1906)
Igelström, Lars Johann (1822–1897)	Wackernagel, Philipp Karl Eduard (1800–1877)
Roemer, Friedrich Adolph (1809–1869)	Websky, Martin (1824–1886)
Landgrebe, Georg (1802–1873)	Wiborg, Samuel Simonsen (1793–1861)

**Table 2.** Germanophone correspondents (Correspondents writing in German)

Aegidi, Ludwig Karl James (1825–1901)	Cunliffe-Owen, Jenny (c1830–1894)
Agassiz, Alexander (1835–1910)	Czerwonka, Henry, fl. 1865–1877
Agassiz, Jean Louis Rodolphe (1807–1873)	Debes, Ernst (1840–1923)
Andrae, Carl Justus (1817–1885)	Dechen, Ernst Heinrich Carl von (1800–1889)
Andrae, Hans Carl, (c1850–1923)	Droege, Gustav, fl. 1865
Apfelstedt, Paul Alexander, fl. 1849–1887	Ehrenberg, Christian Gottfried (1795–1876)
Arndt, Auguste, fl. 1881	Enes, George, fl. 1869–1875
Bahse, Moritz Ferdinand, fl. 1834–1881	Engst, Johannes Gottfried (1819–1910)
Banft, Theodore, fl. 1870–1874	Ettingshausen, Constantin von (1826–1897)
Behm, Ernst (1830–1884)	Eugster, Ernst (c1843–1927)
Berggren, Sven (1837–1917)	Eversmann, Marie (1829–1880)
Bernays, Jacob (1824–1881)	Feddersen, Wilhelm Berend (1832–1918)
Berndt, Adolphus Robert (c1821–1868)	Fenzl, Eduard (1808–1879)
Blaschka, Leopold (1822–1895)	Finsch, Otto (1839–1917)
Blumenthal, Ernst (1846–1911)	Fischer, Carl Frank, fl. 1849–1893
Blytt, Axel Gudbrand (1843–1898)	Foetterle, Franz (1823–1876)
Bolander, Henry Nicholas (1831–1897)	Fraas, Oscar Friedrich von (1824–1897)
Boss, Emil, fl. 1881–1883	Fradersdorff, Johann Ludwig (c.1813–1892)
Brahe, William Alexander (1825–1917)	Frauenfeld, Georg von (1807–1873)
Brandt, Johann Friedrich von (1802–1879)	Fridberg, Robert (1844–1927)
Brunner, Georg Philipp (1804–1882)	Fritsch, Karl von (1838–1906)
Buchenau, Franz Georg Philipp (1831–1906)	Geisler, Wilhelm (1848–1928)
Buchner, Christian Ludwig Otto, (1828–1897)	Godeffroy, Johann Cesar (1813–1885)
Büchner, Ludwig (1824–1899)	Gordon, Lina A H, fl. 1882
Burmeister, Hermann (1807–1892)	Guembel, Carl Wilhelm von (1823–1898)
Carus, Albert Gustav (1817–1891)	Guerard, Eugen von (1811–1901)
Carus, Carl Gustav (1789–1869)	Haacke, Wilhelm (1855–1912)
Clason, Cleon, fl. 1838–1871	Haag, Carl (1820–1915)
Clason, Nis, fl. 1807–1871	Haast, Johann Franz Julius von (1822–1887)

**Table 2.** Germanophone correspondents (Correspondents writing in German) (Continued)

Haeckel, Ernst (1834–1919)	Levier, Emile (1839–1911)
Haidinger, Wilhelm Karl von (1795–1871)	Lipp, Richard Rudolph (1805–1873)
Hartmann, Robert (1831–1893)	Lund, Hermann Maier (1848–1932)
Hatzfeldt, Paul von (1831–1901)	Lundgren, Bernhard (1843–1897)
Hauer, Franz von (1822–1899)	Luschan, Felix von (1854–1924)
Hayek, Gustav von (1836–1911)	Malm, August Vilhelm (1821–1882)
Heger, Franz (1853–1931)	Marienfeld, Otto (1826–1893)
Helms, Richard (1842–1914)	Martius, Carl Friedrich Philipp von (1794–1868)
Heussler, Johann Christian (1820–1907)	Mattnauer, R, fl. 1886
Hiller von Gaertringen, Johann Frederick, fl. 1830–1881	Mayer, M, fl. 1882–1886
Hiller von Gaertringen, Johann Hermann (1838–1880)	Meyer, Adolf Bernhard (1840–1911)
Himmer, Rudolf (1852–1921)	Morhange, Salvador, fl. 1820–1875
Hochstetter, Ferdinand von (1829–1884)	Mueller, Ferdinand Jakob Heinrich von (1825–1896)
Hochstetter, Georgiana von (1842–1905)	Mueller, Gerhard (1835–1918)
Hoffmann, A, fl. 1880–1881	Müller, August, fl. 1884–c1902
Hoffmann, Robert Theodor, fl. c1846–1888	Müller, Nicholas L F (1852–1933)
Hubrecht, Ambrosius Willem (1853–1915)	Nehrkorn, Adolph (1841–1916)
Jacobsen, John Sigismund Martin (c1823–1906)	Neumayer, Georg Balthasar von (1826–1909)
Jacobsen, P H, fl. 1883	Noeggerath, Johann Jacob (1788–1877)
Jelinek, Anton (1820–1897)	Obst, Hermann Bernhard (1837–1906)
Jung, Karl Emil (1833–1902)	Petermann, August Heinrich (1822–1878)
Kate, Herman Frederik Carel ten (1858–1931)	Peters, Wilhelm (1815–1883)
Kaup, Johann Jakob (1803–1873)	Petschler, Charles (1820–1882)
Keller, Ferdinand (1800–1881)	Philippi, Rudolf Amandus (1808–1904)
Kerz, Friedrich (1842–1915)	Pichler, Josef, fl. 1873–1880
Kettler, Julius Iwan (1852–1921)	Pinschof, Carl Ludwig (1855–1926)
Kinkel, Gottfried (1815–1882)	Pipitz, Franz Ernst (1815–1899)
Klipstein, August Wilhelm von (1801–1894)	Radde, Gustav Ferdinand Richard von (1831–1903)
Koch, Augustus Carl Ferdinand (1834–1901)	Rath, Gerhard vom (1830–1888)
Krantz, Adam August (1808–1872)	Reichenbach, Oskar von (1815–1893)
Krauel, Frederick Richard (1848–1918)	Rein, Johannes Justus (1835–1918)
Krauss, Christian Ferdinand Friedrich von (1812–1890)	Reischek, Adelheid (1852–1908)
Kreff, Johann Ludwig Gerard (1830–1881)	Reischek, Andreas (1845–1902)
Krepp, Friedrich, fl. 1829–1872	Remenyi, Gizella (1836–1914)
Krull, Friedrich Augustus (1836–1914)	Reuleaux, Franz (1829–1905)
Kuhn, Friedrich Adalbert Maximilian (1842–1894)	Rinnböck, Josef C (1841–1900)
Lange, Karl Julius Heinrich (1821–1893)	Rosenberg, Georg Otto Franz von, fl. 1834–1900
Lehmann, Richard (1845–1942)	Reichert, Karl Bogislaus (1811–1883)
Leitgeb, Hubert (1835–1888)	Rueppell, Wilhelm Peter Eduard Simon (1794–1884)
Lendenfeld, Robert Ignaz Lendlmayer von (1858–1913)	Schaaffhausen, Hermann (1816–1893)



**Table 2.** Germanophone correspondents (Correspondents writing in German) (Continued)

Scheerer, Theodor (1813–1875)	Suess, Eduard (1831–1914)
Scherzer, Karl von (1821–1903)	Tannen, Karl (1827–1904)
Schleiermacher, Heinrich August (1816–1892)	Thebing, Theodor Bernhard (1824–1866)
Schliemann, Heinrich (1822–1890)	Thureau, Gustav (1821–1901)
Schmellitscheck, Felix, fl. 1884–1934	Tilgner, Victor (1844–1896)
Schmeltz, Johannes Dietrich Eduard (1839–1909)	Troschel, Franz Hermann (1810–1882)
Schmidt, W, fl. 1882	Ulrich, Carl/Charles Adalbert (1838–1907)
Schmidt, Wilhelm, fl. 1859–1874	Ulrich, George Henry Frederick (1830–1900)
Schneider, Gustav (1834–1900)	Umlauff, Johann Friedrich Gustav (1833–1889)
Schomburgk, Moritz Richard (1811–1891)	Veling, Rudolf (1812–1901)
Schuchardt, Theodor (1829–1892)	Vogeley, Johann Peter (1819–1899)
Schuette, Rudolf (c1840–1886)	Völkner, Carl Sylvius (1819–1865)
Schwartz, Augustus J E (1837–1916)	Weber, Friedrich/Frederic (1819–1909)
Schwarzbach, Bruno Beheim, fl. 1845–1911	Weismann, August (1834–1914)
Schweinfurth, Georg August (1836–1925)	Weiss, Emanuel (1837–1870)
Seelhorst, Georg, fl. 1879–1882	Wiesenhavern, Charles Frederick (c1828–1915)
Seuffert, Anton (1815–1887)	Wilhelmj, August (1845–1908)
Siebold, Karl Theodor Ernst von (1804–1884)	Willemoes-Suhm, Rudolph von (1847–1875)
Silaman, H W, fl. 1881	Wohlers, Johann Friedrich Heinrich (1811–1885)
Robert Miles Sloman & Company (Hamburg)	Zernin, Eduard (1830–1914)
Stache, Guido (1833–1921)	Zinckgraf, Karl Albert (1832–1873)
Steindachner, Franz (1834–1919)	Zittel, Karl Alfred von (1839–1904)
Stoliczka, Ferdinand (1838–1874)	Zurhorst, Heinrich Melchior, fl. c1836–1871
Strauss, Auguste, fl. 1880	

**Table 3.** Francophone correspondents (Correspondents writing in French)

Archiac, Adolphe d' (1802–1868)	Malte-Brun, Victor Adolphe (1816–1889)
Bayet, Ernest de (1859–1935)	Marcou, Jules (1824–1898)
Borre, Alfred Preudhomme de (1833–1905)	Maunoir, Charles (1830–1901)
Capellini, Giovanni (1833–1922)	Morhange, Salvador, fl. 1820–1875
Cornalia, Emilio (1824–1882)	Hamy, Ernest (1842–1908)
Doria, Giacomo (1840–1913)	Milne-Edwards, Henri (1800–1885)
Dubois, Alphonse (1839–1921)	Netto, Ladislau (1838–1894)
Dupont, Edouard (1841–1911)	Noulet, Jean-Baptiste (1802–1890)
Filhol, Henri (1843–1902)	Peschard, Albert (1836–1902)
Fremy, Edmond (1814–1894)	Parlatore, Filippo (1816–1877)
Gauthiot, Charles (1832–1905)	Perrey, Alexis (1807–1882)
Gervais, Paul (1816–1879)	Quatrefages, Armand de (1810–1892)
Grad, Charles (1842–1890)	Serrurier, Lindor (1846–1901)
Harven, Emile de (1837–1903)	Swiencki, Apollinaire Leon Alfred (1841–1903)
Hüber, William (1830–1895)	Vaillant, Leon Louis (1834–1914)
Jenevin, Louis Henri Constant (1840–?)	



## Author Biographies



### **Anthony Wright**

Anthony Wright has been the Director of Canterbury Museum since 1996. He trained as a botanist and geologist, becoming Curator of Botany at Auckland Museum in 1980. He progressed through wider collections management and assistant director roles, culminating in periods as redevelopment director and acting museum director until taking up the post in Ōtautahi Christchurch. Anthony is Chair of Christchurch's Public Art Advisory Group, Deputy Chair of the Antarctic Heritage Trust, President of the NZ Botanical Society and a trustee of several science, arts and cultural trusts.

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### **Julia Bradshaw**

Julia Bradshaw is Senior Curator Human History at Canterbury Museum, having worked in museums for nearly 30 years. Julia has a background in South Island history and has a special interest in New Zealand's gold rushes, Chinese migrants, women and remote places, and has had five books published on these topics. She is fascinated by accounts of exploration, isolation and hardship, and is currently researching the lives of women during the gold rushes.

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### **Dr Rosi Crane**

Dr Rosi Crane is Honorary Curator History of Science, Otago Museum. After a career as a film librarian, initially with the BBC's Natural History Unit in Bristol and latterly with Natural History New Zealand in Dunedin, Rosi returned to tertiary study. For her doctoral research, she shed new light on the career of Thomas Jeffery Parker, graduating with a PhD in 2015. Her largely biographical research now extends to the people involved in acquiring specimens for the museum. She has published several research papers, and articles for non-specialist audiences. The focus of her research interests spans colonial science, culture and art, particularly the late nineteenth-century worldwide phenomena of museum-building.

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### **Dr George Hook**

Dr George Hook is an independent, interdisciplinary researcher, whose interests span the fields of art history, environmental history, natural history and the history of science. George worked as a science author, editor and publisher for three decades before undertaking academic research in retirement. He was recently awarded a PhD for his thesis on the topic of fidelity to nature in the Antipodean landscape paintings of the leading mid nineteenth-century colonial artist in Australia, Eugene von Guérard. Currently, George is investigating Julius von Haast's claim that in March 1862 he independently reached the conclusion that alpine lakes were formed by the action of glaciers, a discovery which subsequent glaciological research confirmed.

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### **Prof Dr Marianne Klemun**

Dr Marianne Klemun holds a PhD in Modern History from the University of Vienna, where she has been Professor in the Department of History since 2002. She has authored and contributed to over 200 publications in the history of science, spanning early modern, and eighteenth and nineteenth-century. From 2006 to 2012, she was Vice Dean of the Faculty of Historical and Cultural Studies of the University of Vienna, and from 2016 to 2020, Secretary General of the International Commission on the History of Geological Sciences. Her research fields include cultures, practices and political contexts in the history of natural history, as well as spaces of knowledge, communication and circulation. Her interests include geology, botany, gardens, travelling and collecting.

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### **Prof Dr Martin Krenn**

Dr Martin Krenn studied history, philosophy and archival science at the University of Vienna, Humboldt University in Berlin and Sorbonne University in Paris. In 2020 he was appointed Head of the Archive for the History of Science at the Natural History Museum Vienna. Martin has published in the fields of early modern and contemporary history, regional history, especially the regional history of the Austrian state of Burgenland, and the history of science.

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### **Dr Johannes Mattes**

Dr Johannes Mattes is Research Project Leader at the Institute of Culture Studies and Theatre History of the Austrian Academy of Sciences. He was Visiting Professor at the École des Hautes Études en Sciences Sociales in Paris, and Visiting Scholar at Stanford University in California and York University in Toronto. Johannes is affiliated with the Centre for Science Studies of the German National Academy of Sciences Leopoldina. In 2021 he was awarded the Bader Prize for the History of Natural Sciences. Currently, he is a Board Member of both the International Commission on the History of the Geological Sciences and the History of Earth Sciences Society.

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### **Dr Simon Nathan**

Dr Simon Nathan is a geologist and science historian with a fascination for the people and rocks of the West Coast region. Much of his scientific career was at GNS Science, and he was subsequently science editor for Te Ara, the online Encyclopedia of New Zealand. As well as authoring many technical publications, Simon has written biographies of several leading New Zealand scientists, including James Hector, a contemporary and rival of Julius von Haast.

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### **Dr Sascha Nolden**

Dr Sascha Nolden has held the position of Research Librarian at the Alexander Turnbull Library for the past 7 years. His research interests in nineteenth-century letters and diaries include the transcription and translation of these primary source documentary heritage materials. Early encounters with Julius von Haast's correspondence during his postgraduate research culminated in a PhD thesis incorporating an annotated scholarly edition of letters. Sascha's contributions to Haast scholarship include editions of correspondence, preparing the successful nomination of the Sir Julius von Haast Collection for inscription in the New Zealand UNESCO Memory of the World register, and the 2022 Haast Bicentenary Symposium, which was his brainchild.

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