

Moa bones and New Zealand's early museum directors

Ruth Barton

History Department, University of Auckland
 (r.barton@auckland.ac.nz)

The Moa was crucially important to the development of New Zealand science in the colonial period. Questions about Moa classification and Moa extinction gave New Zealand science an independent subject of enquiry on which colonials did not need to defer to imperial experts with access to large museum collection (Gruber 1987; Barton 2000). Moa were also important in museum building. Moa bones and bird skins were the chief local resources which New Zealand's museum directors exchanged or sold in order to expand their collections (Sheets-Pyenson 1988).

Moa astounded and fascinated everyone, from serious scientific men to Prince Albert and the general population. Ferdinand von Hochstetter, geologist on the Austrian *Novara* round-the-world exploring expedition, had admired the articulated Moa in the British Museum before leaving on the expedition (Berentson 2012, p.137). When asked by provincial governments to look for coal and gold in the Auckland and Nelson provinces in 1858 and 1859, he hoped he would be able to find Moa bones for himself. Hochstetter was given little time for bone hunting, but his assistants found some near-complete skeletons in caves and the grateful people of Nelson gave him their prize large, almost-intact *Palapteryx ingens*. In Vienna expert model builders restored the skeleton and made plaster copies which were sold worldwide (Berentson 2012, p.143).

By examining moa bone exchanges among New Zealand's early museum directors, this article emphasizes how highly valued were impressively large bones and full skeletons, and elaborates facets of museum politics and individual personalities which are little known. The three museum builders in this account are Julius Haast (1822–1887), James Hector (1834–1907) and Frederick Hutton (1836–1905), who arrived in New Zealand in 1858, 1862 and 1866 respectively (Fig.1).

Hector had the highest scientific standing of the three. Hector was Dr. Hector, educated in medicine in Edinburgh, at a time when a medical degree was the major means of formal education in the natural history sciences. He gained a reputation for geological ability and physical toughness on the Palliser expedition to western Canada in 1858 and was appointed Otago Provincial Geologist on the recommendation of Roderick Murchison. He was well-connected with scientific men at the imperial centre. In 1865 when the Colonial Government decided to set up a geological survey it offered the position of Director to Hector. In Wellington he accumulated many other national scientific roles, including Director of the Colonial Museum.

Haast arrived in New Zealand before Hector, but as a migration agent for a shipping company hoping to attract German migrants. His career was shaped by the lucky accident of his arrival the day before the *Novara*. As a German speaker (Haast was born in Bonn within the Kingdom of Prussia), with an interest in geology, he rapidly made the acquaintance of the Austrian scientific men and accepted invitations to work with Hochstetter on the surveys of the Auckland and Nelson provinces. Haast gained field experience with Hochstetter and scientific credibility within New Zealand from his association with the latter's much appreciated work. On Hochstetter's departure Haast negotiated a position as geologist with Canterbury Province.

Captain Hutton, retired army officer, arrived in Auckland looking for money-making opportunities, although, as he made clear to Hector, he would rather obtain scientific employment. He had been active in the Geological Society in London in the preceding five years. While investing in a sheep run and pursuing flax milling, he tried to revive the run-down Auckland Museum (f. 1852). Hector contracted Hutton to produce occasional reports for the Geological Survey, and in 1871 appointed him assistant geologist. Later he was curator of the Otago Museum and later again the Canterbury Museum, but this article does not go beyond the 1860s.

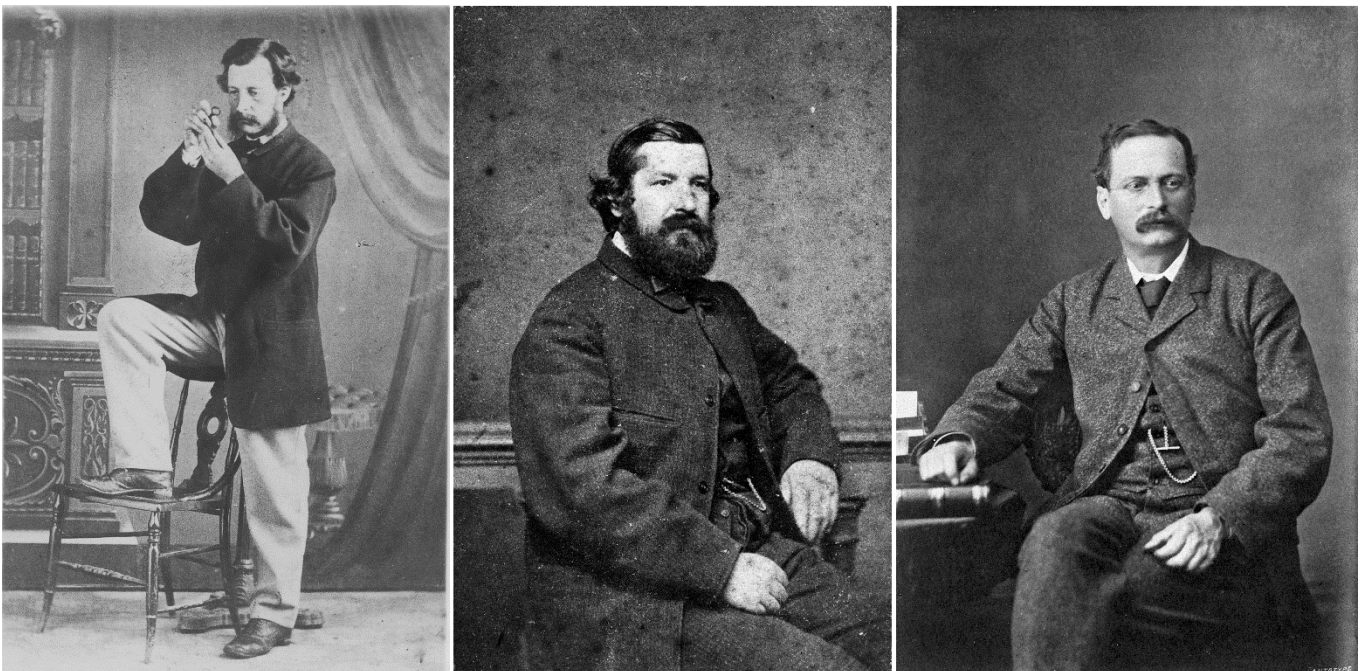


Fig.1. *Hector, Haast and Hutton, c. late 1860s – 1870s. Left to right: James Hector, after 1865, when Director of the Geological Survey of New Zealand; Johann Franz Julius von Haast, later Sir Julius von Haast (creator unknown); Frederick Wollaston Hutton (photographer unidentified).*

The early museums were seldom separate establishments. In Canterbury and Otago, Haast and Hector built up collections associated with their geological employment and *GSNZ Journal of Historical Studies Group*, 46, March 2014

opened them to the public. When Hector left Otago his collection mouldered away. Haast's collection survived because, when his appointment as geologist came to an end, an independent Canterbury Museum (f. 1868) was established and he was appointed Director. Hutton, who operated the Auckland Museum as a volunteer, had no resources and even had to do the cleaning himself (Letter 13, 10 August 1867, in Mildenhall et al. 2013).

In early letters between Haast and Hector the enthusiasm of the romantic German contrasts with the more formal style of the Scot. Haast initially hoped that live Moa might be found in isolated parts of the middle island. He wrote to Hector, who was about to explore in the west coast of Otago: 'Lookout for the Moa. I am certain it exists there, as two years ago the Hon. Watts Russel when exploring with whaleboats the coast, killed a large Emu-like bird, and ate it! without even preserving a single feather.' (Letter 15, 5 November 1852, in Nolden et al. 2012). Although differences in personality appear clearly, the early letters between Hector and Haast were friendly. They exchanged ideas about geological formations and mountain passes, and Hector assured Haast that he would like to exchange specimens.

The importance of Moa as display items is apparent in letters exchanged between Hector and Haast in preparation for the 1865 Otago exhibition. Hector wanted to borrow Haast's cast of the Vienna Moa. But Haast said no, 'it really would not bear another journey', and he wanted to keep it in his museum as an attraction for local visitors (Letter 27, 4 January 1864, in Nolden et al. 2012) Instead, he offered large European specimens from the Canterbury Museum.

Early display skeletons were usually incomplete and made up of bones drawn from different individuals, often even different species. Many large heavy large leg bones survived, but fewer ribs, pelves or feet and even fewer delicate skull bones. The early finds were seldom from a single individual. Individual skeletons and rare parts commanded high prices, as Hector glumly explained to J. D. Hooker of Kew Gardens: 'Since I wrote last enclosing Tracings of Moa Bones I have got hold of a splendid Head & nearly all the other bones of *D. giganteus*. The head is well preserved & and as it is unique I enclose tracings of 5 views of it – natural size.' However, it was only on loan and Hector could not afford to buy it: 'people give fabulous prices for them as curiosities to send home to friends who dont value them' (Letter 30, 17 July 1865, in Burns and Nathan 2012). A few months later, he confessed to Hooker that, because he no longer had the correct head, his *D. giganteus* was displayed with the head of a *Palapteryx* (Letter 35, 12 October 1865, in Burns et al. 2012).

The supply of Moa bones and skeletons was transformed in late 1866 when a swamp of densely packed bones was found at Glenmark Station near Waipara in Canterbury. The owner gave the bones to Canterbury's Provincial geologist (Fig.2). Haast had sixty separately identifiable individuals, which was greater than the total previously collected (Letter 105, 10 August 1867, in Nolden et al. 2012; Berentson 2012, p.149).

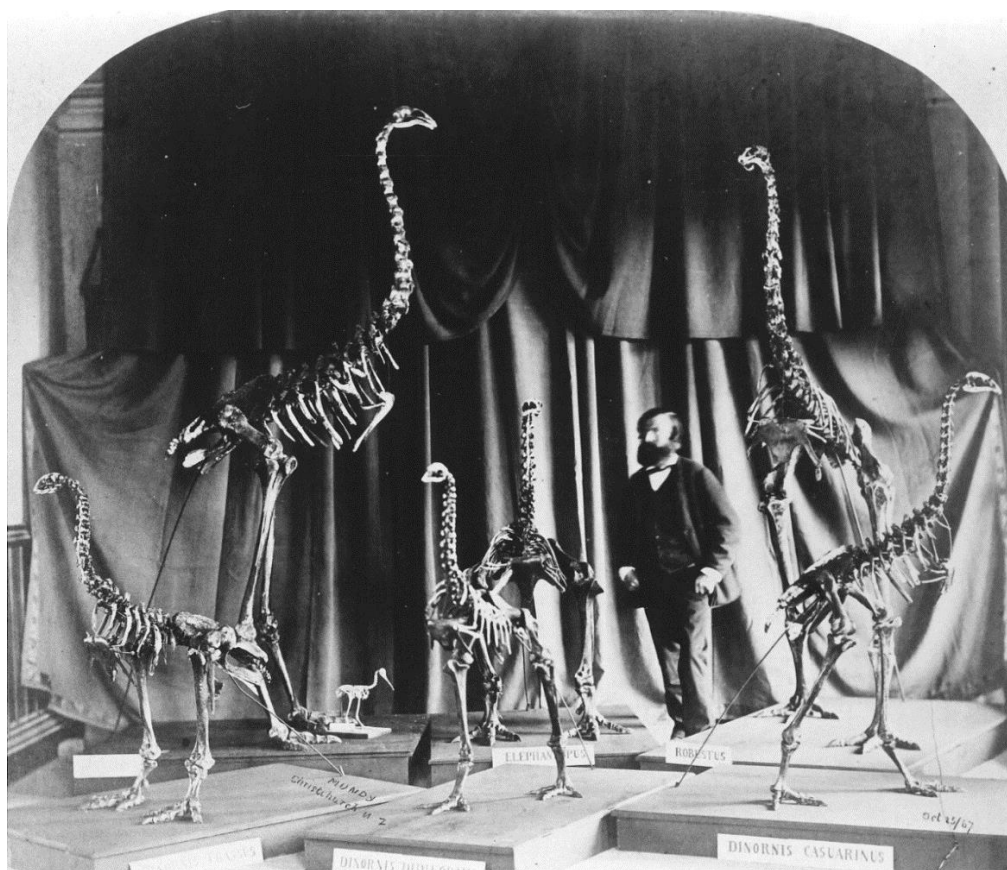


Fig.2. Haast with the temporary exhibition of his Glenmark Moa skeletons in the Canterbury Provincial Chamber Building, 1867. (Photo: DL Mundy).

Haast seemed secretive while excavating his bones and setting up his skeletons. Hector's employees and friends were suspicious. It is unclear to what extent the bad feelings were justified or arose from misunderstandings. John Buchanan, botanist to the Survey, changed his route when he found himself near Haast's site. In Christchurch, Haast's assistant refused to let Henry Travers from Wellington see the skeletons that were being articulated (Buchanan 1867; Travers 1867). These stories became muddled as they passed around Wellington circles. Mantell later told Haast that Buchanan had complained at not being allowed to see the Moas. Haast was puzzled – no one had seen Buchanan – but explained to Hector that his instructions had been intended to keep out the general public, not scientific colleagues (Letter 116, 27 April 1868, in Nolden et al. 2012).

In contrast to this suspicion, Haast's correspondence with Hector while excavating the swamp and articulating his skeletons was full of enthusiastic generosity. He constantly invited Hector to visit, offered duplicate bones to the Colonial Museum and asked advice. 'I repeat', Haast told Hector, that I am quite willing to let you have from my duplicates of Moa bones, what you want. All I wish to see our colonial collections ... as complete and instructive as possible.' (Letter 102, 11 July 1868, in Nolden et al. 2012). Invitations continued. Could not Hector come for just one day (travelling overnight by steamer on consecutive nights), to *GSNZ Journal of Historical Studies Group*, 46, March 2014

both admire and give his opinion on the six articulated Moa skeletons before they were photographed and before the duplicate bones were sent away in exchanges? (Letter 105, 10 August 1867, in Nolden et al. 2012). He reported on the hallux, or high back claw, which occurred on many more species than in Richard Owen's descriptions.

More than in most previous finds, near-complete skeletons were found together at Glenmark, but the swamp was packed so closely that the sets of bones were tangled together and Haast wanted to check that Hector agreed with his groupings and articulations. 'I worked the matter up very much & I would have been only too glad, to see if my deductions were correct.' (Letter 112, 25 December 1867, in Nolden et al. 2012).

Haast actions bear out his assurance to Hector that he wanted the best for colonial institutions. When his own skeletons were articulated he had spare bones to prepare two skeletons, 'as perfect, as the bones in our possession would allow me', for Hector. His formal letter carefully specified which bones were missing, which artificial, and which had been plastered together from fragments. Haast requested objects in exchange: 'a collection of NZ shells, named as far as possible & as complete as it is in your power, also the few northern Island bird skins, so as to complete our Collections', and attached a list of the desired birds. Each skeleton was divided into three sections for packing, then, because there was space to spare in the cases, Haast added some leg bones (Letters 124, 29 June 1868, and 125, 2 July 1868, in Nolden et al. 2012).

In the correspondence with Hector, Haast appears generous. But Hutton accused Haast to Hector of being mean with his Moa bones and skeletons. The Moa collection in Auckland was limited to a few leg bones, one vertebra and a skull (Letter 6, 10 June 1867, in Mildenhall et al. 2013). Hutton reported to Hector that, when asked for some skeletons, Haast had replied, 'when I shall get a box from you containing Maori skulls, frogs shells & fossils I will then send some Moa bones.' Hutton added, self-righteously, as if he did not want to denigrate Haast, 'as I do not like bargaining in science I shall say no more about it.' (Letter 7, 27 June 1867, in Mildenhall et al. 2013). My impression is that Hutton was malicious – he maligned Haast to Hector and, in later years, Hector to Haast, as if he was trying to rouse disrespect and distrust on both sides.

Gentlemen, such as the owner of Glenmark Station, might *give* bones to institutions but the convention was that museums *exchanged* specimens. Haast asked for shells and bird skins in exchange for the two skeletons he sent Hector. Moreover, countering Hutton's accusation, Haast sent eleven parcels of bones to Hutton via Hector in 1868 (Letter 126, 2 July 1868, in Nolden et al. 2012; forwarding note dated 8 July 1868, Te Papa MU000013/001/0001/0388). Hutton came to understand that skeletons were seldom given away and in 1872 offered to pay Haast for 'a good skeleton of a large species' (Letter 93, 20 July 1872, in Mildenhall et al. 2013).

From his first finds of Moa skeletons, Haast was aware of their value as exchange objects. He often proposed collaborative exchanges to Hector. Sometimes it took the resources of both to complete a skeleton or provide the range of bones that a big museum wanted. Their lists of desiderata reveal varied motives – collections of use in mining geology, systematic collections useful for classifying local specimens, and ‘show’ items to draw spectators to their museums. While articulating the skeletons for Hector, Haast was coordinating a collection to send to his friend, the German speaking Swiss, Louis Agassiz at Harvard. ‘We ought to ask’, he suggested to Hector, ‘for as complete a collection of American fossils as well as a good collection of recent shells & their duplicates for Europe etc. A collection of type fishes, echinoids & Asteroids. Will you have some show things? as a large crocodile, snakes, quadrupeds. . . . All what he wants we shall find amongst your duplicates or can get it easy without any expense!’ Haast expected they would also receive ‘a fine share’ of the collections Agassiz had made on his recent trip to the Amazon. ‘Answer at once’, he added, because Hector was often slow to reply (Letter 122, 26 June 1868, in Nolden et al. 2012).

Two weeks later Haast wrote excitedly to Hector about another exchange, this time with Norway. A local Norwegian, a shipping agent, would like to send bird skins and moa bones to the Christiania (Oslo) Museum and would transport them free! ‘I think we can safely promise him 50 birdskins (some skins of *Apteryx* included as I have a good many)’, plus Moa bones, fishes in spirits of wine, and shells, wrote Haast (Letter 131, 12 July 1868, in Nolden et al. 2012).

While Haast and Hector were engaged in these exchanges, Hutton tried to cut Haast out of a valuable exchange and ingratiate himself with Hector. Hutton, who had received a letter from the bird specialist, Alfred Newton of Cambridge University, wrote to Hector: ‘[Newton] says he has some sets of Dodo’s bones & perhaps a solitaire leg to give away (Fig.3). He thinks of sending them to Haast but has forgotten which Museum is his; send him off at once a box of moa bones and you will get them.’ ‘Don’t forget’, he reminded Hector two months later (Letters 42, 1 January 1869, and 46, 22 February 1869, in Mildenhall et al. 2013).



Fig.3. *Dodo Skeleton*

Haast's Moa collection made him the envy of museum curators worldwide. His new museum was written up and his Moa given a half-page engraving in the *Illustrated London News* (8 February 1868). Hector heard that the engraving fell 'far short of reality' and, at last, decided to visit, but only after Walter Mantell, civil servant and Wellington gentleman, recommended Haast's new museum. Hector explained to Hooker, 'from Mantell who is a good judge I hear it is a perfect model of good arrangement. I am going to take a run down to see it.' (Letter 60, 3 June 1868, in Burns et al. 2012).

Whereas Haast treated Hector with respect this exchange suggests that Hector did not reciprocate. Haast praised Hector to Hooker for his excellent geological judgement and wished he were closer for easier consultation (Letter 71, 1 August 1868, in Nolden et al. 2013). Hector, however, responded condescendingly when Haast expressed his intention to write a paper on Moa: 'What are you going to write a Moa paper about? Have you any new specimens & do you feel game to go in for description? or is it a little popular notice of the bones you have found.' (Letter 106, 23 August 1867 in Nolden et al. 2012).

Hector's work was not so obviously superior to Haast's as to justify this exchange. Newton, ornithologist and Professor of Zoology and Comparative Anatomy at Cambridge, was disappointed with the bones sent from the Colonial Museum. Newton was interested in Moa distribution, but the labels recorded no locations for the bones he had received (Newton to Hector, 27 October 1870, Te Papa MU000147/003/0213). Moreover, Trevor Worthy and

Richard Holdaway identify Haast's 1869 description of *Dinornis maximus* as significant because it was named on the basis of several parts from a single skeleton (Newton to Hooker, 27 October 1870,). (Worthy and Holdaway 20012).

This article has focused on the early relationships between Hector, Haast and Hutton. Inter-personal relationships became more difficult in the early 1870s. Hector and Haast were on opposite sides in bitter disputes over Moa extinction. Haast, who had changed his mind about the contemporary survival of the Moa, argued that they had been exterminated by a pre-Maori people. Hutton and Hector also fell out.

This study supports previous analyses of the importance of Moa as museum objects, both for local display and for exchange. Moreover, because Moa were so very desirable, Moa exchange throws light on the relationships between museum directors in New Zealand. Hutton appears here as manipulative, Haast as generous and genuinely respectful of Hector. Hector's personality emerges less clearly. However, even before the moa-hunter controversy he expressed reservations about Haast's science. Hector's own practice was not perfect, as is clear from Newton's complaint about inadequate labelling. The extent to which the judgements Hector, Hutton and Haast expressed about one another were self-interested or had xenophobic elements warrants fuller consideration through close comparative study of their scientific competencies.

Acknowledgements

I am grateful to the Hocken Library, Dunedin and the Museum of New Zealand Te Papa Tongarewa, Wellington, for access to their archives. Especially, I thank Jennifer Twist, Te Papa Archivist, for her assistance. I also thank the Alexander Turnbull Library, the Hocken Collection of the University of Otago Library, and the Canterbury Museum, for permission to reproduce photographs from their collections.

Photo credits: Haast, reproduced courtesy of the Alexander Turnbull Library, Wellington (Ref: 1/4-002124-G. <http://natlib.govt.nz/records/22705267>). Hector, from the Hocken Collections, Uare Taoka o Hakena, University of Otago (Ref: Negative c/nE1856, scan S07-032). Hutton, reproduced courtesy of the Alexander Turnbull Library, Wellington (Ref: MNZ-0474-1/4-F. Making New Zealand: Negatives and Prints from the Making New Zealand Centennial Collection, <http://natlib.govt.nz/records/22677400>). Haast and Glenmark Moas, 23 Oct. 1867, Courtesy of the Canterbury Museum (Ref: 7558).

References

The lengthy biography of Haast written by his son has resulted in Haast being better known and easier to research than Hector and Hutton. Simon Nathan's work towards a biography of Hector is shifting *GSNZ Journal of Historical Studies Group*, 46, March 2014

this imbalance. The openly available transcripts of letters on the Geoscience Society website (www.gsnz.org.nz/information/misc-series-i-49.html) have been immensely useful to me. All quotations from letters are taken from these publications. Idiosyncrasies of grammar and punctuation are in the originals.

- Barton R 2000. Haast and the moa: Reversing the tyranny of distance. *Pacific Science* 54 (3): 251-63.
- Berentson Q 2012. *Moa: The Life and Death of New Zealand's Legendary Birds*. Nelson: Craig Potton.
- Buchanan J 1867. Buchanan to Hector 1867. Te Papa MU000147/001/0532.
- Burns R, Nathan S 2012. My Dear Hooker: Transcriptions of Letters from James Hector to Joseph Dalton Hooker between 1860 and 1898. *Geoscience Society of New Zealand Miscellaneous Publication* 133B.
- Gruber J 1987. The moa and the professionalising of New Zealand science. *Turnbull Library Record* 20 (2): 61-100.
- Mildenhall E, Burns R, Nathan S 2013. Transcriptions of selected letters from Frederick Wollaston Hutton to James Hector and Julius Haast. *Geoscience Society of New Zealand Miscellaneous Publication* 133F.
- Nolden S, Burns R, Nathan S 2012. The Correspondence of Julius Haast and James Hector, 1862-1887. *Geoscience Society of New Zealand Miscellaneous Publication* 133D.
- Nolden S, Nathan S, Mildenhall E 2013. The Correspondence of Julius Haast and Joseph Dalton Hooker, 1861-1886. *Geoscience Society of New Zealand Miscellaneous Publication* 133H.
- Sheets-Pyenson S 1988. *Cathedrals of Science: The Development of Colonial Natural History Museums during the Late Nineteenth Century*. Kingston and Montreal: McGill-Queen's University Press.
- Travers H 1867. Travers to Hector, 5 August 1867. Te Papa MU000147/001/0437 (Henry Travers was the son of the W. T. L. Travers).
- Worthy TH, Holdaway RN 2002. *The Lost World of the Moa: Prehistoric Life in New Zealand* Bloomington: Indiana Univ. Press: p.62.