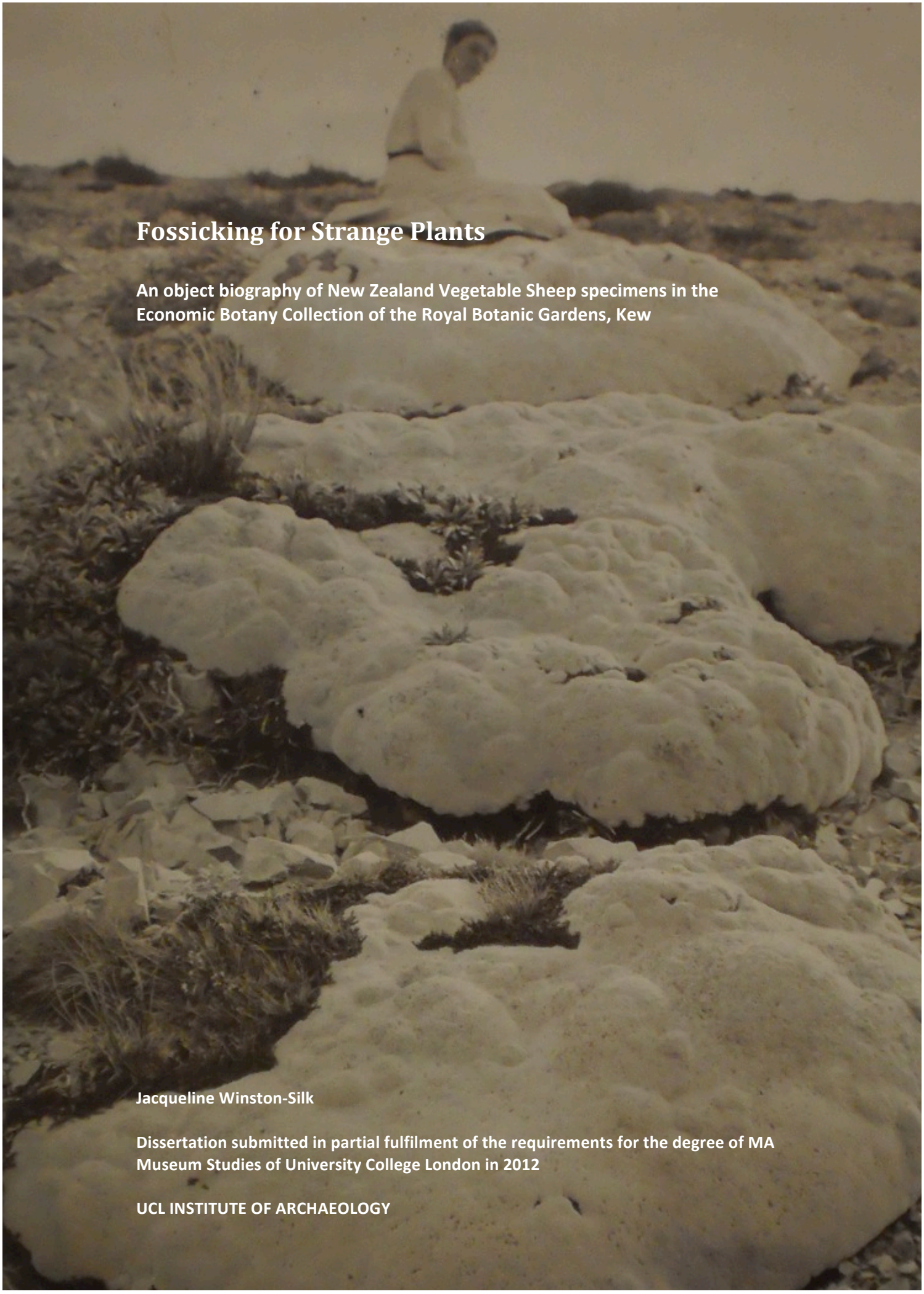

Fossicking for Strange Plants

An object biography of New Zealand Vegetable Sheep specimens in the Economic Botany Collection of the Royal Botanic Gardens, Kew

Jacqueline Winston-Silk

Dissertation submitted in partial fulfilment of the requirements for the degree of MA Museum Studies of University College London in 2012

UCL INSTITUTE OF ARCHAEOLOGY

Acknowledgments

Thank you to Dr Mark Nesbitt for providing access to the wonderful material of the Economic Botany Collection and for giving truly invaluable insights during the research process.

Thank you to Dr Nicholas Hind for welcoming me into the Herbarium and answering my questions.

To all the staff at the Library of the Royal Botanic Gardens, Kew, thank you for being so forthcoming with my constant requests and for helping to decipher cursive.

I am indebted to the Curators and Managers of the Canterbury Museum, the Auckland War Memorial Museum and the Allan Herbarium for readily sharing their collections.

Thank you to Caroline Cornish for consultation to date archival photographs.

Thank you to photographer Andrew McRobb who documented the objects specifically for this project and for taking my portrait with the Vegetable Sheep.

Lastly, thank you to Dr Paul Basu of the Institute of Archaeology who supervised this dissertation and kept me in the right direction.

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Preface

This dissertation presents a biography of the Vegetable Sheep collection in the Economic Botany Collection (EBC) at the Royal Botanic Gardens, Kew (Kew). It will focus on the trajectories of a group of five specimens (Diagram 1, Fig.13). This dissertation comprises a triangulation between museological, botanical and socio-historical discourses. It explores the narratives that arise as a result of the *inter-relationships* between the (broadly defined) conceptual localities of objects, plants and people.

The research presented here has emerged from a prevailing interest in Antipodean material culture, an inherent sense of wonder on seeing the Vegetable Sheep specimens and a perceived disparity in the existing knowledge which surrounded the collection.

Such *ignorances* arise from a common museological problematic. In this case, such a problematic can be made specific as follows:

- The considerable size, weight and immovability of many of the Vegetable Sheep act as a barrier to their physical accessibility.
- The Vegetable Sheep's status as economically 'useless' specimens within a collection of 'useful' plants contributes to their peripheral and ambiguous classification, preventing intellectual accessibility.
- Lastly, a typological resistance persists from visitors and internal staff, in readily recognising the Royal Botanic Gardens, Kew as a museum site.

This dissertation provides an opportunity to address these issues.

I was granted prolonged access to the Economic Botany Collection at the Royal Botanic Gardens, Kew after completion of a voluntary work placement with Dr Mark Nesbit, the Collections Curator

Despite first-hand contact with the material, the subject of this dissertation means it is limited by distance, as well as the vagaries of history.

When you are older and harder you will find nothing better then days fossicking for strange plants, and nights spent under the stars.

Lucy Cranwell, 'Our Vegetable Sheep', Auckland Star, Issue 141, 1934

The naughty plants were growing in the most exposed locality.
We laboured sore an hour or more and courted dire fatality,
Before the monster yielded to our picking and our harrying;
We laid his carcass on the brier to start the dreadful carrying.

Arnold Wall, 'How they brought the good sheep from Torlesse to Christchurch', 1930

Peculiar-looking patches are to be seen upon the sides and tops of mountains, which in the distance look like so many sheep, and even upon nearing them their shaggy appearance help rather to confirm the first impression than to dispel such a notion.

John R Jackson, 'The Vegetable Sheep of New Zealand', 1867.

Abstract

The work will first introduce the Vegetable Sheep specimens as the subject of botanical science, looking at their initial European discovery, description and nomenclature.

The research will then situate the specimens within a history of the development of the Museum of Economic Botany (MEB). It will chronologically trace a career from their original context to their recent treatments at Kew. I will ask how the institution's wider ideas on display, storage and perpetuity contributed to the classification, interpretation and understanding of the natural history specimens.

The dissertation will locate the ethnobotanical specimens within a socio-historic context, paying particular attention to ideas of Victorian colonialism in the mid-late nineteenth and early twentieth century New Zealand. This paper will consider the specimens in correlation to indigenous communities; questioning the relationships to Māori lore and conceptions of the landscape. I will investigate the various meaning(s) produced for different social actors.

Using the structure of an object biography, the intention of the work is to fully document the specimens, enrich and enliven Kew's collection database and uncover avenues of potential future research. Moreover, the hope is that the specimens may be increasingly recognised and engaged with.

Secondly, the work aims to use the Vegetable Sheep as a case study with which to problematise issues of object classification within current museological practice. It will strive to make conclusions on the value and potential of anomalous museum objects.

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Diagram 1: Trajectories of five Vegetable Sheep

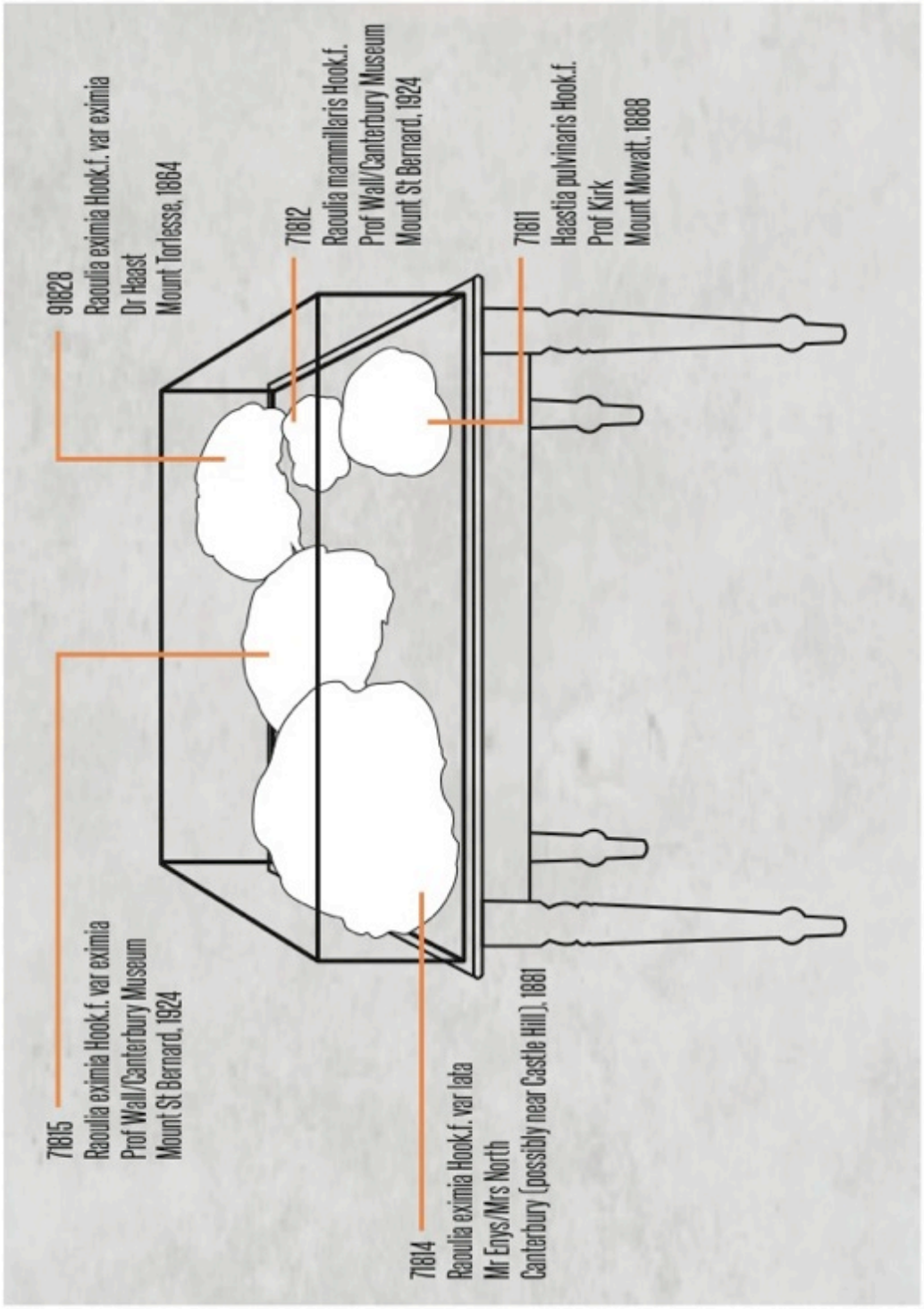

Diagram 1 (created by J. Winston-Silk and A. Gordon). After the closure of the Museum of Economic Botany in 1987, the Vegetable Sheep (still in their original Victorian display case and original arrangement) were moved into temporary storage, and arguably forgotten about. This illustration is based on a photograph taken by Dr Mark Nesbitt, Curator of the Economic Botany Collection, in 2010. The photograph is reproduced in Fig. 13. This dissertation will chronologically trace the careers of the five specimens, detailed above, from their point of collection to their recent treatments at Kew.

Introduction

'Vegetable Sheep' is the common name assigned to several species of the genera *Raoulia* and *Haastia* from the Compositae (daisy) family. For the purpose of this dissertation and in the discussion of the specimens from the EBC, this concerns the followings species:

Raoulia eximia Hook.f. (1864)
Raoulia mammillaris Hook.f. (1864)
Haastia pulvinaris Hook.f. (1864)

All three species are endemic to New Zealand. They are true alpine vegetation often being found on shingle-slips at altitudes of more than 5000ft. They are distributed across both the North and South Islands of the country's archipelago.

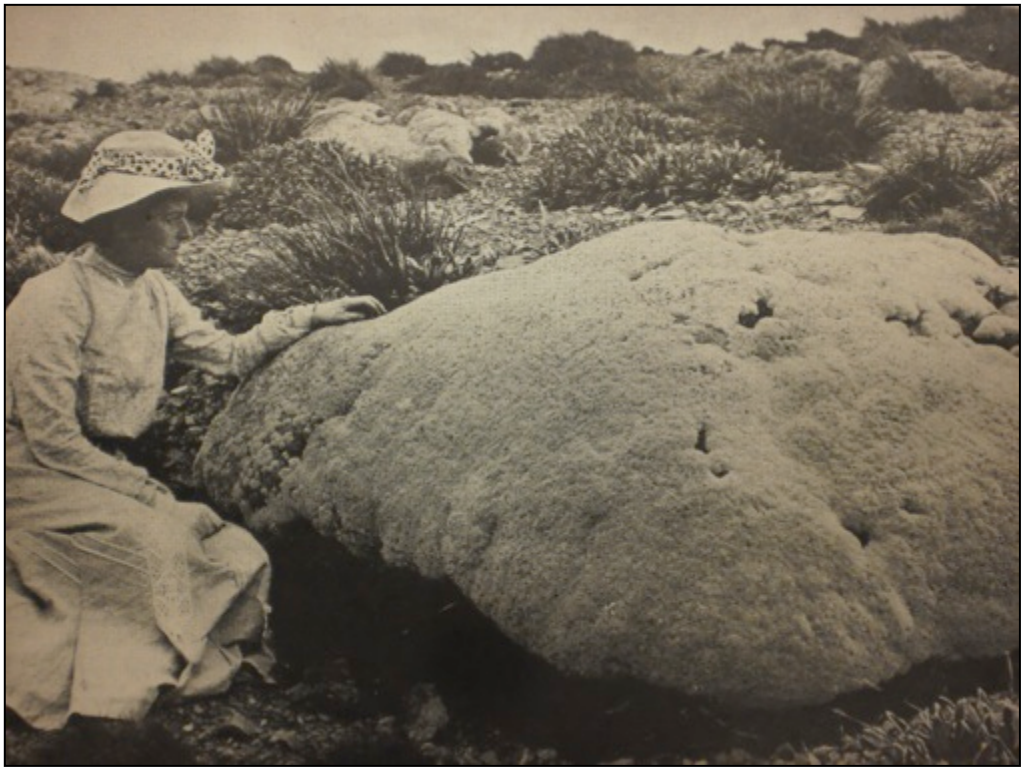

Figure 1.
***Raoulia eximia* growing on a hillside in New Zealand. Published in *The Garden*, Issue LXV, 1904, p271. Accessed in Compositae Folio 932, *Raoulia* 88.216. Courtesy Royal Botanic Gardens, Kew. Extended botanical descriptions of the taxon can be found in Raoul 1846; Hooker 1852; Allan 1961.**

The plants have distinctive features that have captured the imaginations of many. The growth-form is described as a *cushion* (Cockayne, 1927: 23), with woolly pubescence (Dawson, 1988: 186) and branchlets that are so densely compacted together that an impermeable surface is formed, enclosing its own "warmer, moister, mini-environment" (Ward, 1998: 89).

Dr Josephine Ward, the leading authority on the Compositae family, describes the *Raoulia* genus as "curious and unique" (Ward, 1998: 89).

Figure 2.
Raoulia apice-nigra **growing in the Alpine House of the Royal Botanic Gardens, Kew. Photograph © J. Winston-Silk, 2012.**

Figure 3.
Raoulia hookeri var albosericea **growing in the plant nursery of the Royal Botanic Gardens, Kew. Photograph © J. Winston-Silk, 2012.**

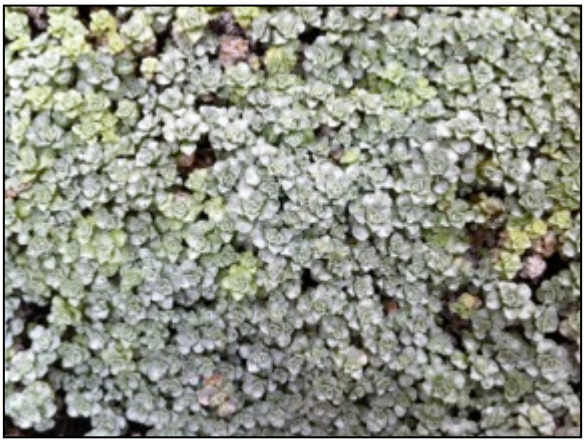

Figure 4.
Raoulia hookeri var albosericea **(detail) growing in the plant nursery, of the Royal Botanic Gardens, Kew. Photograph © J. Winston-Silk, 2012.**

"Anent these plants a very good and true story is told of mountain life… he is sent a few miles in quest of sheep supposed to be seen on the distant hillsides, dogs being sent with him to help 'run them in' and when he arrives at his destination, poor fellow, he can discover nothing but immense masses of this plant" (Marlborough Express, Issue 993, 1878: 5).

The etymology of the nomination 'Vegetable Sheep' stems from accounts of emigrant agricultural workers, who mistook the physiognomy of *Raoulia* and *Haastia* for flocks of sheep; the use of the phrase first appearing in the mid-nineteenth century.

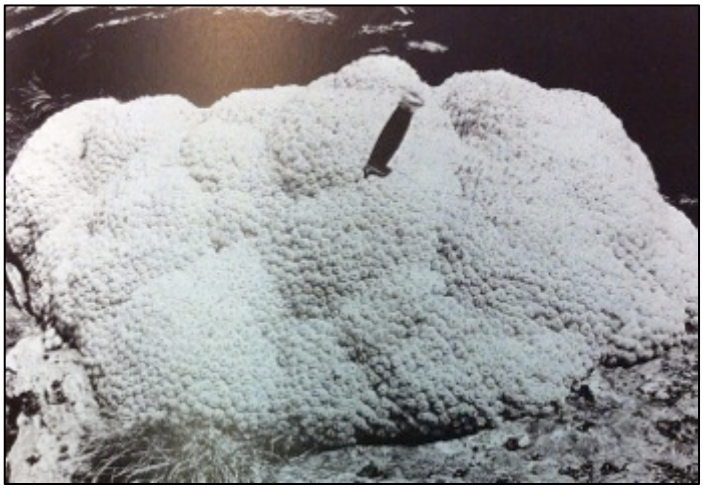

Figure 5.
A cushion of the Marlborough Vegetable Sheep, *Haasti pulvinaris*, growing on Mt Cupola. A knife has been inserted into the woolly pubescence to emphasis the denseness of the leaves. Photograph by J.W.Dawson. Published in *Forest Vines to Snow Tussocks: the Story of New Zealand Plants*, 1988.

Today the EBC holds nine, whole or tuft, specimens of dried Vegetable Sheep. These are in addition to the living plant collections, plant nurseries (Fig. 2-4) and the specimens held in the Herbarium at Kew.

Of the nine specimens, the *Azorella glebaria* or 'Balsam Bog' is not a *true* Vegetable Sheep (Fig. 23). However due to its size, singularity in the collection and comparable physical appearance, the Balsam Bog has become conceptually grouped with the Vegetable Sheep. This reclassification has developed from a myriad of shared histories within the MEB displays. I will later argue the specimens have a reciprocal effect upon one another.

At the time of writing none of the dried specimens were on display; a Condition Report and an overview of the collection is provided in **Appendix 1** and **Table 2** respectively.

Literature Review & Key Terminology

The study of material culture has increasingly been recognised as the subject of an inter-disciplinary approach (Garrow and Shove, 2007). With its roots in anthropology, the object biography as one approach to the study of material culture stems from the idea that human (animate) and non-human (inanimate) subjects share an extant materiality (Pearce, 1992: 16). Moreover, the approach assumes that the distinction(s) between the linguistic treatment of these two poles can be collapsed.

In Appadurai's germinal anthology (1986), the author argues for the capacity of objects to have 'social lives'.

"If our approach to things is conditioned necessarily by the view that things have no meaning apart from those that human transactions… endow them… this formal truth does not illuminate the concrete, historical circulation of things. For that we have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories… it is the things-in-motion that illuminate their human and social context" (Appadurai, 1986: 5).

Appadurai defines objects as "things with a particular kind of social potential" (ibid: 6) and discusses their ability to move in and out of the commodity state. This agility and transformation, or "candidacy" (ibid: 13) is described as a conceptual feature of an object whereby it can refer to the criteria (symbols or classifications) of a particular social and historical context. In his discussion of 'Paths and Diversions', Appadurai recognises *Paths* as the customary uses of objects and *Diversions* as the interruption or modification to such uses. A passive object can be *reappropriated* along the customary path of its social life, providing an "opportunity to accumulate an idiosyncratic biography or enjoy a peculiar career" (ibid: 42).

Ascribing to a processual model, Kopytoff suggests that the same cultural questions can be asked of objects, as of people (1986: 66), contending that objects have 'biographies'. Kopytoff considers the biography of an object as it moves, permeating alternate arenas of human action. He emphasises an object's malleability in terms of, for instance, its physical accessibility (ibid: 67). In

comparison, Appadurai discusses the ebb and flow of knowledge and ignorance (lack of knowledge) associated with objects as they circulate along their trajectories (1986: 41).

Acknowledging that "objects are always polysemous and capable of transformations of meaning across time and space contexts" (Woodward, 2007: 27), these epochal ideas form the basis of an interrogation in the form of an object biography.

The purpose of an object biography is to "make salient what otherwise remains obscure" (Kopytoff, 1986: 67). This research provides an opportunity to address the occasions of *ignorance* within the EBC's Vegetable Sheep collection, and uses the idea of 'ignorance' throughout.

These phenomena, alongside a belief in the reciprocal efficacy of objects, are described as an "agentive turn in social history" (Hoskins, 2006: 74). Hoskins notes that passive objects can seem to *act* and to stimulate emotional responses. As such, discourses should "pay more attention to the phenomenological dimensions of our interactions with the material world and interrogate the objects which fascinate us as well as our *reasons* for feeling this fascination" (ibid: 76, emphasis my own).

The habit of anthropomorphizing objects is discussed at length by Woodward who notes that "inanimate things within the environment act on people, and are acted upon by people, for the purpose of carrying out social functions, regulating social relations and giving symbolic meaning to human activity" (Woodward, 2007: 3). For Woodward, culture is understood as something created and *lived through* objects. Within this framework, objects are assumed to be vehicles for the synthesis of macro and micro social structures; involved in broader systemic dimensions such as social representation and identity formation (Woodward, 2007).

* * *

Pearce (1994) asserts that the whole of cultural expression falls within the realms of material culture. We should therefore broaden our understanding of the term 'object' to include specimens of Natural History.

"There is little point in attempting to distinguish systematically between a natural world and an artefactural one… nearly all objects are encountered" (Miller, 2007: 167).

For Pearce (1994) the idea of the natural word as artefactural or *encountered* is explained via the process of collecting; it is the act of selection that renders the natural world an object or specimen, and eventually into a museum piece.

Alberti, similarly concerned with disproving the antonymous linguistics of 'specimen' and 'artefact', describes in detail a process he terms, the "museology of nature" (2008: 74). The museology of nature denotes the ways in which a 'natural' object is actively constructed behind glass within the site-specificity of the museum. Alberti uses taxidermy as an archetypal example of this.

The 'museology' of a natural history specimen, or the "techniques of effected meanings" (ibid: 80), is resultant on drying, stuffing and mounting. Crucially, such techniques are concealed in an authorless denial of the labour of manufacture. Furthermore, Alberti suggests that museum nature is *naturalized*. Naturalization or 'culturing' describes the route by which things "cease to be strange" (ibid: 83) in the vitrine of the museum. The resulting displays are examples of a fabricated and illusory 'museum nature' - and include the treatments of botanical specimens.

Pearce notes the proliferation of words used to describe physical 'things' (Pearce, 1994: 9), each one ideational and loaded with discursive meaning. Throughout the dissertation and with an awareness of the principles outlined above, I refer to *specimen* most frequently as the appropriate noun to encapsulate the materiality and status of the Vegetable Sheep.

'Specimen' is ordinarily considered as a part of an animal or plant that is representative of the characteristics of the species as a whole. At certain points the specimens will act as metonyms for their species; the ideas presented will be applicable to all Vegetable Sheep. At other times, the narratives will refer to an individual and thus be, to borrow Appadurai's term, *idiosyncratic.*

Furthering the ideas in *The Social Life of Things*, Leigh Star and Griesman (1989) cast specimens as 'boundary objects'. The authors problematise the multiple

viewpoints expressed by the diverse actors involved in scientific work, recognising a tension in their multiplicity in the pursuit of generaliabsle findings.

Boundary objects are used as an analytical tool to unpick the need for cooperation among invested participants, in order to ensure the translations of ideas among social worlds. Leigh Star & Griesman argue that coherence in the museum is achieved through an ecological approach using method standardisation and boundary objects.

This emphasis on coherency is one response to the *ignorances* associated with an object, collection or institution. At this point a useful dualism has emerged between the ignorance and idiosyncrasy of an object-based epistemology. It describes a sliding scale of knowledge, providing the bookends between which an object biography functions, tiptoeing ever towards the idiosyncratic account.

Despite Hoskin's recent agentive turn most prominently belonging to post-modern arrangements of material culture, the notion of the object biography resonates in earlier botanic investigations. Leonard Cockayne adopts a more holistic study of plants and their environments in *New Zealand Plants and their Stories*. His style appears to advocate the approach and is worth quoting at length.

"The plants of any country, could they speak, would not only have a surpassingly wonderful story to tell… But they remain forever silent, gracing the earth with their beauty and fragrance, and above all making it a place where man can exist. Notwithstanding their silence, many ways have been devised to learn their secrets. First of all, they have been classified with something like completeness, and the all-necessary names given to their various groups or individuals. Much further then this have their interrogators gone – their relationship to one another has in many instances been determined…. their travels have been recorded; something even has been learnt of their position in the world in the dim past (Cockayne, 1927: 1-2).

Within his narrative account, Cockayne dabbles with notions of animation and anthropomorphism, making silent plants 'speak'. He discusses a plant's 'secrets', echoing Appadurai's conception of ignorance. Through the act of interrogation Cockayne notes that relationships and histories can be unveiled, embedding plants

in a nexus of socio-cultural associations with the potential to act and signify. The idea of 'travels' is reminiscent of Kopytoff's circulation of objects through alternate contexts.

Woodward (2007) dovetails the ideas of the authors above (and others like them) as the 'Cultural' approach to the investigation of material culture. This dissertation ascribes to such a *Cultural* methodology.

Methodology

An object biography utilises qualitative research tools.

The nature of the dissertation means the work relies heavily on archival research. Original sources in the form of historic correspondence and newspaper reports have been used.

Original research has been undertaken through conversations and semi-structured interviews with specific gatekeepers (**Appendix 2**) including current staff members at Kew, and by fostering a network of correspondence with Curators and Botanists of New Zealand Herbaria and Museums. Where possible, the ideas of world authorities of botanical knowledge have been considered.

In order to generate ethical findings I have sought confirmation that the work is covered by UCL's Data Protection. (**Appendix 3**). I have provided my participants with information sheets (**Appendix 4**) and obtained written consent. None of my participants have requested anonymity.

Lastly, a substantial degree of object analysis and examination of surviving documents and labels has been necessary in order to establish histories and trajectories.

Biographical Questions

- What has been the museological treatment of the Vegetable Sheep at Kew, from the mid nineteenth century to the present day?
- How were Vegetable Sheep conceived in social-historical contexts in Britain and New Zealand?
- Do Vegetable Sheep have a place in Māori folklore?
- As a case study, what can the Vegetable Sheep reveal more broadly about anomalous objects in museum collections?

Map of New Zealand

Figure 6.
Map of New Zealand, courtesy and © www.nationsonline.org.

The *Raoulia* and *Haastia* genera are distributed across high alpine regions at altitudes of 5000ft or higher. The Canterbury Alps and the Waimakariri river basin (South Island) are particularly fruitful as collecting sites, with many specimens coming from Mount Torlesse. The mountains of the Nelson region (North Island) also produce specimens.

Notes on the Floristic History of New Zealand and its Vegetable Sheep

"The distinctive plants… that evolved were unlike a whole range of life forms elsewhere in the world" (Clarke, 2007: 17)

The extraordinary biota of New Zealand's archipelago is contributed to the longevity of its isolation from any major landmass. This has resulted in an unparalleled proportion of endemic species that yield for the collecting botanist "material of the highest interest" (Laing & Blackwell, 1907: 2).

Table 1 provides a timeline of significant events in the specimen's European discovery and description.

1770	The first documented encounter with Vegetable Sheep is believed to belong to Captain James Cook. Describing the vegetation of Mount Tarananki, the captain of *HMS Endeavour* notes "many white lumps in companies which bore much resemblance to flocks of sheep" (Cook cited in Kitson, 1907: 157).
1830-40	With the assistance of learned Māori, missionary Reverend William Colenso was one of the earliest Europeans to explore and botanise in the high mountain regions of the South Island. Colenso collected industriously and sent many specimens to Kew (Fig. 7 & 8).
1840	Joseph Dalton Hooker joined as a botanist on *HMS Erebus* on the Antarctic Expedition, visiting Auckland and the Bay of Islands, New Zealand, en route. As a result of his botanising in these regions, Hooker published *Flora Antarctica* (1847) and *Flora Novea-Zelandiae* (1852). Cockayne argues, "it is impossible to speak too highly of Hooker's untiring industry and skill as a collector" (1921: 10).
1842	The French corvette *L'Aube* landed in Canterbury in 1842 - by this time the New Zealand daisy family were already well known in Europe (Ward, 1998: 89). The ship's surgeon, Etienne Raoul, was also a keen naturalist, botanised in Akaroa, Canterbury. Fragments of Raoul's collections are housed at Kew (Fig. 10). Raoul, the eponymous figure in the biography of the Vegetable Sheep (his name is the basis of the genus name), discovered the previously undescribed mat daisy and was first to publish (Fig. 9) the discovery in the illustrated *Choix de plantes de la Nouvelle-Zélande, page 20.*
1864-67	Hooker published *Handbook of the New Zealand Flora*, in which he *describes* the species *Raoulia eximia, Raoulia mammillaris* and *Haastia pulvinaris* using specimens at Kew.

1864	The MEB acquires the first whole Vegetable Sheep specimen, courtesy of Sir Julius von Haast.
1865	Hooker became the Director of Kew (following his father, William Jackson Hooker). With the great resources of Kew at his disposal, Hooker was the recipient of much botanical material as individuals in the young Colony were not confident enough to describe their discoveries - nor did they have the means for local publication (Cockayne, 1958). Cockayne argues that botanical research in the Dominion of New Zealand was dependant on a love of nature to inspire early colonists to collect and undertake excursions (1958: 10). Gradual exploration of the Southern Alps by (among others) Dr Sinclair, Sir Julius Von Haast, Leonard Cockayne, Professor Arnold Wall and Lucy Cranwell, began to reveal the botanical value of the alpine flora in all its richness. Tufts and whole specimens of the *Raoulia* and *Haastia* genera that were collected by these enthusiasts are retained in Kew's Herbarium and in the EBC.
1867	Curator of the Museum at Kew, John R Jackson, published *The Vegetable Sheep of New Zealand* in the *Intellectual Observer* in February 1867. Based on specimens in Kew's Herbarium, Jackson provides an abridged description of twelve known species of *Raoulia* and an illustrated colour plate (Fig. 11). The article ends with a call for individuals in New Zealand to forward to Kew "some ripe scheme or seeds of this curious plant, and some flowers in a perfect state" (Slack, 1867: 135).
1867	Analysis of New Zealand newspapers (using the extensive, scanned digital archive of the *National Library of New Zealand*, accessed at www.paperspast.natlib.give.nz) reveals that use of the nomination 'Vegetable Sheep', together with the anecdotal account of the plant misleading emigrant shepherds, became publicly acknowledged as early as 1867. The first reference was the result of Jackson's request for material (Fig. 12). The frequency of articles discussing Vegetable Sheep is provided in **Diagram 2** and demonstrates that public awareness gradually increased towards the end of the nineteenth century and reached a high in the first years of the twentieth century. A discussion of the correlations to this data is explored in Part 2.

Figure 7.
Herbarium sheet containing Compositae specimens collected by Reverend William Colenso. Courtesy of the Herbarium at Royal Botanic Gardens, Kew.

Figure 8.
Portion of tuft (detail) collected by Reverend William Colenso, possibly *Raoulia australis*. Courtesy of the Herbarium at Royal Botanic Gardens, Kew.

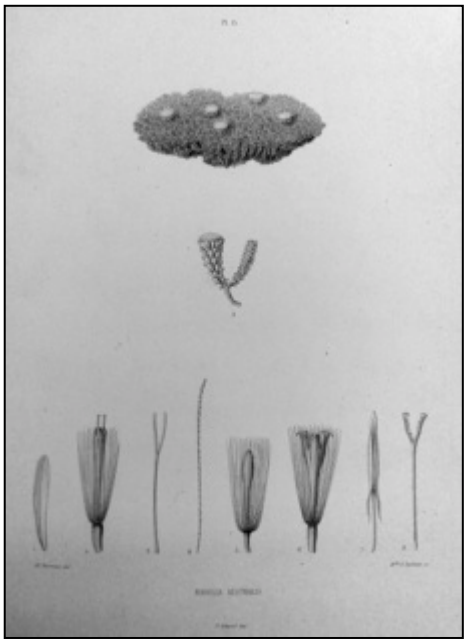

Figure 9.
Publication of *Raoulia australis* in Raoul's Choix de plantes de la Nouvelle-Zélande, page 20, 1846

Figure 10.
Portion of tuft of *Raoulia australis* Hook.f Lectotype. Herb. Kew. Collected by Etienne Raoul at Akaroa, Canterbury C.1842. Courtesy of the Herbarium at Royal Botanic Gardens, Kew.

Figure 11.
Coloured plate showing the variety of the *Raoulia* species. Published in J.R Jacksons 'The Vegetable Sheep of New Zealand' in The Intellectual Observer, Review of Natural History, Microscopic Research and Recreative Science, Volume XI, 1867.

News of the Week.

The attention of our readers is called to a very interesting paper in the March number of the *Intellectual Observer*, to be seen on the Athenæum table, on the "Vegetable Sheep of New Zealand," and inviting residents here to forward to the care of Messrs Groombridge, London, some of the achenes or seeds of this curious plant and some flowers in a perfect state.

Figure 12.
First appearance of the term 'Vegetable Sheep' in New Zealand archive press, using *PapersPast*, the online repository of printed news from the National Library of New Zealand. The article responded to Slack's invitation to forward specimens of the plant to Kew. Printed in the Otago Witness, Issue 807, 18 May 1867, Page 11.

Part 1
Idiosyncratic careers at Kew

Vegetable Sheep specimens were exhibited on permanent display in the MEB from 1883 – 1987. When the last museum site closed to the public in the mid-1980's the specimens were moved into storage. Taken in 2010, Figures 13 and 14 provide a starting point for the discussion of the specimens' career.

This section investigates their course of trajectory during the interim period, piecing together provenance, display and literature from archival sources. It will explore the meaning(s) created by the museum and ask what the specimens came to represent.

Figure 13.
Vegetable Sheep specimens in their original Victorian display case. Photograph by Mark Nesbitt, 2010. © Royal Botanic Gardens, Kew

Figure 14.
Balsam Bog specimen in the original Victorian display case. Photograph by Mark Nesbitt, 2010. © Royal Botanic Gardens, Kew

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Initial Acquisition

The first whole, true Vegetable Sheep specimen to arrive at Kew was the result of a specific request from William Hooker, Director of Kew (1841-65) to Julius von Haast, Founder and Director of the Canterbury Museum.

"Your wish to obtain some entire and complete specimens of *Raoulia's* and *Haastia's*… shall be attended to… you will then have an opportunity of judging for yourself how easy it is for shepherds at a distance to mistake them for their woolly namesake" (Haast to Hooker, August 2nd 1863, Folio 288).

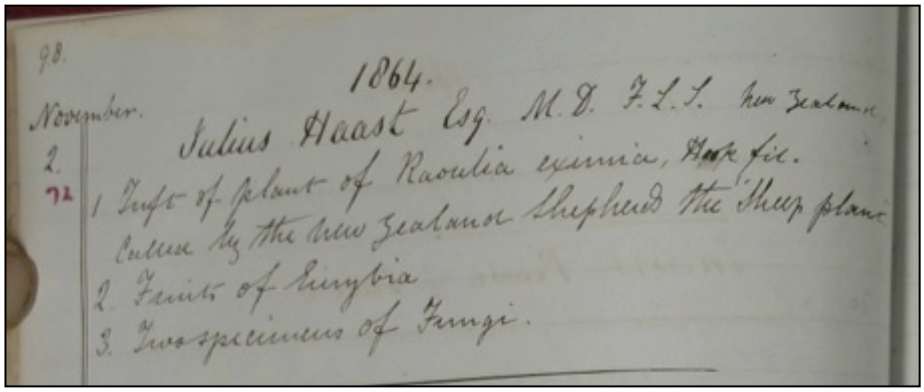


Figure 15.
Museum Entry Book, EBN 72:1864, © Royal Botanic Gardens, Kew

Figure 16.
Specimen 91828, Photograph by Andrew McRobb © Royal Botanic Gardens, Kew

As promised, and confident of his botanising skills, four months later Haast wrote to inform Hooker he was setting off "towards Mount Torlesse… I am certain I shall find some" (ibid, December 12th 1863, Folio 295-296).

Hooker's wish to obtain a specimen of one of New Zealand's most curious plants was granted; Haast wrote informing that the specimen had been collected, dried and sent to London, "the Vegetable Sheep will on this have found its place in your collections" (ibid, Aug 10th 1864, Folio 299-300).

Figure 17.
Mount Torlesse, Canterbury. Date unknown. Photographer Burton Bros. No. 1519, Copy Neg c/nE5763/35. Hocken Collections, University of Otago Library.

The substantial specimen of *Raoulia eximia* Hook.f. *var eximia* was accessioned on 2nd November 1864.

History of the Museum of Economic Botany

The MEB was founded in 1847, initially in a modest dwelling of a former fruit store displaying Hooker's collection of vegetable products. The site became the first museum of economic botany in the country (Desmond, 2007: 184) and grew to occupy four sites during its lifetime.

Despite being the first, the initial location is now regarded as *Museum No. 2*, after the later *Museum No.1* opened in 1857. This is most likely because the initial location came to hold the *second* part of the numerical sequence from Dicots to Monocots. Cornish expressed this layout design as "walking the natural classification" (Cornish, 2012: 140).

Figure 18.
Interior of the Principle Room of Museum of Economic Botany, Museum No.2. The building was retrofitted with a skylight and mezzanine gallery and opened to the public. Published in the frontispiece of J.D. Hookers, Guidebook to the Museum of Economic Botany, 1855.

The increased capacity allowed for continual growth of the collection, indicated by Hooker's request for whole Vegetable Sheep specimens. Hooker's first *Guidebook to the Museum* provides a clear indication of what we would now recognise as the museum's mission statement, collecting principles and modes of display

"A deposit for all kinds of useful and curious Vegetable Products, which neither the living plants of the Garden nor the specimens in the Herbarium could exhibit… such a collection would render great service, not only to the scientific botanist, but… appeals to the faculties and understandings, showing the practical uses of the study and application of botany" (Hooker, 1855: 3-4).

The museum taxonomy followed the classification and display of objects according to the "natural affinities of the plants producing them" (ibid: 6). The guidebook outlines the purpose of the museum as providing access to the raw material of a visitor's professional trade, in instances where specimens would be correctly named and accompanied by an account of their origin, history and native country. Methodologically, the museum pioneered the reconciliation of the raw vegetable product with its derivative, economic product(s).

"The visitor receives twofold instruction, if, with these several vegetable forms in his mind, he can enter an adjacent building, and there contemplate their *products*, and see, as it were, the uses which the ingenuity of man has derived from them… information of this kind cannot fail to be acknowledged and appreciated in a great mercantile country" (ibid).

Figure 19.
Contents of Case 67 in Museum No.2 of the Museum of Economic Botany. The case demonstrates Hookers pedagogic display approach where the raw material (kokerite palm) is paired with its manufactured product. Photograph by J. Lotsy in 1902, courtesy of Caroline Cornish © Royal Botanic Gardens, Kew

Britain routinely sought commercial export crops from its colonies, with Kew becoming increasingly involved in their selection. Latterly, the study of economic botany became synonymous with the study of tropical plants (Wickens, 1990: 22) and was intrinsic to its profitable success. The subject of economic botany is concerned with identifying a plant's uses, distribution and suitability for propagation, cultivation and manufacture.

In line with Victorian Empiricist ideologies, the museum employed a pedagogic approach which narrativised the exploitation of colonial material. Each display case created a profile of nations, condensing them into a palette of useful material cultures. The 'Commercial Man' could heuristically obtain "information on the properties, uses and availability of plant products from known sources; on new sources of, and possible substitutes for known products" (Freeman, 1903: 230).

Figure 20.
Interior of the Principle Room of the Museum of Economic Botany, Museum No.2, as seen from the Mezzanine Floor. Traditionally flowering plants are divided into two groups: Dicots and Monocots. When the MEB grew to occupy its second site, the collection was split according to this division. Photograph c.1900's. © Royal Botanic Gardens, Kew

The Case of the Balsam Bog

Alexander Smith, the museum's first Curator (1856-58), made preparatory revisions to Hooker's 1855 guidebook that showed his intention to exhibit the newly acquired Balsam Bog specimen. Smith's annotations demonstrate the frequent additions to the museum, something that Hooker accepted as often rendering such publications "imperfect" (Hooker, 1847: preface V).

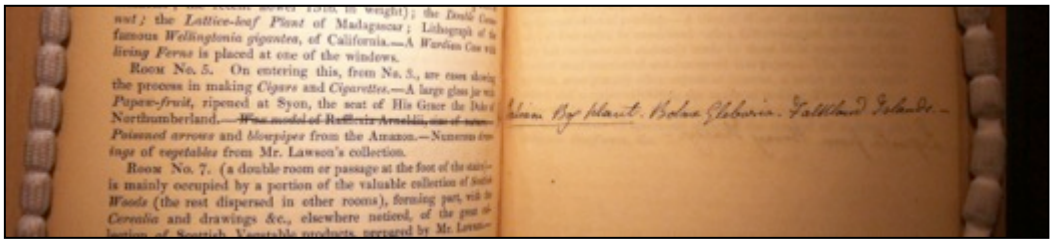


Figure 21.
Alexander Smith's reworking of the 1855 guidebook in preparation for the second edition in 1863. Smith's annotations reveal his intentions to incorporate newly acquired material into the existing displays. Photograph by J.Winston-Silk © Royal Botanic Gardens, Kew

The *Azorella glebaria* specimen (**71816**) is a separate family, endemic to the Falkland Islands. Scottish MP George Rennie, who later became the resident Grosvenor of the Falkland Islands in 1847, donated the specimen to the museum in 1856.

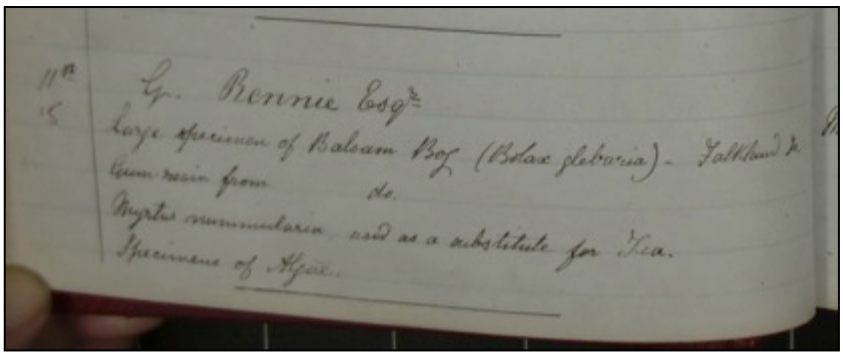


Figure 22.
Museum Entry Book, EBN 15:1856, Photograph © Royal Botanic Gardens, Kew

Figure 23.
Specimen 71816. The Balsam Bog is a member of the Umbelliferae (carrot) family. Photograph by Andrew McRobb © Royal Botanic Gardens, Kew

Smith chose to exhibit the Balsam Bog together with a life size wax model of *Rafflesia arnoldii,* which was already on display as an object of 'Miscellanea'. The *Rafflesia* was described as "the most remarkable production of the floral kingdom" (Baker, 1857: 72) on account of having the world's largest flower and emitting a smell of rotting flesh.

"Sound taxonomy is absolutely essential to economic botany" (Wickens, 1990: 14).

By the publication of the second guidebook in 1863, complete with Smith's revisions, the Compositae and Umbelliferae orders had been transferred to Museum No. 1. However, upon entry the Balsam Bog was placed in a case similar to the *Rafflesia's* and both specimens were relocated to Room VII - a small room at the foot of the stairs in Museum No.2, removing them from their natural orders.

Figure 24.
Room VII of Museum No.2, Museum of Economic Botany. This small room was described as a "passage" and "hallway" (Hooker, 1863: 31-44). Photograph c.1960, Photographer unknown.

"Any fact, specimen, or record left out of order is lost" (Leigh Star & Griesener, 1989: 399).

This decision desynchronised the specimens from the museum's taxonomic arrangement. There are several possible theories I suggest as to why the specimens were peripherally displayed.

- To emphasise their miscellany
- To monopolise on a location which yielded one of the highest footfalls, linking the ground and mezzanine floors
- Size restrictions prevented their display in the correct taxonomic location
- As a temporary holding location

It is not possible to fully understand why during this period, the specimens were not exhibited within their natural orders. It is likely to be a combination of the above, particularly as by 1883 both specimens had been relocated to Museum No.1 - where they remained for over a century.

Figure 25.
The life-size wax model of *Rafflesia arnoldii* in Kew's 'People and Plants' exhibition. Published in H.J. Noltie, Raffle's Ark Redrawn, 2009.

In the following, I argue that Smith's decisive curatorial pairing was to frame how visitors were to interpret the Balsam Bog throughout its career at Kew, and as having a subsequent impact on our classification and understanding of the Vegetable Sheep.

The *Rafflesia* caused a "sensation" in Europe (Noltie, 2009: 94), so much so, that the wax model remains on continual display today.

What at first seemed to be a logical solution to the display of two out-sized miscellaneous objects; the association (and its longevity) facilitated the equation of the Balsam Bog to an equally spectacular exhibit of botanical curiosity.

Triptych

By 1883, the first *true* Vegetable Sheep specimen(s) were displayed in Museum No.1 and a numerical labelling system had been initiated.

Figure 26.
Interior of Museum No.1. Photograph by E.J. Wallis c.1900, © Royal Botanic Gardens, Kew

"Every object of *great importance* enumerated bears… a corresponding number… the portion of numbered objects is very small to the whole" (Hooker, 1883: 6, emphasis my own).

Case 63 contained numerous objects including several smaller specimens of Vegetable Sheep (possibly **61602** and/or **51566**) that were assigned *No. 295* - a demonstration of their value among other objects within the museum. The guidebook stated,

"Tufts of plants of *Raoulia eximia*, Hook.f., and *Raoulia mammillaris*, Hook.f. They grow in large tufts on the mountains of New Zealand, where they are called "Sheep Plants", from their resemblance, even at a short distance, to that animal. A *very fine*

tuft of one of these plants is exhibited in a *special case* opposite Case 49" (Hooker, 1883: 56, emphasis my own).

The guidebook facilitated a visitor's contemplation of the group by directing them towards the location of the *special* case. The case had a dark mahogany base with spun legs, and glazed slanting glass that opened fully on great hinges.

Figure 27.
Installation of the triptych of display cases in Museum No,1. Closest to the camera is the *Rafflesia*, in the middle is the Balsam Bog and the far end is the Vegetable Sheep group. Photograph by E.J. Wallis c.1900. © Royal Botanic Gardens, Kew

Together, the group - separate from the wall cases of the museum - allowed visitors to navigate around an 'island' and to view the specimens from all angles. The museum demarcated a triptych of exhibits and thus earned the Vegetable Sheep an association with the sensationalist careers of its neighbours.

Marvels

An indication of the popular interest in Vegetable Sheep is given in Hutchinson's series *Marvels of the Universe*. Begun in 1911, the periodicals encouraged an interest in science and natural history for audiences with no prior knowledge (Bowler, 2009: 153). Vegetable Sheep were described as a marvel of science, alongside singularities like the surface of the moon, dinosaurs and the praying mantis. The article featured a well-rehearsed account of the plants ability to deceive shepherds and was illustrated by a photograph.

Research shows this was specimen **71816.** I present Hutchinson's photograph together with the original, asking what such a representation reveals about the object's status.

Figure 28.
Original, unedited photograph taken by E.J Wallis, date unknown. 593N, *Azorella Caespitosa* Folio, © Royal Botanic Gardens, Kew

Despite specimens of *true* Vegetable Sheep being readily available, it is Kew's Balsam Bog that is presented as the archetypal Vegetable Sheep. The published photograph has been painted to simulate a specimen rooted to alpine scree, in turn concealing its true genera and revealing the effects of the *museology of nature*.

Figure 29.
The illustration of the "Vegetable Sheep" specimen. Published in 'Vegetable Sheep' by Edward Step, *Hutchinson's Marvels of the Universe,* 1911

"The Balsam Bog, in a colloquial way, is called another Vegetable Sheep. If not being taxonomist" (Hind, pers comms, 2012).

The constructed and *masquerading* "vegetable sheep" is the result of the spectacle of the vegetable sheep usurping and acting upon the Balsam Bog. It represents a moment of *ignorance* in the MEB's classification.

The false taxonomy of the Balsam Bog - no doubt a result of its size and similar uniqueness in the collection - remains in the EBC today (Nesbitt, pers comms, 2012). Such a conception by Kew's current curatorial staff highlights both the authoritative nature, and the ambiguities of categorization, of museum collections when dealing with anomalous objects.

Very fine tufts

At the time of publication of the third *Official Guide* (1883), the MEB had acquired three specimens of Vegetable Sheep. However, the guidebook does not specify which specimens were exhibited and is ambiguous over the number of specimens

shown. Figures 13 and 14 are evidence of a grouped amalgamation. By cross-referencing with the Museum Entry Book, it is possible to extrapolate that the *very fine tuft* in the *special case* could have been **91828, 71814** or **61602**.

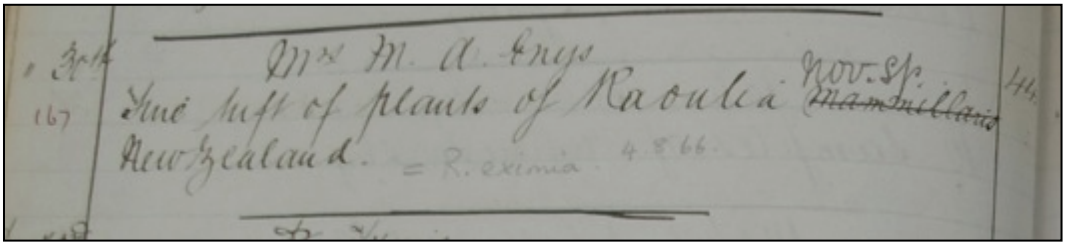


Figure 30.
Museum Entry Book, EBN 167:1881, Photograph courtesy © Royal Botanic Gardens, Kew

Correspondence between Hooker and his collectors reveals the likely *fine* specimen.

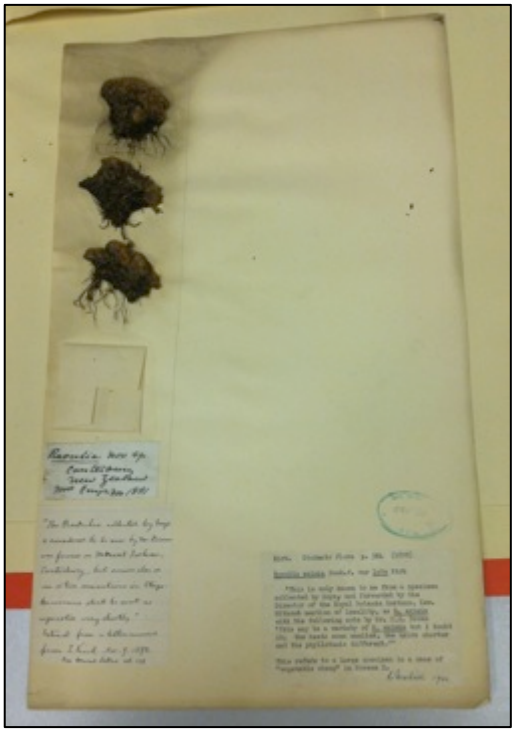


Figure 31.
Specimen of *Raoulia eximia* Hook.f. *var lata.* It is the "small bit included" in Marianne North's letter to Hooker, 22nd November 1881. The Herbarium sheet notes that 71814 is in the museum. Photograph by J. Winston-Silk © Royal Botanic Gardens, Kew

"My brother John D Enys of Canterbury New Zealand, has just sent me home a case of plants known to Colonists by the name of the "Vegetable Sheep" but which I doubt not you will recognise it and by the small bit included. My brother wished me to offer for your acceptance… to the Kew Museum, a *very fine* specimen" (North to Hooker, 22nd November 1881, Folio 201, emphasis my own).

Marianne North was a celebrated artist and plant hunter who had exhibited her paintings at Kew and travelled the world seeking indigenous plants of different regions. North had stayed in Canterbury with her cousin, Enys, on his sheep station at Castle Hill in 1881 (Strongman, 1996: 74); it is likely that this relationship and provenance fostered the onwards trajectory of **71814**.

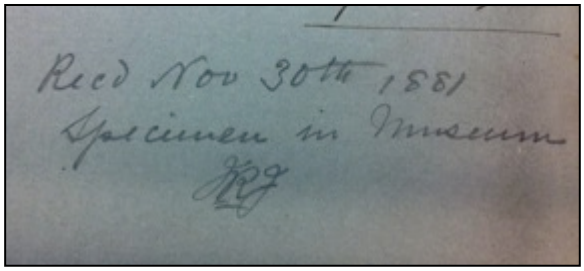


Figure 32.
John R. Jackson's annotation on a letter from Ms North to J.D. Hooker, November 2^{6th} 1881, Folio 202. Photograph by J. Winston-Silk © Royal Botanic Gardens, Kew

John R. Jackson, the Museum's new Curator, and later Keeper (1858-1901), agreed with North's description of **71814** and quoted her terminology in the guidebook. North's following letter confirms that the specimen had been dispatched via luggage train and bares a later note by Jackson confirming the specimen was transferred to the museum.

Jackson's note indicates that **71814** was exhibited in the museum in 1881 (two years earlier then previously thought, and evidence that the guidebook did not always correlate with the most recent curatorial decisions). The keenness with which Hooker acquired the initial specimen suggests that each one could have been added to the museum incrementally, as and when, they arrived into the collection.

It can be asked, against what criteria Jackson and Hooker were selecting specimens for display and for specific citation in the guide. What made **71814** unique against the other specimens? It seems that Jackson and Hooker foremost valued size; size therefore emerges as the correlative of the physiognomic characteristic most representative of *fine* Vegetable Sheep.

It is possible to trace this agenda across the later selections of specimens within the Canterbury Museum, Auckland War Memorial Museum and at international exhibitions of 1886 and 1907 (see Part 2). Therefore, the MEB can be said to be actively constructing a didactic typology of Vegetable Sheep displays.

There also appears to be a conscious impetus by the museum to present the visitor with a synopsis of species, demonstrating the variety of habit among the genus. **Table 2** and **Appendix 1** indicate this.

Figure 33.
Specimen 71814 is largest in the collection and is so out-sized and heavy that it must be stored on a pallet truck. Photograph by Andrew McRobb, © Royal Botanic Gardens, Kew

Table 2: Overview of the EBC Collection, Provenance & Associated Materials

61602	Haast donated a second specimen to the museum; his correspondence reveals that Hooker had a prolonged wait for his additional request – this time a specimen of *Raoulia mammillaris* Hk. f. "I had great trouble to get this vegetable sheep at Canterbury" (Haast to Hooker, July 31st 1872, Folio page 366). Perhaps on account of Haast's "old bones" (Haast to Hooker, Aug 29th 1873, Folio page 371), the botanist describes how this request took him up into the mountains for two months, ascending to altitudes of 6000ft and was "most discouraging" (Haast to Hooker, July 31st 1872, Folio page 366). Having been sent, **61602** was accessioned at Kew in 1873 but it was incorrectly described as *Raoulia eximia* and later re-determined by Hooker in 1881 as *Raoulia mammillaris*. Haast, in his capacity as the Curator of the Canterbury Museum, began the collection and preservation of native plants at the institution. His observations throwing "a flood of light upon the high mountain florula" (Cockayne, 1921: 10). In the *Records of the Canterbury Museum*, Haast's successor, Arnold Wall, describes how Haast deposited many specimens in the museum from his travels in the Alps between 1862-1880; however "the best parts of the collection were sent to England" (Wall, Vol 2, No.2, 1922: 91). **61602** does not appear in Figure 13. The survey of specimens within the case perhaps indicates why Haast's second specimen was not selected: • It duplicated a species already in the case • It's smaller size • The ambiguity over its identification and subsequent re-determination However, as far as it is known, all objects were displayed in the museum as there was no storeroom or reserve collection (Nesbitt, pers comms, 2012). **61602**'s exhibition label has survived (Fig. 36) and confirms it was exhibited. Current member of Kew's staff, Sue Frisby, recalls how "the larger vegetable sheep were displayed in purpose built Victorian glass display cases and smaller specimens would have been in glass fronted boxes" (Frisby, pers comms). Therefore this specimen may have been displayed within the wall cabinets.

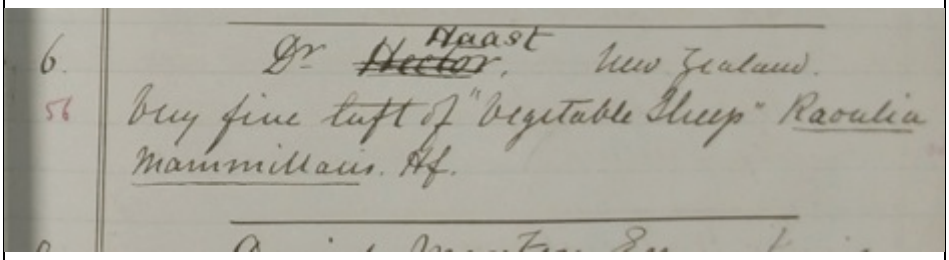


Figure 34. Museum Entry Book, EBN 56:1873, Photograph courtesy Royal Botanic Gardens, Kew

Figure 35. Specimen 61602. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

Figure 36. Label for 61602. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

71811	**71811** was collected by Professor Thomas Kirk, Chief Conservator of State Forests, New Zealand. It is a specimen of *Haastia pulvinata* Hook.f. "For thirty-four years all his time and energy has been devoted to New Zealand Botany… early on he became a leader of botanical thought in the Colony" (Cockayne, 1921: 15). Before leaving for New Zealand, Kirk wrote to Hooker offering his collecting services to Kew. "Being about to proceed to New Zealand I am desirous of receiving communications for sets of dried plants illustrative of the peculiar and interesting flora of that country. The specimens will be well selected… as far as possible they will be set out names and numbered uniformly so as to facilitate subsequent identification… Subscriptions – half payable in advance – at the rate of £10 for 500 specimens" (Kirk to Hooker, 1st August 1862, Folio 418). Testament to the collector's meticulousness, Wall comments on the propensity of his specimens to be "beautifully prepared and mounted" (Wall, 1992: 91). No doubt Hooker would have been as satisfied with the material received at Kew; Kirk later wrote confirming that he had given, "Instructions to forward specimens of *Haastia pulvinaris* for the museum" (Kirk to Hooker, 23rd Feb 1888, Folio 873). These instructions were given five days before Kirk's compulsory retirement.

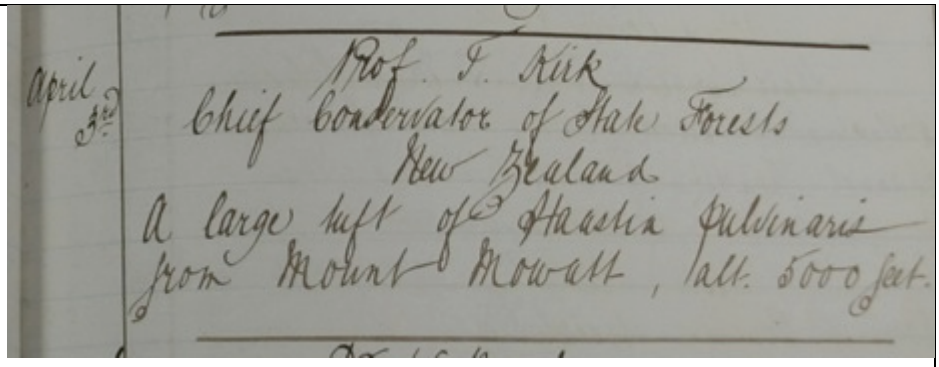


Figure 37. Museum Entry Book, EBN 37:1888, Photograph courtesy Royal Botanic Gardens, Kew

Figure 38. Specimen 71811, Photographs © Andrew McRobb, Royal Botanic Gardens, Kew

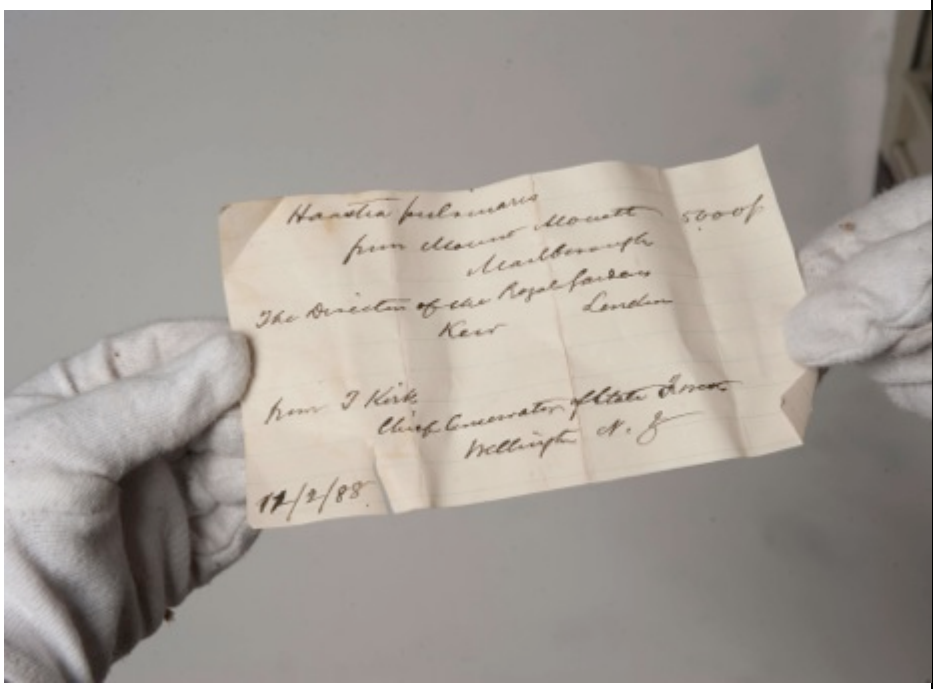


Figure 39. 71811 Label. Photographs © Andrew McRobb, Royal Botanic Gardens, Kew

71815 and **71812**

The final two specimens in the MEB case (Fig. 13) were acquired from the Canterbury Museum in 1924. **71815** is the type specimen for *Raoulia eximia* Hook.f. *var eximia* and **71812** is a specimen of *Raoulia mammillaris* Hook.f. The specimens were collected by one of New Zealand's most prominent botanists and authors, Professor Arnold Wall, who became the honorary Curator of the Herbarium at the Canterbury Museum. "The activity of A. Wall in collecting specimens… has been amazing" (Cockayne, 1921: 19).

71815 and **71812** have one of the least well documented provenances of the collection. Paul Scofield, the current Senior Curator of Natural History at the Canterbury Museum suspects "that the exchange was never formally documented" (Scofield, pers comms, 2012). This is reverberated by the lack of correspondence held in Kew's archive. Within his semi-autobiographical Flora, *The Botany of Christchurch,* Wall indicates his specimen's possible passage to Kew. "Several thousand specimens of the alpine flora were collected, a large number were photographed, and seeds were distributed to many parts of Europe and America" (Wall, 1922: 46).

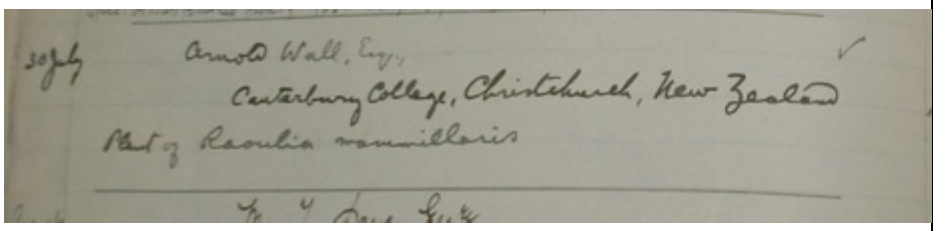


Figure 40. Museum Entry Book, EBN 42:1924, Photograph courtesy Royal Botanic Gardens, Kew

Figure 41. Specimen 71815 (left) & 71112 (right). Photograph © Andrew McRobb, Royal

Botanic Gardens, Kew

Figure 42. Specimen 71815, label detail. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

Figure 43. Specimen 71812, label detail. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

Based on his familiarity with other objects in the collection, Scofield (pers comms 2012) confirmed that the Canterbury Museum label of **71815** (which bears the note 'Type Sp") is genuine, however he was unfamiliar with the style of labels on the base of **71812** and suggested these may have been added at a later date.

In botanical nomenclature a 'type' is an example to which the name of a taxon is

	permanently attached and anchors its defining features. The lack of documentation surrounding the acquisition of **71815** is somewhat unexpected considering the acknowledged importance of type specimens within museum collections. "Types are the most valuable possession of museums and constantly increase in value as years elapse. They should not be left in the herbarium with the ordinary specimens, but should be so mounted as to be protected from injury in handling and should be kept in fire-proof cases, if possible in a special room where they may be consulted in the presence of a custodian who can help preserve all fragments of the type material" (Swingle, 1913 cited in Datson, 2004: 160). Datson (2004) argues that type specimens are unique and irreplaceable, and that their biographies are as important as those of their authors for botanists who are intent on pinning a name to a species. Alberti (2011) suggests that the unique type specimen in natural history is the clearest example of the authority of the object. Despite the significance and value of type specimens, it is widely recognised that museum collections are plagued by a lack of documentation. Therefore the trajectories of **71815** and **71812** prior to their arrival at Kew remain relatively unknown. Their assumed arrival time co-ordinates with the *British Empire Exhibition*, 1926 which featured a New Zealand Pavilion of the countries manufactured products, much akin to the displays of the *Colonial and Indian Exhibition*. However this has not been proven as impetus for their transferal to the MEB. In the career of the Vegetable Sheep specimens, it was Dr Hind's identification of the type specimen within the somewhat discarded collection that ensured the groups salvation. This act is demonstrable of the value of the botanical type specimen within contemporary museum collections.
51565	**51565,** a specimen *Haastia pulvinaris* Hook.f., was transferred from the *Tresco Abbey Gardens* in the Isles of Scilly and was donated to Kew by Captain Dorrien-Smith. It is possible that Dorrien-Smith, who later became the Lord Proprietor of the Isles of Scilly, collected the specimen during his travels to New Zealand in 1909. "I herewith enclose a list of the plants I have brought from New Zealand as far as I know them and I hope that some of the things may be acceptable to you… I think the New Zealand alpine plants will do better with you then with us out of

doors on the rockery & further I see no reason why the south island plants should not be hardy any where in the west and south of England as they have in nature a rigorous though short winter… I have a dry specimen of Haastia pulvinaris the farmers 'vegetable sheep' to which you are welcome should you require it for the Herbarium" (Dorrien-Smith to Prain, May 5th 1908, Folio 78-90)

The specimen demonstrates the interest in cultivating the alpine plants in England's botanic gardens on account of their horticultural and ornamental value. *The Gardeners Chronicle* notes "many of these plants are justly famous in the horticultural world, but are extremely difficult to procure" (Anonymous, 2nd March 1929: 161).

Dorrien-Smith describes his expedition in *The Gardener's Chronicle,*

"Kew has been largely enriched with New Zealand plants in consequence of this expedition… the genus is almost peculiar to New Zealand where it forms one of the chief ornaments of the mountain and alpine flora of that colony" (Dorrien-Smith, Jan 2nd 1909: Kew Microfilm: 429, Miscellaneous 1864-1913).

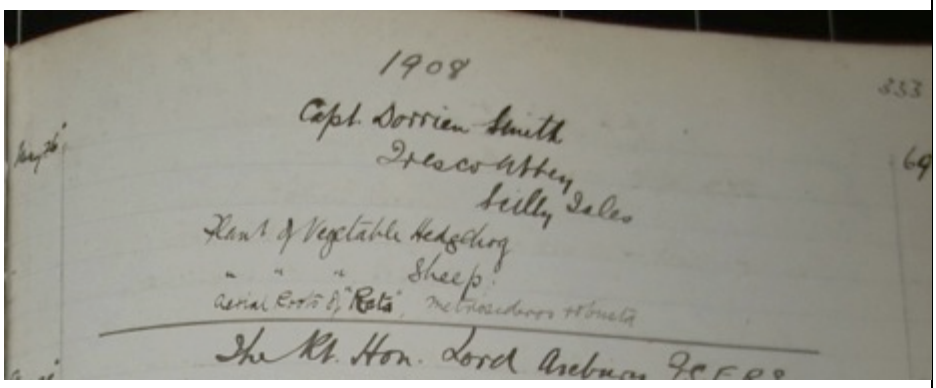


Figure 44. Museum Entry Book, EBN 69:1908, Photograph courtesy Royal Botanic Gardens, Kew

Figure 45. Specimen 51565. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

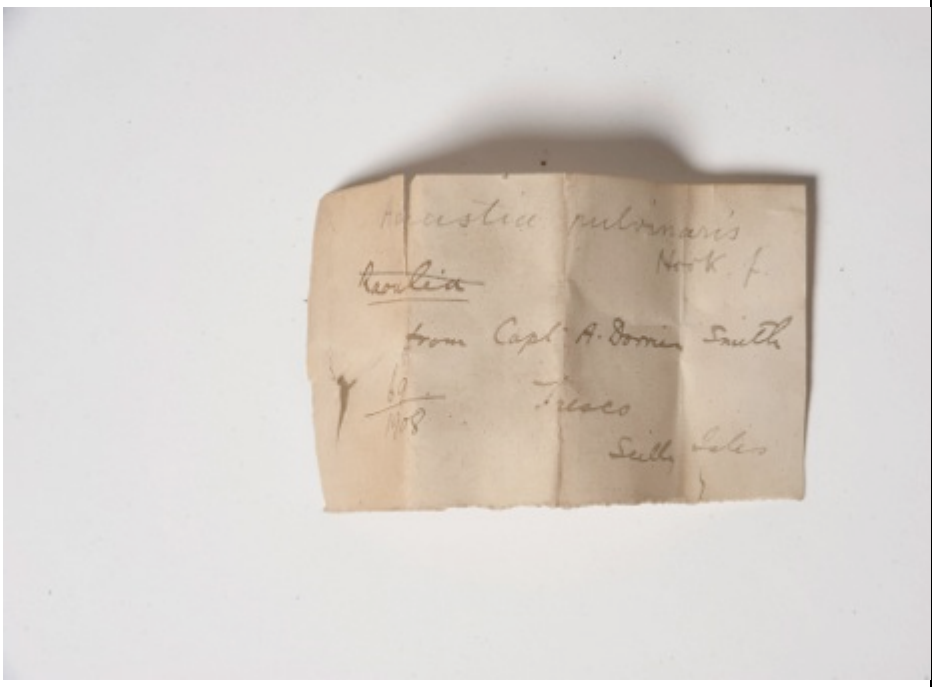


Figure 46. Specimen 51565, label. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

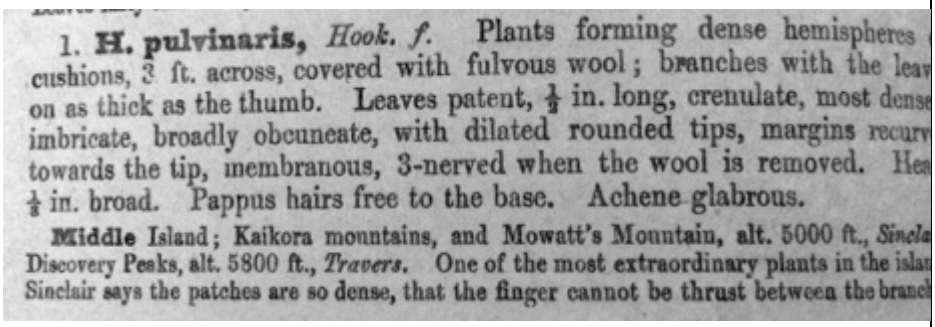
51565	Dr Andrew Sinclair donated a small tuft specimen of *Haastia pulvinaris,* collected from Mowatts Moutain, Nelson. The date of entry into the Museum is unknown, as it does not have an associated Museum Entry Book number. Dr Sinclair travelled to New Zealand in 1858 to collect material for Hooker's *Handbook of the New Zealand flora* (1864–67). It was during this trip that Sinclair drowned in the Rangitata River while botanising with Haast in Canterbury.  **Figure 47. Specimen 51566. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew**  1. **H. pulvinaris,** *Hook. f.* Plants forming dense hemispheres cushions, 3 ft. across, covered with fulvous wool; branches with the leav on as thick as the thumb. Leaves patent, ½ in. long, crenulate, most dense imbricate, broadly obcuneate, with dilated rounded tips, margins recurv towards the tip, membranous, 3-nerved when the wool is removed. Hea ⅛ in. broad. Pappus hairs free to the base. Achene glabrous. **Middle** Island; Kaikora mountains, and Mowatt's Mountain, alt. 5000 ft., *Sincla* Discovery Peaks, alt. 5800 ft., *Travers*. One of the most extraordinary plants in the islan Sinclair says the patches are so dense, that the finger cannot be thrust between the branch **Figure 48. Description of *Haastia pulvinaris*, published in Hooker's *Handbook of New Zealand Flora*, 1867, page 156.** It is possible that this small tuft specimen was used to identify the species in Hooker's *Handbook of New Zealand Flora.* The description indicates that a specimen from Mowatts Mountain, collected by Sinclair was used as a reference.

Figure 49. Specimen 51566, reverse. Photograph © Andrew McRobb, Royal Botanic Gardens, Kew

The reverse of the specimen has traces of resin and blue tack. This is likely to indicate that the specimen would have been mounted to a display within the MEB.

Anomalies

I have discussed how various exhibitionary devices have helped to shape an understanding of the specimens. The discussion now turns to an investigation of their anomalous position.

"Though singular and interesting to the botanist, these plants are of no value economically" (Jackson, 1867: 133).

Economic Botany is defined as "the study of the plants and plant products, which directly or indirectly are of service to man" (Freeman, 1903: 228). Yet, Vegetable Sheep are of no *service* - they retain no medicinal, sustenance, or commercial applications and yield no gum, resin or fibre - and therefore cannot be said to be economic plants.

This demonstrates that the value of an anomalous object must be resultant on factors other than its inclusion in a museum's tautology. By creating an interstice in the taxonomy, the question to be asked is why were the Vegetable Sheep in the collection? Several key ideas have emerged as a way to scrutinise their appearance and peripheral status:

- The importance of whole specimens
- The museums embrace of spectacle

The regularity with which whole specimens (of any species) arrived at Kew was far outweighed by the frequency of Herbarium specimens, to the extent that such a donation was deemed out of the ordinary (Nesbitt, pers comms, 2012). Acquiring a whole specimen caused "great inconvenience" (ibid) not only to the museum or Herbarium because it required bespoke storage, but also to individuals overseeing its collection, drying and transportation - only adding to the unusual capacity in which entire plants came to be accessioned. It would have taken approximately three weeks to dry the specimens. The efforts of early botanists are explored further in Part 2.

"Dead specimens [have] more credibility then those in the garden or the field" (Alberti, 2011: 60)

Figure 50.
Herbarium Sheet of *Raoulia mammillaris*, tufts taken from Haast's specimen in the museum, 61602. Photograph by J Winston-Silk, © Royal Botanic Gardens, Kew

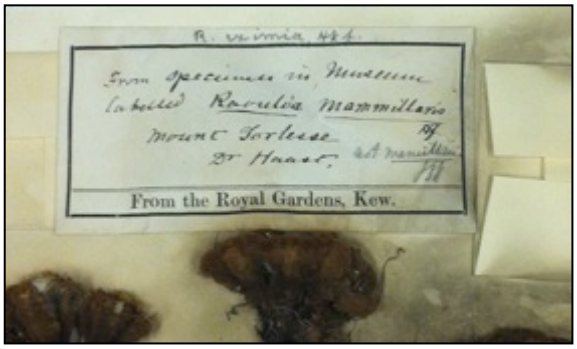


Figure 51.
Herbarium Sheet of *Raoulia mammillaris*, tufts taken from Haast's specimen in the museum, 61602. Photograph by J Winston-Silk, © Royal Botanic Gardens, Kew

Having access to a whole specimen has benefits not only for botanical research but also for display purposes. Foremost, a whole specimen is valued because it acts to highlight the limitations of Herbarium specimens. The entire specimen is valuable as it demonstrates the *actual size* of the plant.

"Tweaked beyond all recognition… if one needed to check on disposition of flowering shoots or growth patterns that can't be done with a herbarium specimen" (Hind, pers comms, 2012).

The dried specimen "remains just that – a *sheep*" (ibid), providing Curators with the correct physiognomy upon which the plant's central biography is pinned. Its structural integrity, a testament to Kew's safekeeping, allows audiences to interpret the object because it retains the physical surface on which so much symbolic reference is derived. One can easily imagine how unimpressive the peculiar story of Vegetable Sheep would be if it were illustrated by nothing more then a root or bud.

Scofield however, who is charged with the safekeeping of a 134lb Vegetable Sheep specimen in the Canterbury Museum (Fig. 73), is consultable on the disadvantages of whole specimens, although is ultimately agreeable in the need of such things.

"In the 19th century no-one in New Zealand thought of space or was 'fiscally responsible'. Only with the growth in botanical collections was there a thought that a whole vegetable sheep is too much… whether they are needed now is no different to asking do we need a whole tree or just some foliage" (Scofield, pers comms, 2012).

It would be reductionist to see the MEB as catering purely to the dissemination of scientific knowledge, after all a "desire to both entertain and educate represents the beginning of the modern museum" (Giebelhausen, 2006: 4). From the outset the museum was seen to embrace the entertaining 'curiosity' in its collections, acting as a "deposit for all kinds of useful and *curious* Vegetable Products" (Hooker, 1855: 3-4, emphasis my own). In his thorough and nuanced history of Kew, Desmond vehemently argues that, "eclecticism has been the guiding principal of the museums exhibitions" (2007: 310).

The duality present in the acquisitions policy allies the museum with the notion of the spectacle piece in its approach to the display of tropical products. This occurred to such a degree that Hooker became critical of the usurpation of "scientific objects… in favour of *showy articles*" (Hooker to Bentham, 20th April 1851, Folio 49, quoted in Desmond, 2007: 185, emphasis my own).

Most recently, Cornish, in her discussion of Totem Poles in the MEB, acknowledges the propensity of the museum to embrace curios in its displays, suggesting it was a reflection of the diverse audiences Kew was trying to attract (Cornish, 2012: 139).

"The useful object in a scientific collection is selected on the basis of its typicality, its location in a tabular display being predicted on an acknowledged system of classification; 'curios' on the other hand, speaks of uniqueness and of a more personal experience of meaning-making" (ibid: 138).

It is of considerable importance to recognise that the paradox in the MEB collection does not simply demarcate curious objects from scientific ones. The

museum's curious objects – the *Rafflesia* wax model, the Balsam Bog and Cornish's Totem Pole (among many others) – although they are deserved of their curious titles, they remain tabular objects of economic botany as each has a valid commercial or practical application. By comparison, the Vegetable Sheep are simply curious.

Writing after the Kew Museum's heyday, Debord discusses the idea of the spectacle and its implications on modern living. *The Society of the Spectacle* offers myriad definitions of the spectacle often using dense and sloganizing Hegalian language:

"That which appears is good, that which is good appears" (Debord, 1977: 12).

Debord's readings can be applied to the discussion of material culture. If, by their concrete association to the *Rafflesia* and the Balsam Bog triptych the Vegetable Sheep are thought of as 'good' 'showy articles', then Debord's accounts can be used to draw out the specimen's further hidden values.

"The spectacle is the existing orders uninterrupted discourse about itself, its laudatory monologue. It is the self-portrait of power in the epoch of its totalitarian management of the conditions of existence" (Debord, 1977: 24).

Debord argues that the spectacle object is a self-aggrandising construct of a particular socio-historical power. Woodward (2007) argues that objects become meaningful through their symbolic manipulation and contextualisation in broader discourses, narratives and myths.

"The removal of object from a colonial periphery to the imperial centre profoundly alters the way in which they are understood" (Barringer, 1998 :12).

As such, the Vegetable Sheep acquire meaning independently of their original context and independently of their inclusion in the museum's central taxonomy. They become a 'showy' epochal self-portrait. By sidestepping the representation of useful and commercially viable raw products, they encapsulate a nexus of collectors and correspondence through their materiality and act as a monologue of Kew's pandemic and systemic collecting; a citation of the Empire's mercantile reach. Ultimately, the specimens also help render the museum's collections as a

primary resource of their time, and this agentive performance has practical applications. Endersby argues that demonstrating Kew's usefulness was an essential part of a strategy to maintain its government funding (Endersby, 2008: 233). As such, the museum needed to be seen as complimenting the living collections by way of the scope of its collections.

Colonial and Indian Exhibition

The effects of spectacle and the museology of nature are illustrated nowhere more clearly then in the framework of the World Fair. I use the display of Vegetable Sheep at the *Colonial and Indian Exhibition* 1886 as a case study to demonstrate the specimen's classification, status and reception in London.

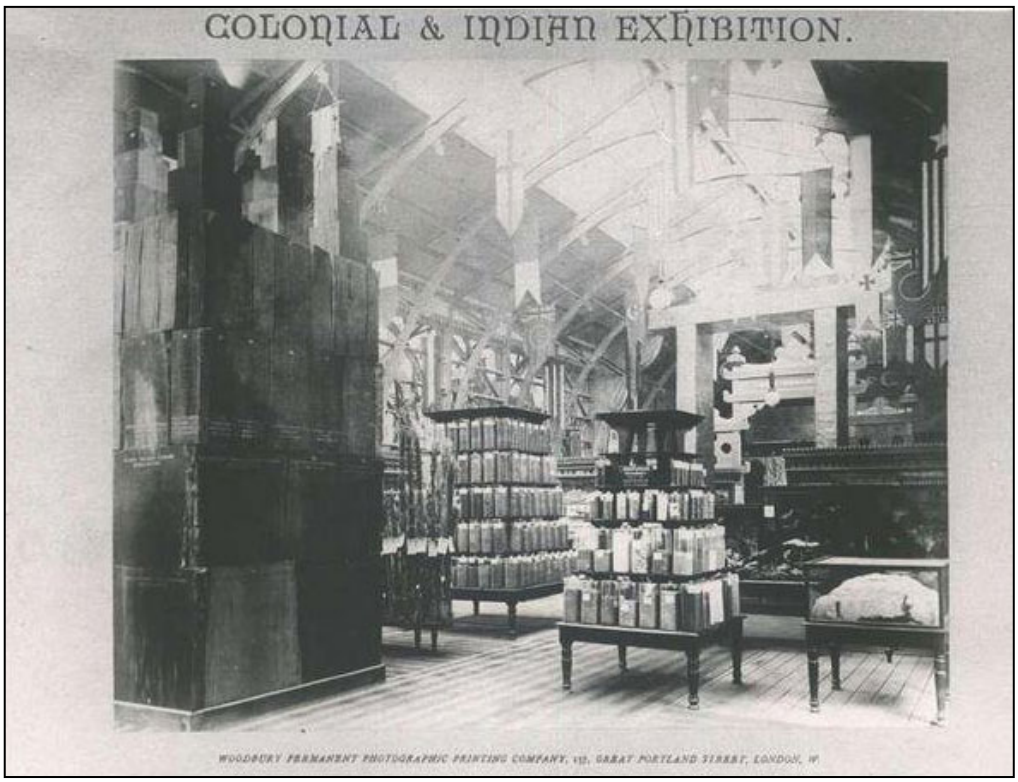


Figure 52.
Interior of the New Zealand Court at the Colonial and Indian Exhibition, 1886. A vegetable sheep specimen is displayed in a case similar to the MEB. Photograph by Woodbury, Copy Neg c/nE3035/32, Published in Reports on the Colonial Sections of the Exhibition, ed H. Trueman Wood, Wlm Clowes & Sons, 1887. © Hocken Collections at the University of Otago Library.

Barringer (1998) argues that the Exhibition was both the culmination and archetype of South Kensington's period of popular imperialism. The author, echoing Debord's sentiment, argues it continued to pedal the invented traditions of Empire and promoted the imperial ideal in a bonanza of national self-aggrandisement.

Figure 53.
Vegetable Sheep exhibited at the Colonial & Indian Exhibition, 1886. Published in 'A Ramble through the New Zealand Court', Illustrated London News, 2nd October 1886, page 361

Figure 54.
Kauri Pine specimens exhibited at the Colonial & Indian Exhibition, 1886. Published in 'A Ramble through the New Zealand Court', Illustrated London News, 2nd October 1886, page 361

The Illustrated London News (ILN) provides a peripatetic eyewitness account of the New Zealand Court.

"Strolling round… one finds something of interest at each step. Here for instance is the very peculiar mountain plant, aptly named "vegetable sheep" by the New Zealand shepherds" (Anonymous, ILN 2nd October 1886: 366).

Julius von Haast acted as an Exhibition Commissioner and secured a specimen of *Raoulia eximia,* collected by John D. Enys (who also supplied **71814** and it is debatable whether this was the specimen in the exhibition). The "remarkable exhibit" (ibid) was displayed in the Court together with taxidermy birds, a section

of the trunk of the Kauri pine, samples of wool and gold, a Moa skeleton and ethnographic objects (including a Māori *Pataka* or store-house). The specimen was classified in the 'Horticulture' Group within the 'Flowers and Ornamental Plants' class. Within the same class were a collection of ferns, living plants in the conservatory and a specimen of vegetable caterpillar (*Sphaeria robertsii*).

The exhibitionary dynamics of the 1886 show are shared by the MEB. Countries were commodified and reduced to the sum of their material productions - with a distinct polarity between objects of science and curiosity.

"Kauri is most useful. It's timber is in great request for spars and masts, the planking of ships and for house furnishings" (ibid: 365).

The Kauri was exhibited with pedagogic devices to exemplify its economic properties. There was an example of Kauri gum, a photograph indicating its height and worked objects of various New Zealand timbers (Landsdown, 2006: 252). The ILN records the Kauri with examples of radial and tangential sections - as representative *specimens* - and as the subject of discussion between two gentlemen in top hats.

By contrast, the Vegetable Sheep was presented as an *ornamental* object. Its value derived from its unique, curious and decorative properties, with no such interpretation as to genus or distribution. It was displayed in a mahogany glass case rendering the plant an artefactual device of *museum nature*. The ILN illustrates the specimen as an object gazed upon by an intrigued mother and daughter.

Recent Histories

"Some are high up in society, while others occupy very humble positions. There are plants which, seizing the opportunities fortune has given, have risen to greater things… others have fallen from their high estates into obscurity" (Hutton, 1901: 71).

This section charts the trajectories of the Vegetable Sheep during their more recent careers at Kew. An era arguably defined by the oscillation of changing attitudes towards the MEB, resulting in the Vegetable Sheep's eventual "fall in esteem" (Nesbitt, pers comms, 2012). I present a series of transformations enveloped in the interests held by those Kew actors who mobilised the safekeeping of the specimens in recent years.

It can be reasoned that the lessening significance of the museum is allied with the well-documented decline of interest in economic plants, which closely followed the loss of British colonies after World War 2.

Figure 55.
Interior of Museum No.1 in 1971. There are considerably fewer objects on display compared to the same view c.1900, see Fig,27, page 40. The Triptych remains unchanged. Photographer unknown. © Royal Botanic Gardens, Kew

"Research in economic botany in Kew declined rapidly with the granting of self rule" (Wickens, 1990: 23).

With such an ideological shift came an institutional one; the museum's central narrative of reconciling colonial materials with their commercial opportunities appeared unprogressive in the socio-political context.

Figure 56.
Interior of Museum No.1 in 1971. There are considerably fewer objects on display. Numerous objects were deaccessioned and transferred to the British Museum and the Horniman Museum. Photographer unknown. © Royal Botanic Gardens, Kew

Caroline Cornish and Mark Nesbitt discuss these changing attitudes in the paper, *History of Ethnobotanical Collections*. Like Wickens, the authors attribute the decline of interest in ethnobotanical artefacts and tropical products to the expiration of European Empires. The manuscript also identifies two other factors implicit in the falloff:

- The reaction against nineteenth century architecture
- The introduction and zeal for synthetic materials

In Alberti's historical synopsis of the Western science museum, it's apogee as a site for the production and consumption of natural knowledge, is said to begin in the 1860's lasting for a period of eight decades. By the mid-twentieth century the decline in influence is further correlated with ill-fated museological disciplines.

"Natural history lost credibility and field-based ethnography was more favoured then collection-centred ethnography… the huge collections that had been the basis of their status now denied the museum the physical or conceptual flexibility to adapt to the changing intellectual climate" (Alberti, 2011: 64-65).

Figure 57.
Cataloguing of 73,000 objects using *Oracle* database software was undertaken by Kew staff members Sue Frisby, Nicky Biggs and Naomi Rumball. Photographer unknown. © Royal Botanic Gardens, Kew

Testament to Alberti's assumptions, the MEB had changed little since it's inception. The Victorian display cases remained, as did the systemic taxonomy and principle arrangement of exhibits. Fewer objects were displayed giving a more concise and modern aesthetic; it is fair to say the site had remained static and fairly unresponsive to the flux of post-war Britain. During the period the Vegetable sheep, still in their triptych, remained on permanent display.

By 1985 the responsibility of researching economic botany - which included the safekeeping of the collections - was transferred from the former Museums Division to the Herbarium Division. The final closure of the Museum No.1 site for renovation in 1987 provided an opportunity for the material to be catalogued.

"The project involved databasing, photographing and repackaging items from delicate Victorian glass storage jars to more robust new glass containers, or into acid free cardboard boxes according to requirements… It was a shame that we couldn't retain some of the wonderful display cases, but they would not have been allowed under current health and safety regulations " (Frisby & Biggs, pers comms, 2012).

No Man's Land

The larger Vegetable Sheep (Fig. 13) were not accessioned and did not enter the safekeeping of the EBC store and were "eminently almost lost" (Hind, pers comms, 2012) after an unknown individual requested that Kew dispose of the material. From consultation with Dr Nicholas Hind, I present a piecemeal account of the Vegetable Sheep trajectories from 1987, to their role today.

Immediately after the closure of the museums the specimens were housed in the environmentally unstable Herbarium furniture store and the original cases became damaged. Their size, which had previously demarcated the *fine tufts* for display, now prevented the specimens from entering the Herbarium proper – being ill equipped to stow out-sized specimens.

At this time, Nesbitt (pers comms, 2012) argues that the Vegetable Sheep were thought of as purely botanical specimens, their career and classification as popular exhibits coming to an end with the closure of the museum and it's architectonics that had defined them as such. This "no-mans land" (ibid) refers not only to their physical periphery to the collection, but yet again to an ambiguity over their status.

"The artefact and the specimen are to be found in different museum case and accession ledgers" (Albert, 2008: 82).

Along such diverting lines, either the Herbarium or the EBC was to be charged with the responsibility of their perpetuity. By recognising the botanical importance of the type specimen Dr Hind salvaged the group and subsequently transported the specimens to a more secure space in the atrium of the Banks Building and stored under a tarpaulling.

"What happened next was rather remarkable" (Hind, pers comms, 2012).

Interest in the specimens resurfaced when they were considered for *First Time Out* (2011). The exhibition was to display five previously unseen exhibits from five leading cultural and scientific institutions. Each objects would be shown in sequence and re-interpreted according to the interests of the Curatorial teams at the respective organisations.

The format of the exhibition is one approach to address the *ignorances* of museum collections, and is evidence of the resurgence in anomalous objects and their biographies. The Vegetable Sheep met resistance from the recipient museums who were horrified by the size and logistical requirements of the Victorian display cases (Hind, pers comms, 2012). It was decided that the lack of research undertaken on the material (at that time) would also have been an obstacle to their successful re-interpretation (Nesbitt, pers comms, 2012).

Figure 58.
The 5 objects exhibited as part of the *First Time Out* exhibition, 2010. Left to Right: Medicine Chest from the Wellcome Collection, Wooden paddle from Easter Island from the Horniman Museum, Japanese painted panel from the Royal Botanic Gardens, Kew, the skull of a giant Lima from the Natural History Museum and Lowenthal's children's toy from the Science Museum. Photograph © The Horniman Museum.

In 2010 Kew's vast collection of specimens from the Compositae family were rehoused in a new wing of the Herbarium and a new taxonomic arrangement of the genera, based on molecular systematics, was inaugurated. By 2011, a decision had finally been made between the Curator of the EBC and Herbarium staff to move the Vegetable Sheep material into the EBC as accessioned specimens. The original display cases, which had been plagued by concerns over their failure to meet health and safety standards were dismantled and disposed of. The specimens were frozen as a pest preventative enabling them to enter the collection proper.

Today the EBC is used as a teaching collection on a range of subjects at postgraduate level, remaining a key resource for historians of medicine, science and empire. Research now focuses on the role of indigenous peoples in creating objects and knowledge. Most recently, the collection database was made available online.

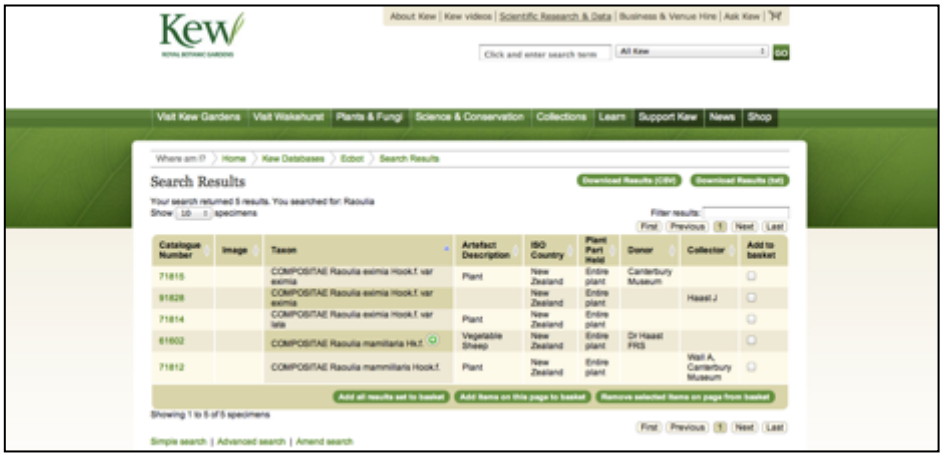


Figure 59.
The online database 'EcBot' of the Economic Botany Collection. Material can be searched via catalogue number, taxon, artefact type, country, collector and more. The database contains images for part of the collection and provides Museum Entry Book Numbers. The tool can be accessed here: http://apps.kew.org/ecbot/search

Part 2
Aotearoa

The discussion will stage a contextualisation of the specimens in their country of origin. It will investigate the rich histories of Vegetable Sheep specimens, illuminated by the actors involved in their trajectories. The contemporary voices of collectors, botanists, curators, journalists, photographers and poets are presented here and help to render a portrait of Vegetable Sheep through their meanings in late nineteenth to early twentieth century New Zealand. The section will address three key themes:

- Presence of specimens in New Zealand Museums and Herbaria (**Appendix 5)**
- The polysemous stories and ideational associations of Vegetable Sheep produced by New Zealand inhabitants.
- Alternate regimes of meanings for indigenous communities

Diagram 2: Frequency of the "Vegetable Sheep" in New Zealand Archived Press, 1860-1949

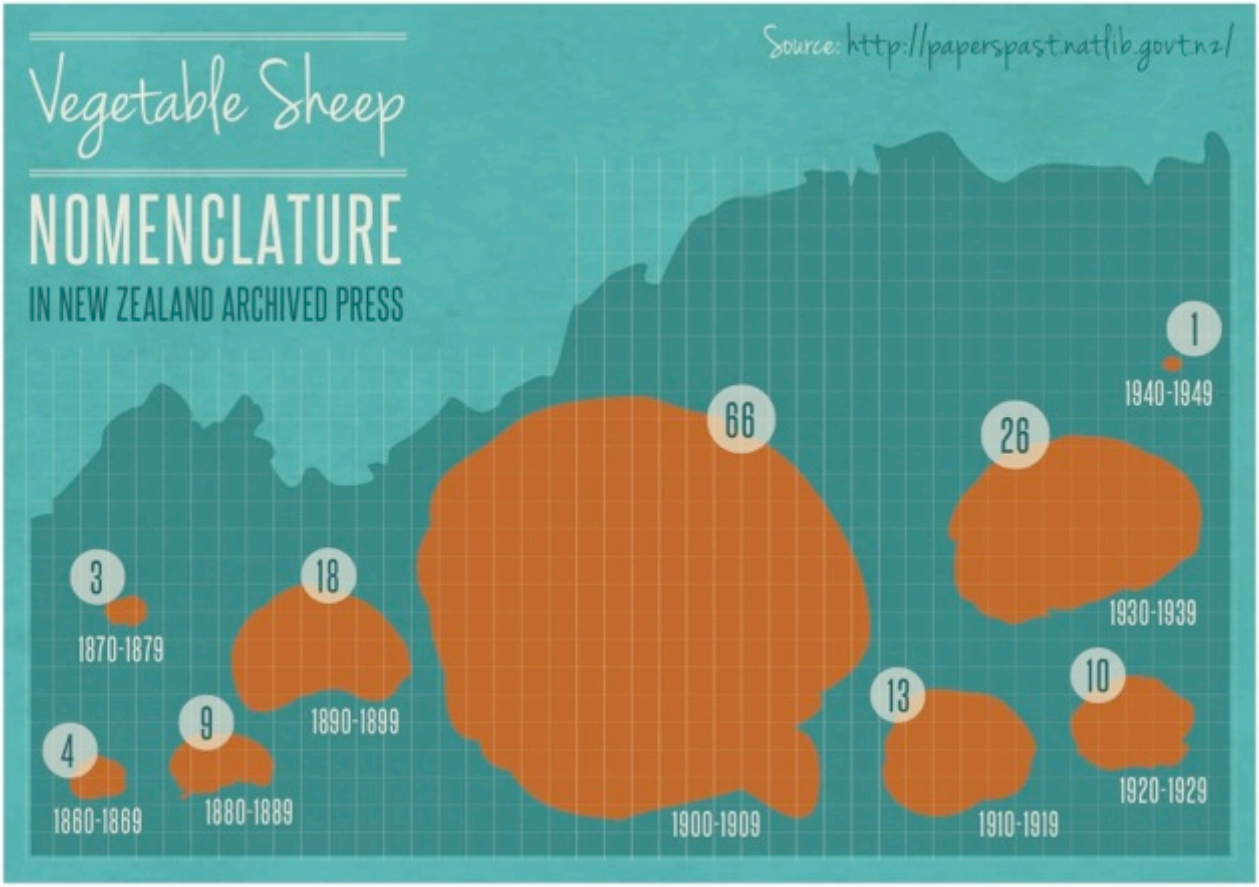


Diagram 2 (created by J. Winston-Silk and A. Gordon) explains the frequency of single articles containing reference to Vegetable Sheep in New Zealand archived newspapers. The first reference was published in 1867 and the last reference was seen in 1940. The information for this diagram was obtained from the National Library of New Zealand (http://paperspast.natlib.govt.nz/), the online database ceases to hold articles post 1945 and therefore the information after this time is incomplete. The frequency of articles is represented by the size of the Vegetable Sheep specimen in 9 year increments. The data shows that the term 'Vegetable Sheep', together with the associated narrative to agricultural workers mistaking the plants for sheep on the hillsides, was publicly acknowledged in the mid-eighteenth century. This correlates with the publication of '*The Vegetable Sheep of New Zealand',* 1867, by J.R. Jackson, Curator of the MEB, in which he calls for New Zealanders to forward specimens to Britain. Subsequently, as Kew and various Herbaria in New Zealand acquired specimens, frequency increased.

The first peak in the data occurs between 1880-1889, this correlates with the appearance of Vegetable Sheep at the *Colonial & Indian Exhibition*, 1866 in London.

By far the largest result was achieved between 1900-1909, this is the result of the interest in the New Zealand International Exhibition, 1906-07 which displayed Vegetable Sheep specimens in the North Canterbury Court.

There is also a resurgence in reports between 1930-1939, this directly correlates with the activities of Lucy Cranwell, Botanist of the Auckland War Memorial Museum. Cranwell botanised throughout the period and obtained a substantial 134lb specimen for the museum with her companion and mentor, Arnold Wall. The specimen was displayed in the museum in 1931 (see Appendix 6).

Frequency decreases during the period of the Second World War.

Topsy-Turviness

A Flora is a catalogue of the known species of plants in a particular country, aiding their descriptions during field and lab work. New Zealand botanical literature reveals a tendency in which authors developed the traditional format of a descriptive Flora into an autobiographical or semi-autobiographical account of botanising expeditions and colonial histories writ large. Cockayne, Wall, Laing & Blackwell and Cranwell ascribe to this discursive scheme in which personal histories are interwoven with botanical reference literature.

Cockayne, whom I have quoted at length, argues that the history of botanical research is bound up with the development of the Colony (1921: 10). Strongman retrospectively notes that Cockayne's writings were a first attempt to link New Zealanders of European decent with their landscape, fostering a vision of the Dominion as a unique place (1998: 74).

"The tussock country is dearly loved by every New Zealander. It is full of *associations* for him" (Laing & Blackwell, 1907: 4, emphasis my own).

Figure 60.
***Raoulia eximia* photographed by Leonard Cockayne and published in *Transactions & Proceedings of the New Zealand Institute,* 1899, Volume XXXII. As well as Cockayne's writings, the proliferation of his photographs also aided the construction of the New Zealand landscape as a unique place.**

In the discussion of agentive material culture, Hoskins (2006) recognises that people act through objects and distribute part of their personhood into things. *Agency, Biography and Objects* argues that people surround themselves with objects to develop their personalities and reflect on them, they are used as "part of a narrative of self-definition" (ibid: 78).

This is particularly true of Colonial discourses in which the English settler was faced with the "the mythical antipodean topsy-turviness" (Cockayne, 1927: 135), through which his assimilation to the Dominion relied on crafting a home, and to a certain degree, a new identity in a perceived strange land.

"The emigrant from the flowery fields of Britain, cannot fail being struck with great deficiency of those enlivening adjuncts to the landscape, when he first steps forth on the antipodal shores of New Zealand" (Taylor, 1855: 672).

"The Englishmen, on his arrival here is puzzled by the appearance of detached hillocks of grass, in place of the continuous turf of the green fields to which he is accustomed" (Laing & Blackwell, 1907: 4)

Strongman argues that as the colony grew, Cantebrians "began to identify with their new home and to accept native plants as part of their culture" (1998: 74). Native plants began to be cultivated in gardens and the farmers impulse to plant grasses for his sheep "was often seen almost in religious terms, as a positive act of superimposing order on natures chaos" (ibid).

Botanise

Through the process of botanising, individuals defined a sense of self through the act of collecting, further shaped by their experiences and emersion in the landscape (a case study of this effect is explored on page 82). In turn, the act of botanising as an adjunct of settlement leaves an indelible imprint on the terrain.

"The plant-covering of New Zealand differs greatly from what it was in the comparatively recent pre-European days. Then… almost all vegetation was

primeval. By now by far the greater part of the lowland belt bears a stamp of a European character" (Cockayne, 1921: 2)

By the stamp of European character, Cockayne is referencing the devices associated with the transformations that are necessary for settlement. Adaptations to the terrain come in the form of road building, swamp drainage, forest clearing, the ploughing of arable lands, the onslaught of introduced mammalian species and the associated modifying and destructive effects of the introduction and propagation of alien plants (of which Kew has played a role). Paradoxically, this provides impetus for further botanising expeditions, with many acknowledging the threats posed to the primeval flora and the subsequent desire to record them.

Figure 61.
Botanising expedition. The photo shows the eroded slope of Dunston Mountain (North Otago District). The tussock grassland gone through farming and overstocking and replaced by mats and low dense cushions of *Raoulia lutescens.* Photograph by W.H Reid, 1928. Image reference A.24, H.1730-28 © Royal Botanic Gardens, Kew

Moreover, the stamp of European character is also a linguistic device, in which objects in the *topsi-turvi* landscape undergo a process of integration. English terminologies are assigned to the botanist's *encountered* natural objects and act as page-markers in the unfolding narrative of colonisation; "Vegetable Sheep" is the clearest quotidian example of this. See **Diagram 2**.

"The English names are for the most part those which have been given by the early settlers, partly from some likeness, real or fancied to the plants in the Old Country and partly from some peculiar characteristic of the species in question" (Cockayne, 1927: 148).

A discussion of the act of naming and its associations to power and ownership is well versed and beyond the scope of the work here, however such a mechanism is demonstrated by a historical attempt to veto a botanical binomial. In a letter to the editor of the *Evening Post,* an unnamed penman (whose correspondence arrived during the years of the Great War) challenged the authorities of the Canterbury Museum on a contentious issue. The sender demanded,

"the removal of German names from the maps and charts. Will the same authorities remove all the specimens, ect, collected and named by him" (anonymous, Issue 100, 25th October 1917: 7).

The individual in question was Haast, whose name is incorporated into the *Haastia* genera as an ode to his services to botanical science. The paper's Editor discredited the request on account of it being "a gross insult" to the late botanist to whom the "world is indebted", but not before highlighting the absurdity of the suggestion by asking if, "the Haastias of the Vegetable Sheep [were] to be removed?" (ibid).

I argue that discourse analysis, when applied to the descriptions and rhetoric surrounding Vegetable Sheep, demonstrates the relationship of the plant to broader conceptions of 'home' for New Zealanders of European decent. They are habitually cited with similes of comfortable furnishings and the notion of safe interiors.

"Often very beautiful… though resilient to the tread, like a good carpet"
(Laing & Blackwell, 1907: 430)

"It is a lovely foot massage when you step on it barefoot"
(Schönberger, pers comms, 2012)

"An excellent and appropriate seat for a wearied botanist"
(Cockayne, 1927: 146)

"As large as an ordinary sofa"
(Low, 1900: 150)

"Pincushion and tufts of it are often used for that purpose by the Shepherd's wives"
(Hooker, 1883: 56)

Figure 62.
Vegetable Sheep used as a seat during expeditions on the Mount Torlesse Range. Photographed by Leonard Cockayne. Published in Cockayne's *New Zealand Plants and their Stories*, 1927, page 137.

The jocular projections demonstrate a typical Pākehā representation of the natural, encountered world - one that can be juxtaposed with Māori mythologies. By re-appropriating the meanings of an object, the Vegetable Sheep are henceforth removed from their *Path* into a *Diversion* narrative of European settlement. I provide a case study (see page 82) of the ability of an object to be "transformed from a piece of stuff definable independently of any story-line into a social object by its embedment in narrative" (Harre, 2002: 25). It pays particular attention to the role of Vegetable Sheep in ideas of 'adventure' and identity formation in the Dominion.

Ego of this new country

Under the auspices of the New Zealand Government, the colony hosted the *New Zealand International Exhibition* 1906-07.

Figure 63.
The main entrance to the New Zealand International Exhibition, 1906/07, Hagley Park, Christchurch. It was held in the largest building that had been built in the Colony at that time. File Reference CCL Photo CD 2, IMG0093. Courtesy of Christchurch City Libraries.

Like much of the rhetoric inherent to discussions of the 'World Fair' model (see for example Shelton 1994, Barringer 1998), the idea of the *microcosm* as an exhibitionary style is employed by the organisers.

"The results of civilisation, the sum of modern science and the skill embodied in its manufacturers… a museum of… the word in little" (Anonymous, Official Record of the New Zealand Exhibition, 1907: 1).

The exhibition was a jamboree including a helter-skelter, cyclorama and crystal maze. But above all it was "a means for fixing the ego of this new country" (ibid: 2), as a concrete expression of progress and the result of sixty-six years of colonisation (ibid).

Each of the major townships grouped their staple exhibits within provincial Courts. The *Official Record* documents the presence of two vegetable sheep specimens as part of the North Canterbury Court, which like the MEB, "combined the utilitarian and the ornamental very happily" (Ibid: 174). Helping to create a portrait of the geographic area, the Vegetable Sheep flanked the court's avenue. Cockayne collected the specimens specifically for display in the exhibition. They were collected from Mount Torlesse – the same locality as Kew's specimens – and were no doubt selected for their grand size. After the exhibition, one specimen was transferred back to the Canterbury Museum. It is not known where the remaining

specimen was deposited. **Appendix 5** outlines the holdings of selected New Zealand Museums and Herbaria.

Figure 64.
Vegetable Sheep specimens on display in the North Canterbury Court of the New Zealand International Exhibition, 1906/07. The courts decorative scheme included ferns and wreaths of wheat and flax, in additional to an early-history section, relief models and specimens of natural-history. Photographer unknown. Published in the *Official Record New Zealand Exhibition,* Section VIII, New Zealand Provincial Court, page 195.

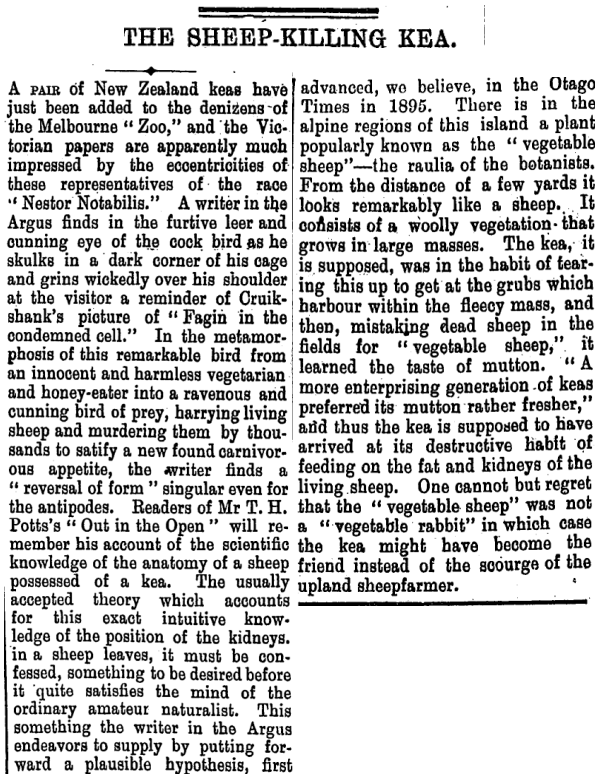
Figure 65.
Collecting specimens of Vegetable Sheep (*Raoulia eximia*) for the International Exhibition. Cockayne documented the expedition with his camera; some of his images were subsequently used to illustrate the *Natural History Court* of the Exhibition. Photographed by Leonard Cockayne. Published in Cockayne's *New Zealand Plants and their Stories*, 1927, page 137.

Kea

The exhibition displayed the specimens "alongside a stuffed specimen of the kea or sheep-eating parrot, once a vegetarian now a carnivorous bird" (ibid: 196). The sensationalist narrative of the cannibal kea transpired in parallel to the career of the Vegetable Sheep in both Britain and New Zealand. It had ramifications on how the specimens were staged at international exhibitions.

A BIRD NOTORIOUS FOR ITS ATTACKS ON SHEEP AND LAMBS, WHICH IT MAY ORIGINALLY HAVE MISTAKEN FOR THE SHRUB *Raoulia exima*: THE KEA PARROT (*Nestor notabilis*).

Figure 66.
The Kea (*Nestor notabilis*)."A bird notorious for it's attacks on sheep and lambs, which it may originally have mistaken for the shrub *Raoulia eximia*". Photograph by Harold Bastin. Published in the *Illustrated London News*, 1st November 1947.



THE SHEEP-KILLING KEA.

A pair of New Zealand keas have just been added to the denizens of the Melbourne "Zoo," and the Victorian papers are apparently much impressed by the eccentricities of these representatives of the race "Nestor Notabilis." A writer in the Argus finds in the furtive leer and cunning eye of the cock bird as he skulks in a dark corner of his cage and grins wickedly over his shoulder at the visitor a reminder of Cruikshank's picture of "Fagin in the condemned cell." In the metamorphosis of this remarkable bird from an innocent and harmless vegetarian and honey-eater into a ravenous and cunning bird of prey, harrying living sheep and murdering them by thousands to satify a new found carnivorous appetite, the writer finds a "reversal of form" singular even for the antipodes. Readers of Mr T. H. Potts's "Out in the Open" will remember his account of the scientific knowledge of the anatomy of a sheep possessed of a kea. The usually accepted theory which accounts for this exact intuitive knowledge of the position of the kidneys. in a sheep leaves, it must be confessed, something to be desired before it quite satisfies the mind of the ordinary amateur naturalist. This something the writer in the Argus endeavors to supply by putting forward a plausible hypothesis, first advanced, we believe, in the Otago Times in 1895. There is in the alpine regions of this island a plant popularly known as the "vegetable sheep"—the raulia of the botanists. From the distance of a few yards it looks remarkably like a sheep. It consists of a woolly vegetation that grows in large masses. The kea, it is supposed, was in the habit of tearing this up to get at the grubs which harbour within the fleecy mass, and then, mistaking dead sheep in the fields for "vegetable sheep," it learned the taste of mutton. "A more enterprising generation of keas preferred its mutton rather fresher," and thus the kea is supposed to have arrived at its destructive habit of feeding on the fat and kidneys of the living sheep. One cannot but regret that the "vegetable sheep" was not a "vegetable rabbit" in which case the kea might have become the friend instead of the scourge of the upland sheepfarmer.

Figure 67.
'*The Sheep – Killing Kea' published in the Marlborough Express, Volume XXXIII, Issue 34, 9th February 1898, Page 3.*
The article describes how the Keas learned the "taste for mutton" after confusing their usual sustenance of the *Raoulia* for living sheep.

Figure 68.
'*A Victim of the Kea*', painting by G. Sheriff. The painting was exhibited as part of the New Zealand Court at the *Colonial & Indian Exhibition*, 1886. Published in 'Ramble through the New Zealand Court' in the *Illustrated London News*, 2nd October 1886, page 361.

Lucy Cranwell

"The alpine plants and foliage must always have a fascination for those who… care to leave the cities, and live for a time in the fresh air and glorious scenes of the mountains heights" (Laing & Blackwell, 1907: 23-24).

Shortly after the Auckland War Memorial Museum moved to larger premises in 1929, Lucy Cranwell was appointed as the inaugural botanist. The study of living flora - as compared to herbaria specimens - was a relatively modern approach in the 1920-30's and as such, Cranwell wither her "rucksacks and bedrolls, coloured headscarves and boy's shorts" (Priestly, www.natlib.govt.nz, 2012 ¶2) become an iconic figure in the history of New Zealand Botany.

Figure 69.
''At Te Moehau, Coromandel, 1939'', Lucy Cranwell is on the left © Auckland War Memorial Museum

Not unlike Hooker and the opening of Museum No.1, Cranwell, with empty museum halls to fill, describes how she came to collect and accession a substantial object (see **Appendix 5**).

"A collection of cushion-plants was made in Canterbury, the largest being a "Vegetable Sheep" weighing 134lbs. The satisfactory results of this trip were

largely due to Professor Arnold Wall's forethought and knowledge of local conditions, and to his enthusiastic help" (Cranwell, 1930: 14).

Cranwell's subsequent report tells us that the heavyweight specimen was displayed alongside timber specimens, transparencies of exotic conifers and a set of medicinal plants (Cranwell, 1931: 17). This specimen's trajectory is well documented and helps to illuminate the rich relationships between the figure of the botanist and the landscape.

"We all went puffing up Mt Torlesse to see the famous vegetable sheep… You would have laughed too, if you had seen the five of us, including the professor, lying prostrate round that "sheep", feeling for injuries and debating loudly our next move… We were happy if bruised and dirty… We thought of Prof Goebel, who once went up Torlesse with Dr Cockayne to collect for the Munich Museum and of J.D. Enys, who had sent splendid specimens to South Kensington and Vienna 60 years before our visit, and we felt something of their glow of achievement.. Now Aucklanders will see our specimen in the Memorial Museum, while Christchurch children will see almost its twin" (Cranwell, 1934: 3).

In her jovial account Cranwell provides a subtle clue to the reception of the "famous" Vegetable Sheep by audiences in the country's provincial institutions. Despite being rewarding and good-humoured, she describes the great challenge botanists faced when collecting such material and situates her activities within a lineage of botanizing expeditions, paying homage to bygone Alpine *trampers*.

Cranwell's companion and mentor, Arnold Wall, immortalised the Vegetable Sheep in poetry. His account demonstrates a true sense of adventure that was associated with early expeditions (full text in **Appendix 6**).

> *Those damsels were not fragile things of porcelain or faience,*
> *They resolutely followed up the rugged paths of science;*
> *They bawled to one another and incurred some little odium,*
> *By prating of Ranunculus, Pyhylachne, Lycopodium…*
> (Wall, c1930)

Figure 70.
The New Zealand Education Department issued *Illustrations of the New Zealand Flora* in 1908 as a learning resource for schools. It featured 40 coloured plates accompanied by notes to "be cut out and gummed to the backs of the prints to which they refer". The notes taught students the genus' habit, geography and association to Etienne Raoul. The Raoulia eximia plate was accompanied by the following description: "Along the eastern slopes of the New Zealand Alps these curious 'Everlasting Daisies' grow forming great cushions or humps which are sometimes several feet long. They are formed of branches, which, with their crowded leaves, are as thick as one's finger, and are packed so closely together that they are extremely difficult to separate. In the middle of summer, when in flower, the branches end in daisy-like blossoms, and these, with the hairy tips of the little leaves, give the humps such a white, woolly appearance that the name 'Vegetable Sheep' has been given to them. The genus was named after Raoul, surgeon-botanist of the French corvette "L'Aube" which visited New Zealand in 1840. These cushion plants are probably survivors

Cranwell did much to promote botany in the region. Her annual reports detail a prolonged focus on mounting specimens in the Cheeseman Herbarium and a succession of botanical displays based on alpine material.

Cranwell also inventories the museums education programmes; among the many she pioneered are the *Junior Botanist Club* and *The Cheeseman Native Spring Flower Show.*

Cranwell's substantial specimen *AK209589* remained on display between 1931-1996 an ode to its importance within the collection and to Cranwell's legacy.,

Specimen *AK209589* is now in storage, however it once again became a central focus in the recent retrospective *Lucy Cranwell: Walk on the Wild Side* (2010).

The exhibition featured a single, darkened room. "The vegetable sheep was the only object… it was quite atmospheric" (Cameron, pers comms, 2012). Echoing the ideas expressed by Hoskins (2006), the specimen acts as a metonymic device for Cranwell's excursions and life spent in the New Zealand Alps. The performative

and communicative aspect of the specimen is used to encapsulate the career and legacy of Cranwell. The exhibition demonstrates how:

"Objects can stand for a particular feature of a person" (Woodward, 2007: 137).

Figure 71. and 72.
Installation Photographs of Lucy Cranwell *Walk on the Wild Side*, 2010. Auckland War Memorial Museum. Photograph by Zoe Macintosh © Zoe Macintosh

Figure 73. Specimen AK 209589, Collected by Lucy Cranwell. Courtesy of Ewan Cameron © Auckland War Memorial Museum

Tutāhuna

"The conditions of transnationalism under which most people in the world now live have created new, and often contradictory cultural and economic values and meanings in objects" (Myers, 2001: 3)

This statement is as true now as it was in the nineteenth century. I next explore the role of Vegetable Sheep within indigenous conceptions of the New Zealand landscape.

"All people are dependant on plants. Every morsel of our food, most medicine, much cloth and fibre, many other material needs, and, for most groups of people in the world, even the majority of our fuels are derived from plants. Similarly the idea of the natural world is a potent image and central theme in the belief and actions of many cultures" (Minnis, 2000:3).

Knowing the Vegetable Sheep's peripheral status in the taxonomy of the MEB, it was unlikely that a 'use' would be found. However, Minnis' latterly holistic definition of use as an *idea* or *potent image* is more constructive to this discussion. Where relationships between people and plants are not limited in their definition as the bridges of commerce between raw plant materials and their social products, the study of relationships enters the domain of Ethnobotany. As a discourse, it helps us to understand humanity and its place in the environment in a greater ecological manner.

I acknowledge that my investigations are limited by distance and therefore an opportunity for further ethnographical research is apparent. I provide some preliminary conclusions from consultation with New Zealand's *Landcare Reaserach Manaaki Whenua.* Māori are 'tangata whenua', the indigenous people of Aotearoa New Zealand, with whom the organisation consults and collaborates in their work.

Landcare's Ethnobotanists had "never heard of any cultural or even medicinal use of this plant" (Scheele & Tawiri, pers comms, 2012), an opinion reverberated by the Manager of Canterbury's *Allan Herbarium*,

"Like many daisies here in New Zealand, Raoulia does not contain any 'exciting' or useful substances" (Schönberger, pers comms, 2012).

It is widely recognised that much ethnobotanical information is contained oral traditions (Harris & Kapoor, 1990). As such, establishing uses can be problematic - not merely because of the ambiguity and universal application of the term "use", to which it is argued that horticultural and qualitative 'ornamental' uses, together with a person's own sense of enjoyment should be added to Minnis' definition (Hind, pers comms, 2012).

It can confidently be said that Māori named the Vegetable Sheep species, "tutāhuna" (Beever, 1991: 31). Discussing the etymology of the Māori language, linguist Bruce Biggs notes that Māori tribes had a vocabulary matching the richness of their environment with each plant having its own name (Biggs, 1990: 53). It is also thought names were accorded to species "based on their usefulness or qualities" (Wetere, 1990: 10). As such, it is possible to extrapolate that the plant was at least recognised and demarcated within the wider landscape.

Looking more broadly at indigenous belief systems, Elsdon Best, one of New Zealand's preeminent ethnographers, recorded an account of pre-European Māori social life and material culture. Best outlines how Māori considered the forest as necessary to his welfare and as having an allied origin.

"Man, birds and trees are descended from a common source; their ultimate origin lay with the primal pair, Rangi the sky parent and Papa the earth mother, though they were actually brought into being by Tane the fertilizer" (Best, 1941: 1).

Best's work stressed the extent to which the forest was prized in Māori mentality. Clarke (2007) notes the intimate botanical knowledge of Māori led to numerous legends, which accounted for the peculiarities of plant growth and form expressed in oral histories. In his account of medicinal plants Riley (1994) describes how the Māori mythological *order of things* informed their uses of certain herbs. Such perceptions would bind "people and land in ways that are not so readily apparent yet to New Zealanders of European descent" (Park, 1990: 114). This manifestation can be contrasted with the earlier ideas of Pākehā identity formation and relationships to New Zealand biota.

It is therefore possible to hypothesis that the nomination "tutāhuna" could have linked the physiognomy of the Vegetable Sheep to a story specific to Māori cultural regimes. Interestingly, the term also refers to a species of shark or fish.

The *International Workshop on Ethnobotany,* held at Te Rehua Maral in Christchurch in February 1988 fostered an inter-disciplinary dialogue between scientists, botanists and Māori community members. The workshop subsequently published it's papers which provide a great insight into modern conceptions of the New Zealand landscape. Hon. K.T. Wetere, Ministry of Māori Affairs, gave an address on behalf of the people of New Zealand stating,

"My people regard themselves as the *tangata whenua* or the first people of the land. Hence the saying, *He ahau No te Whenuahau, Ko ahua te whenua*. I am! I am the land! I am the land! This expresses a mental and spiritual bond with the land and a reverence for the bounty of nature… to conserve this bounty at all times" (Wetere, 1990:9).

Vegetable Sheep are not documented as having economic or medicinal uses for source communities. Yet, it can confidently be said the plant was identified and demarcated within an already rich, ideational framework of the landscape. The symbolism or circulation of Vegetable Sheep as *ideas* or *potent images* within Māori belief systems is likely to exist in some capacity, although it is harder to establish because of the practice of oral traditions.

Part 3
Conclusions

Findings

As an object-centered historiography, the research presented here has attempted to unveil the possible meanings and values of the Vegetable Sheep specimens as they circulate along a series of *diversion*s from their original context, or "pre-history" (Alberti, 2005), to their more recent careers at Kew. The specimens have been situated within two broader discursive themes that have formed the structure of the discussion, and aided our understanding of the plants in context:

- The history of the development of the Museum of Economic Botany
- Narratives of settlement in colonial New Zealand

The collection of Vegetable Sheep has been brought together and studied as a group for the first time. This dissertation has generated tangible findings, which have specific ramifications for the infrastructures of the EBC. Foremost, the research has enabled a synthesis of archival material with information gained from object analysis; the work has resulted in:

- The correct identification of physical specimens with accession numbers
- The establishment of provenance through pairing the acquisitions with Museum Entry Book numbers and historic correspondence between Kew and its collectors
- Full photographic documentation of the specimens and associated materials
- A record of the specimens current state and recommendations for conservation, storage requirements and suitability for handling/loan have been outlined in the Condition Report
- Discovery and assimilation of previously unaccounted specimens

These findings will enable the Curator of the EBC to update and enrich Kew's *EcBot* database. This will mean the results of this dissertation will be disseminated publically through Kew's online search tool, subsequently widening intellectual access to the previously un-documented and un-researched specimens.

Figure 74.
Discovery of the unaccounted for specimen (71812). Photograph by J. Winston-Silk, 2012

This dissertation has unearthed findings that can be localised within existing dialogues of material culture. Metaphors of *ignorance* and *idiosyncrasy* have been used throughout as vehicles through which to discuss the effect(s) of both museum architectonics and the agendas of social actors (or whole institutions), on the classification and status of objects.

The association and reciprocal relationships of the Vegetable Sheep to the *Rafflesia* and Balsam Bog can be used as a case study to identify the ways in which the meanings of an object are impacted upon. Curatorial selection, position within a museums classificatory system and an object's immediate display environment are all devices that reveal a museum's silent, authoritative voice and didactic site-specificity, in *constructing* pieces of 'museum nature'.

The Vegetable Sheep have been used throughout as a prism through which to critique the treatments of anomalous objects within museum collections. The research has shown that the value of anomalous objects is to be derived from factors other than their inclusion in a central taxonomy. Anomalous objects can perhaps be said to embody, to borrow Cornish's analogy, a more personal experience of meaning making. Thus, anomalous objects can represent the agendas and passions of key stakeholders of a museum, are often used as spectacle pieces and become recipients of rich, diverting narratives.

Moreover, the Vegetable Sheep have served to highlight the threats posed to objects that fall outside of a museum's central narrative or mission statement. Such objects are more susceptible to ambiguities over definitions of use or function. They may find themselves on the periphery - both in terms of their physical location and intellectual engagement. As such, anomalous object become lost and act as signifiers of *ignorance* within a museum collection; they are the gaps in our knowledge. The research has shown that such ignorance can result in misclassification, where an object may *masquerade* as a device that can be more easily assimilated into a set taxonomy. The Balsam Bog is the clearest indication of this phenomenon.

Lastly, the Vegetable Sheep have emphasised the agentive turn in material culture. The specimens have demonstrated the capacity of an object to be re-appropriated and absorbed into idiosyncratic narratives outside of the museum. The work has argued the relationship of the plant's career in parallel to the colonisation of New Zealand, and demonstrated the myriad ways in which individuals define a self of self through their experiences with objects and how, in turn, objects acquire the attributes of individuals.

Recommendations

I make the following recommendations (**Table 3)** in order to improve engagement with the specimens.

Table 3: Recommendations

Recommendations for Physical Accessibility
• Intellectual bridges could be fostered at Kew between the living plant collections in the gardens, with the objects of the *Plants & People* exhibition and those stored in the EBC. This information could be communicated via plant information panels, or by making use of Kew's existing Mobile App and creating content for QR codes which have been initiated on Kew's new style plant labels. The idea is to create a 'trail' for Kew's audience, linking and complementing the Gardens, much like Hooker's original vision. • Mount a display of Vegetable Sheep specimens to present the findings of this dissertation. The exhibit could recount the significance of the Vegetable Sheep in the MEB, the importance of size in display pieces, the narratives of colonialism, idiosyncratic associations to the Kea and alternative Māori mythologies. An example of an exhibition panel mock-up is provided in **Diagram 3.**
Recommendations for Intellectual Accessibility
• Update Kew's online database with data produced in this dissertation so that Kew's holdings are accurate and representative. Of central importance is to incorporate Andre McRobb's specimen photographs. • As with previous post-graduate and PHD projects, the Vegetable Sheep research could be presented on Kew's blog pages. • It is important to circulate the physical report to key stakeholders and make it available to individuals who have taken part in the research process.

Limitations and Potential for Future Research

I recognise that the research has been limited by distance, the vagaries of history and by the set parameters of this task. As ever, the format of an object biography often raises substantially more questions then it can answer.

An opportunity has emerged to undertake ethnographic research with Māori groups to further establish possible holistic uses and the *potent images* associated with the genera. This research would ally with the EBC's current focus and collaboration with source communities, investigating their roles in the creation of objects and knowledge.

It would be beneficial to expand upon the survey of comparable collections. Research could chart the economic botany collections of Europe and America to establish the prevalence of Vegetable Sheep specimens across other Western institutions - to test the universality of the findings made here, particularly with reference to the modes of display and selection of specimens according to size.

The relationships and ratio of *curios* to objects of economic botany within the MEB collection could be further scrutinized to establish the occurrences of anomalous objects. This would contextualise the careers of the Vegetable Sheep, allowing the researcher to draw valid conclusions over the typicality of their curatorial treatments.

Diagram 3 – Exhibition Panel Mock-Up for Vegetable Sheep Display

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Dissertation Word Count: 10, 997
According to UCL "word limits exclude title page, contents pages, lists of figures and tables, abstract, acknowledgements, preface, bibliography, captions and contents of tables and figures, appendices", 2012.

Appendices

Appendix 1

Object Condition Report
Vegetable Sheep in the Economic Botany Collection, Royal Botanic Gardens, Kew.

Date: 14th June 2012

Reason for Condition Report: To document the Vegetable Sheep's current condition, for use during possible future loans and to make recommendations regarding conservation, where necessary.

There is no record of previous condition reports or conservation being undertaken.

Examiner: Jacqueline Winston-Silk

Owner of Object(s): Economic Botany Collection, Royal Botanic Gardens at Kew

Object	88.00 COMPOSITAE *Raoulia eximia* Hook.f. *var eximia*
Accession Number	91828 (Previously listed as 71812)
Image	

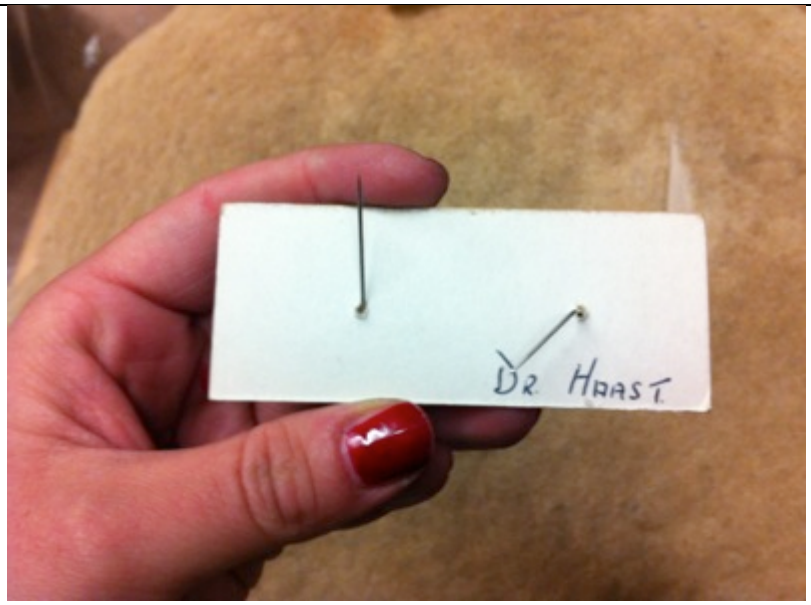
Provenance & Date	**Collector** **Geography** **Collection Date** **Date of Donation to Kew** **Donor**	Julius Haast Mount Torlesse, New Zealand Unknown 2nd November 1864 Julius Haast
Associated Materials	**Kew Museum Entry Book Reference EBN: 72.1864** "2nd November 1864, Julius Haast Esq. MD F.L.S. New Zealand. 1. Tuft of plant of Raoulia eximia, Hook fil. Called by the New Zealand shepherds the 'sheep plant'"	
	Attached label **Front** "Raoulia eximia Hook.F. var eximia (Compositae). Mount Torlesse, New Zealand". **Reverse** "Dr Haast"	
Dimensions	**Width** **Depth** **Height**	65.1cm 62.8cm 27.9cm
Supporting Documentation	Museum Entry Book Original Exhibition Labels Kew Online Database	
Materials & Method of Manufacture	Organic Plant Material Paper label, metal pins	
Condition Report	A whole dried specimen of Raoulia mammillaris. It has a peaked, tortoise shell form and is a rough quadrangle in plan view. It is a beige, slightly green colour with several darker patches of flower heads; these appear to be slightly deeper-set into the surface. The surface is smooth and very hard and cannot be compressed when touched. The specimen is comprised very dense, tiny flower heads measuring approx. 0.7mm in diameter. The petals of the flower heads are triangular in shape and appear as tight 'starbursts'. The flower heads are so compacted that it is difficult to recognise individual flowers, rather it appears as one mass. The specimen is considerable in weight and is able to be lifted only when two handlers are present. The overall surface condition of the specimen is good. There are several minor scratches and indentations present, however there is one example of considerable impact/pressure damage measuring 5.6cm x 1.6cm. The specimen's has one exhibition label which is attached via 2 pins; these have left minor incision holes at the peak. At the edge of the specimen the organic material is at it's most susceptible to damage. Small sections have been knocked off and remain within the plastic packaging. Where the	

material culture has come away, the plants internal structure is revealed. At the edge and underside the material is chalky.

On the underside of the specimen at the plant's root, the material is fragile and contains soil and leaf debris. This material is loose and flaking.

The specimen is wrapped in plastic and sealed with masking tape. Upon opening the packaging pests were present - a black beetle measuring 2.2cm.

Surface damage from impact or pressure



Label pins inserted into the specimen

Edges of the specimen, revealing its structure

Underside, loose soil and debris

Evidence of pests

	 Dense flower heads.  Current Storage
Recommendations & Requirements	
Conservation	Debris should be bagged and kept with the specimen. The plastic wrapping should be adequately sealed. Original labels should be kept in plastic wallets to preserve the information. No other conservation needed at the present time.
Storage	The specimen is wrapped in plastic and sealed with masking tape; it is mounted on a temporary wooden base and is positioned on the floor next to the boundary of the roller racking. It is recommended that the specimen be moved to a position away from the moveable roller racking since it is susceptible to loss of organic material through impact damage. When feasible a place on the racking, which is elevated above the floor, should be assigned to the specimen. The specimen is to be kept within the EBC storeroom. Any movement would require the

	specimen to be frozen upon re-entry to the collection for a period of 2 weeks at –X degrees centigrade to avoid contamination of material and the introduction of foreign bodies. The size of the specimen means adequate freezing facilities must be made available.	
Handling	Handling should be kept to a minimum as the organic material is loose and may come away. If handling is undertaken, 2 people should be present because of the weight and size of the specimen. Jewellery should be removed when handling, as the material is soft enough to be scratched.	
Environmental Conditions	Relative Humidity Temperature Lux	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).	
Loan	Yes	
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.	

Object	88.0 COMPOSITAE *Raoulia eximia* Hook.f. *var eximia*	
Accession Number	71815	
Image		
Provenance & Date	**Collector**	Arnold Wall, Esq
	Geography	Mount Torlesse, New Zealand
	Collection date	Unknown
	Date of Donation to Kew	30th July 1924
	Donor	Canterbury Museum
Associated Materials	**Kew Museum Entry Book Reference EBN: 42.1924** "30th July 1924, Arnold Wall, Esq. Canterbury College, Christchurch, New Zealand. Plant of Raoulia mammillaris".	
	Attached label "Canterbury Museum No. TYPE SP, Raoulia Mammillaris, Vegetable Sheep, Mount Torlesse."	
	Original label* "Canterbury Museum Type Specimen. These plants, mostly from New Zealand, grow in large tufts in mountainous areas. Each short branch is densely clothed in minute smooth or woolly leaves, wit a single starry white flower in the apex of each twig. From a distance they may look like sheep hence the name sheep plant or vegetable sheep." *Label is now lost but is recorded on Kew's online database	

Dimensions	Width Depth Height	52.6cm 47.7cm 23.1cm
Supporting Documentation	Museum Entry Book Kew Online Database Original Exhibition Labels	
Materials & Method of Manufacture	Organic Plant Material Paper label	
Condition Report	Entire dried specimen of Raoulia eximia. This is the Canterbury Museum Type Specimen. The specimen is dark brown, round and mounded towards the centre, with irregular cloud-like tufts across the surface. There are several small, patches of flower heads, which are discoloured. The surface appears woolly, fuzzy and is felty to the touch. The flower heads are covered with minute hairs. The surface can be compressed with pressure. The specimen is comprised loosely compacted flower heads, which separate at points across the surface as 'cracks'. The flower heads are pronounced and measure up to 8mm; some of the individual flower heads are loose. The flower heads are more densely compacted at the base and become looser at the top. The specimen is fragile; it has one considerably loose portion that divides at the 'crack'. This part can be moved and is weak. Therefore the overall surface condition of the specimen is fair ands needs to be supported and cushioned to avoid further damage. The specimen is susceptible to loss of organic material and breakages along the edges and the 'cracks'. The specimen is light enough to be lifted by one handler. The specimen's original museum label is attached with glue, the text is still legible but some detail is fading. "Type Sp" can be seen in the top right-hand corner. The specimen is wrapped in plastic and sealed with masking tape; it is mounted on a temporary wooden base.	

Discoloured patches

Detail of flower heads

'Splits' in the entire plant, with loose sections

Dense flower heads at base. 'Cracks' or gaps in the specimen's surface

Looser flower heads

Original Museum Label

	 Storage
Recommendations & Requirements	
Conservation	The specimen needs to be supported to avoid further breakages or damage to the loose/movable portions and splitting organic material. The original Canterbury Museum label should be photographed under ultraviolet light in an attempt to record the fading cursive text. The label should not be removed, as it is important for the object's biography. The plastic wrapping should be adequately sealed. The specimen requires cushioned and supportive storage to eliminate unnecessary movement and further splits in the organic material. No other conservation needed at the present time.
Storage	The specimen is wrapped in plastic and sealed with masking tape. It is placed on a temporary wooden base and is positioned on the floor next to the boundary of the roller racking. It is recommended that the specimen be moved to a position away from the moveable roller racking since it is susceptible to impact damage because of its soft outer surface. When feasible a place on the racking, which is elevated above the floor, should be assigned to the specimen. The specimen is to be kept within the EBC storeroom. Any movement would require the specimen to be frozen upon re-entry to the collection for a period of 2 weeks at –X degrees centigrade to avoid contamination of material and the introduction of foreign bodies.
Handling	As this is the type specimen, handling is to be expected by researchers making a serious study of Raoulia eximia. Handling therefore is acceptable. From a botanical point of view, the cracks and splits in the plants surface reveal more of the internal structure and can be seen as beneficial.

	However the plant is in a fragile state and unnecessary movement should be avoided unless for the purpose of research.	
Environmental Conditions	Relative Humidity Temperature Lux	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).	
Loan	Yes	
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.	

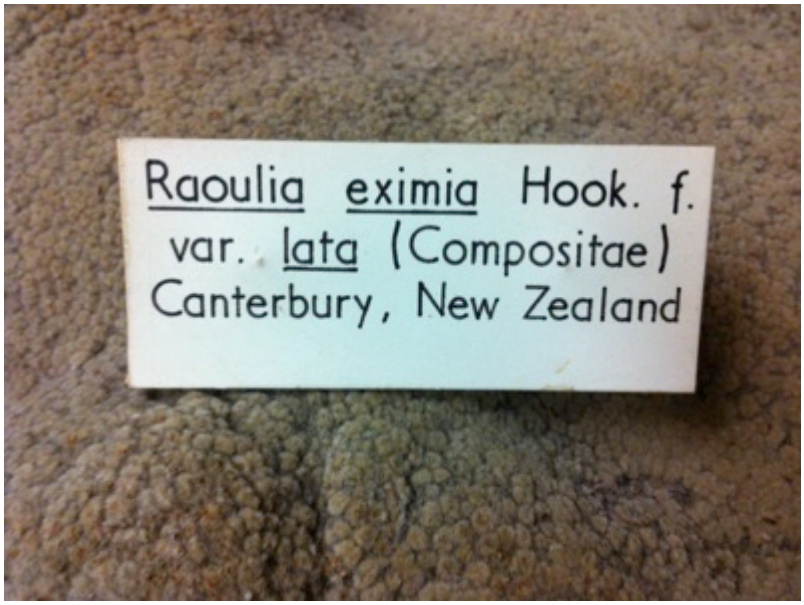
Object	88.0 COMPOSITAE *Raoulia eximia* Hook.f. *var lata*	
Accession Number	71814	
Image		
Provenance & Date	**Collector**	J.D. Enys
	Geography	Canterbury, New Zealand
	Collection Date	Unknown
	Date of Donation to Kew	30th November 1881
	Donor	Mrs M.A. Enys
Associated Materials	**Kew Museum Entry Book Reference EBN: 44.1881** "30th November 1881, Mrs M.A. (?) Enys, Fine tufts of plants of Raoulia Mammillaris, New Zealand". Mammillaris has since been crossed out and reads "new (?) sp." There is a later addition to the entry which reads " = R.eximia. 4.8.66"	
	Attached label **Front** "Raoulia eximia Hook.f. var. lata (Compositae), Canterbury, New Zealand." **Reverse** "44 – 1881 J.D. Enys"	
	Original label* "These plants, mostly from New Zealand, grow in large tufts in mountainous areas. Each short branch is densely clothed in minute smooth or woolly leaves, wit a single starry white flower in the apex of each twig. From a distance they may look like sheep hence the name sheep plant or vegetable sheep."	

	*Label is now lost but is recorded on Kew's online database	
Dimensions	**Width** **Depth** **Height**	78cm 63.1cm 33.4cm
Supporting Documentation	Kew Online Database Original Exhibition Labels Museum Entry Book	
Materials & Method of Manufacture	Organic Plant Material Paper Label	
Condition Report	A whole dried specimen of Raoulia eximia. It has a slightly peaked, mounded form and is triangular when seen in plan view. The surface is bumpy with undulating cloud-like tuft. It is felty to the touch but is fairly firm if compressed. The specimen is comprised dense, squashed, round flower heads measuring less than 4mm in diameter. The specimen is softer around the base as the flower heads become less dense. It is a grey-beige colour and features smaller patches of darker flower heads that appear to be slightly deeper-set into the surface. The largest patch measures 6x7cm. An exhibition label is present on the specimen - it is attached via 2 pins. The specimen is considerable in weight and is able to be lifted only when two handlers are present. The overall surface condition of the specimen is good. There is some damage at the edge where the organic material hangs off the wooden base. The specimen appears to have been knocked as the impact as penetrated the surface. On the underside of the specimen at the plant's root, the material is fragile and contains soil and leaf debris. This material is loose and flaking. The specimen is wrapped in plastic and sealed with masking tape. It is stored on a wooden board.	

Tufts

Small flower heads

Darker patches of flower heads



Exhibition Label

	 Damage to base  Debris at base
Recommendations & Requirements	
Conservation	Although temporary, the wooden base is insufficient as the specimen is too large. The specimen should be protected around the base to avoid further damage. The plastic wrapping should be adequately sealed. Loose material and debris should be bagged and kept with the specimen. No other conservation needed at the present time.
Storage	The specimen is wrapped in plastic and sealed with masking tape; it is mounted on a temporary wooden base and is positioned on the floor next to the boundary of the roller racking. It rests on a trolley due to its size and weight. It is recommended that the specimen be moved to a position away from the moveable roller racking since it is susceptible to loss of organic material through impact damage.

<table>
<tr><td></td><td colspan="2">When feasible a place on the racking, which is elevated above the floor, should be assigned to the specimen.

The specimen is to be kept within the EBC storeroom. Any movement would require the specimen to be frozen upon re-entry to the collection for a period of 2 weeks at –30 degrees centigrade to avoid contamination of material and the introduction of foreign bodies. The size of the specimen means adequate freezing facilities must be made available.

 
Trolley</td></tr>
<tr><td>Handling</td><td colspan="2">Handling should be kept to a minimum as the organic material is loose and may come away. If handling is undertaken, 2-3 people should be present because of the weight and size of the specimen. The specimen can be moved via the trolley.</td></tr>
<tr><td>Environmental Conditions</td><td>Relative Humidity
Temperature
Lux</td><td>50
14’C
Florescent Lighting, usually switched off.</td></tr>
<tr><td>Display</td><td colspan="2">Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).</td></tr>
<tr><td>Loan</td><td colspan="2">Yes</td></tr>
<tr><td>Security</td><td colspan="2">The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.</td></tr>
</table>

Object	88.00 APIACEAE *Azorella caespitose* Vahl. Previous name: 88.00 APIACEAE *Azorella caespitose* Vahl.	
Accession Number	71816	
Image		
Provenance & Date	**Collector** **Geography** **Collection Date** **Date of Donation to Kew** **Donor**	George Rennie Falkland Islands Unknown 11th February 1856 George Rennie
Associated Materials	Museum Entry Book Original Labels Kew Online Database	
Supporting Documentation	**Kew Museum Entry Book Reference EBN: 15.1856** "11th February 1856, G. Rennie Esq., Large specimen of Balsam Bog, (Bolax glebaria) – Falkland Is"	
	Attached label "Balsam Bog, Azorella caespitosa Vahl. (Bolax glebaria Comm), Umbelliferae. This peculiar plant is a native of the Falkland Islands, where it grows in huge tufts or hillocks similar to this specimen, but up to four feet high. It is related to the carrot, fennel, ect."	
Materials & Method of Manufacture	Organic Plant Material	

Condition Report	Entire specimen of *Azorella caespitose*. This very large specimen is brown and roughly circular. It is comprised of dense, open flower heads that are 0.8cm in diameter and are a 'starburst' shape. It cannot be compressed and is rough to the touch. A large portion of the surface material has come away on one side, revealing the inner structures of the plant. Similarly, material is lost around the base. The flower heads are sharp and flaking, making the specimen brittle. A large amount of dry debris falls from the plant and is collected in the plastic packaging. Debris has been collected in a sealed plastic wallet. Large chunks of the organic material are movable at the base and have broken off. The root system of the plants is exposed at the rear. The roots are brittle and there are soil deposits. The specimen features 2 exhibition labels one on the front orientation and one on the reverse. These are attached via 2 pins. A metal nail is embedded in the flower heads on the reverse of the specimen. The specimen rests on a wooden frame, on top of a wheeled trolley.  Starburst flower heads

Loss of surface material on one side

Loss of material at base

Material collected in bag

Loose pieces of plant material

Exposed Roots

Soil Deposits

Label

	 Metal nail	
Recommendations & Requirements		
Conservation	A suitable base should be made which will support the large specimen. Soil deposits should be preserved for future study opportunities. Debris should be collected and bagged. The nail should not be removed, as it is important for the object's biography. The plastic wrapping should be adequately sealed. No other conservation needed at the present time.	
Storage	The specimen is stored on a wooden frame on a wheeled trolley to allow for ease of access and movement due to its size and weight. It is kept in sealed plastic wrapping. The specimen is to be kept within the EBC storeroom. Any movement would require the specimen to be frozen upon re-entry to the collection for a period of 2 weeks at -30 degrees centigrade to avoid contamination of material and the introduction of foreign bodies. The size of the specimen means adequate freezing facilities must be made available.	
Handling	Handling should be kept to a minimum as the organic material is loose and may come away. If handling is undertaken, 2-3 people should be present because of the weight and size of the specimen.	
Environmental Conditions	**Relative Humidity** **Temperature** **Lux**	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly	

	robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).
Loan	Yes
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.

Object	88.00 COMPOSITAE *Raoulia mammillaris* Hk. f Previous name: 88.00 COMPOSITAE *Raoulia eximia* H.k. Fil Determination Date: 00/12/1881 Determiner: Sir Joseph Hooker	
Accession Number	61602	
Image		
Provenance & Date	**Collector**	Dr Julius Haast
	Geography	Mount Torlesse, Alps of Canterbury, New Zealand
	Collection Date	Unknown
	Date of Donation to Kew	6th June 1873
	Donor	Dr Julius Haast
Associated Materials	Museum Entry Books 4 Labels (3 loose, 1 attached at roots) Kew Online Database	
Dimensions	**Width**	37.3cm
	Depth	31.3cm
	Height	37.3cm
Supporting Documentation	**Kew Museum Entry Book Reference EBN: 56.1873** "6th June 1873, Dr Haast, New Zealand. Very fine tuft of "Vegetable Sheep" Raoulia mammillaris. Hf."	
	Original Cursive Label "Raoulia eximia. HK fils. Alps of Canterbury New Zealand, Dr Haast, Examined and verified by Sir Joseph Hooker, Dec 1881"	
	Original Typeface Label	

	"The Vegetable Sheep of the New Zealand shepherds, Raoulia mamillaria Hk.f. This curious plant, which is allied to Gnaphalium, forms masses on the bare mountain tops, so closely resembling sheep at a very short distance that the most experienced shepherds are often deceived by their appearance. Mount Torlesse, New Zealand. Dr Haast, F.R.S"
Materials & Method of Manufacture	Organic Plant Material Paper labels Metal label stand
Condition Report	A smaller, entire specimen in good condition. The specimen is dark brown with multiple and pronounced cloud-like tufts. The flower heads are and very densely compacted, making the surface firm, smooth and felty to touch. Flower heads are very small at 0.2mm. The specimen is light enough to be handled and it can be turned over to reveal the root system. An original label written in cursive is tied to the roots with string. There is some damage to the surface of the specimen at its highest point, this is likely from contact with a lid or shelf, or through handling. The flower heads have been broken and worn away, revealing their internal composition. There is some debris caught in the box lid, however most of the specimen remains intact. There is little to no damage on the edges. The specimen has 2 original labels and 2 newer EBC labels. The original typeface label has an indentation where it has been placed in the metal loop stand.  Label on reverse

Label attached to roots

Labels

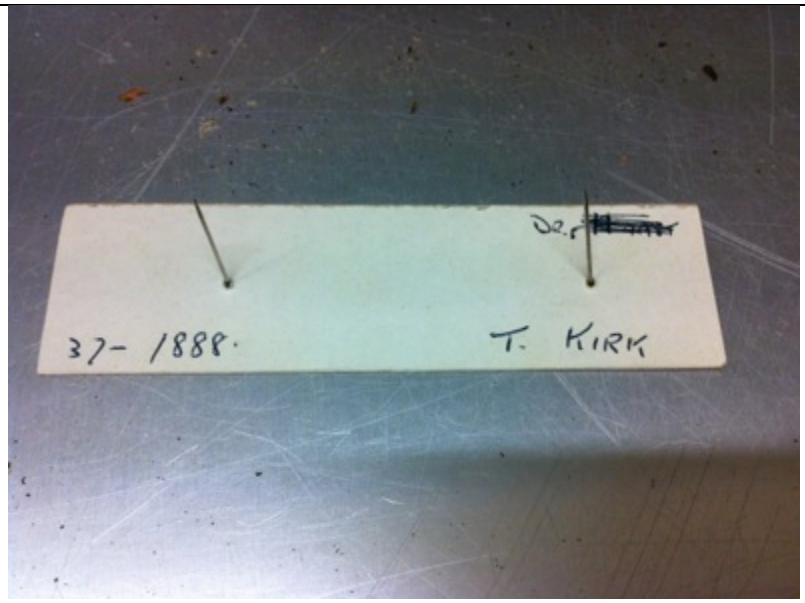
	 Storage	
Recommendations & Requirements		
Conservation	The original label should not be removed from the roots. Where possible, labels should be placed in plastic wallets for preservation. The specimen should be placed in an archival box and/or bagged. No further conservation needed.	
Storage	The specimen is stored open in the lid of an acid-free conservation box (acting as a tray) on a shelf on the roller racking in the collection storeroom.	
Handling	Handling should be kept to a minimum as the organic material is loose and may come away. If handling is undertaken, 1 person is sufficient to lift.	
Environmental Conditions	Relative Humidity Temperature Lux	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).	
Loan	Yes	
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.	

Object	88.00 COMPOSITAE *Haastia pulvinaris* Hook.f.	
Accession Number	71811	
Image		
Provenance & Date	**Collector**	Prof T.Kirk
	Geography	Mount Mowatt (alt. 5000ft), Marlborough, New Zealand
	Collection Date	Possibly 11th February 1888
	Date of Donation to Kew	3rd April 1888
	Donor	Prof T.Kirk
Associated Materials	Original Exhibition label Paper note Kew Museum Entry Book Kew Online Database	
Dimensions	**Width**	21.8cm
	Depth	25.5cm
	Height	14.8cm
Supporting Documentation	**Kew Museum Entry Book Reference EBN: 37.1888** "3rd April 1888, Prof T Kirk, Chief Conservator of State Forests, New Zealand. A large tuft of Haastia pulvinaris, alt. 5000 feet."	
	Note with cursive text "Haastia pulvinaris from Mount Mowatt 5000ft Marlborough, the Director of the Royal Gardens Kew London, from J Kirk. Chief Conservator of State Forests, Wellington, New Zealand. 11th February 1888."	

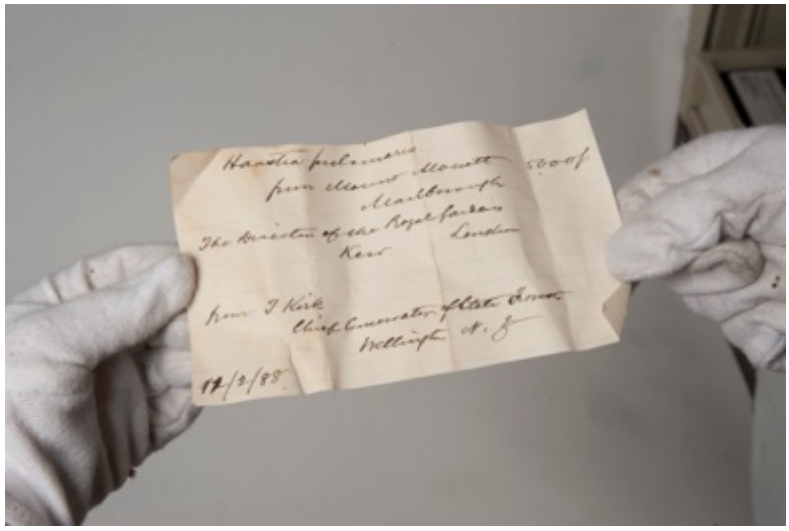
	Original Exhibition Label **Front** Tufts of Haastia pulvinata Hook.f. (Compositae) Mount Mowatt, 5000ft. New Zealand" **Reverse** "37-1888 T.Kirk. Dr Haast" Dr Haast has later been crossed out.
	Original Label* "These plants, mostly from New Zealand, grow in large tufts in mountainous areas. Each short branch is densely clothed in minute smooth or woolly leaves, with a single starry white flower at the apex of each twig. From a distance they may look very like sheep – hence the name sheep plant or vegetable sheep"**. * Label is now lost but is recorded on Kew's online database ** This label does not seem to match this specimen, it better describes Raoulia eximia. Possibly label transference (this specimen was in the Herbarium glass case with several others).
Materials & Method of Manufacture	Tuft, organic plant material Paper Label Paper Note
Condition Report	Tuft of *Haastia pulvinaris*, mustard yellow in colour with round flower heads approx. 1.5cm in diameter. The flower heads are covered in minute hairs and are textured; some have small indentations and ripples. The specimen is very light, soft and spongy; it is susceptible to damage from pressure. Several flower heads have been knocked open to reveal spoors. The spoors are fine and fluffy. See figure X. Overall the specimen is in good condition. The specimen is accompanied by an exhibition label that is attached via 2 pins. There is also an accompanying note with written in cursive text. This note is fragile, it has been folded and the paper has become brittle. The note cannot easily be unfolded and does not lay flat. The specimen is stored in an archival box.

Flower heads

Spoors



Exhibition Label


Cursive Label

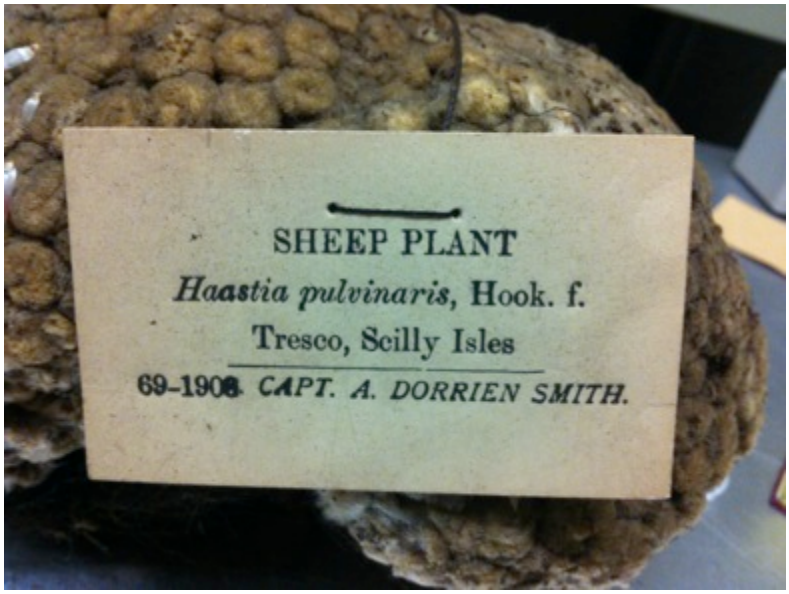

Base

Recommendations & Requirements		
Conservation	A paper conservator may wish to be consulted on remedial conservation to the folded notepaper. The note should be photographed to record the text that is subject to fading. Debris should be collected and bagged. No other conservation is needed at this time.	
Storage	The specimen is adequately stored in an archival box and is kept on the racking.	
Handling	Handling should be kept to a minimum as the organic material is loose and may come away.	
Environmental Conditions	Relative Humidity Temperature Lux	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).	
Loan	Yes	
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.	

Object	88.00 COMPOSITAE *Haastia pulvinaris* Hook.f.	
Accession Number	51565	
Image		
Provenance & Date	**Collector**	Capt. A Dorrien Smith
	Geography	Tresco, Scilly Islands, Great Britain
	Collection Date	Unknown
	Date of Donation to Kew	1908
	Donor	Capt. A Dorrien Smith
Associated Materials	Original Museum label x 2 Should read Museum Label circa. 1910 Paper note Kew Museum Entry Book Kew Online Database	
Dimensions	**Width**	14cm
	Depth	18.4cm
	Height	10.7cm
Supporting Documentation	**Kew Museum Entry Book Reference EBN 69:1908** "Captain Dorrien Smith, Tresco Abbey, Scilly Islands, Plant of Vegetable Sheep"	
	Both labels read "Sheep plant, Haastia pulvinaris, Hook.f., Tresco, Scilly Isles, 69/1908, Capt. A. Dorrien Smith"	
	Note "Haastia pulvinaris Hook.f., Raoulia from Capt. A. Dorrien Smith 69/1908 Tresco Scilly Islands". Raoulia has since been crossed out	

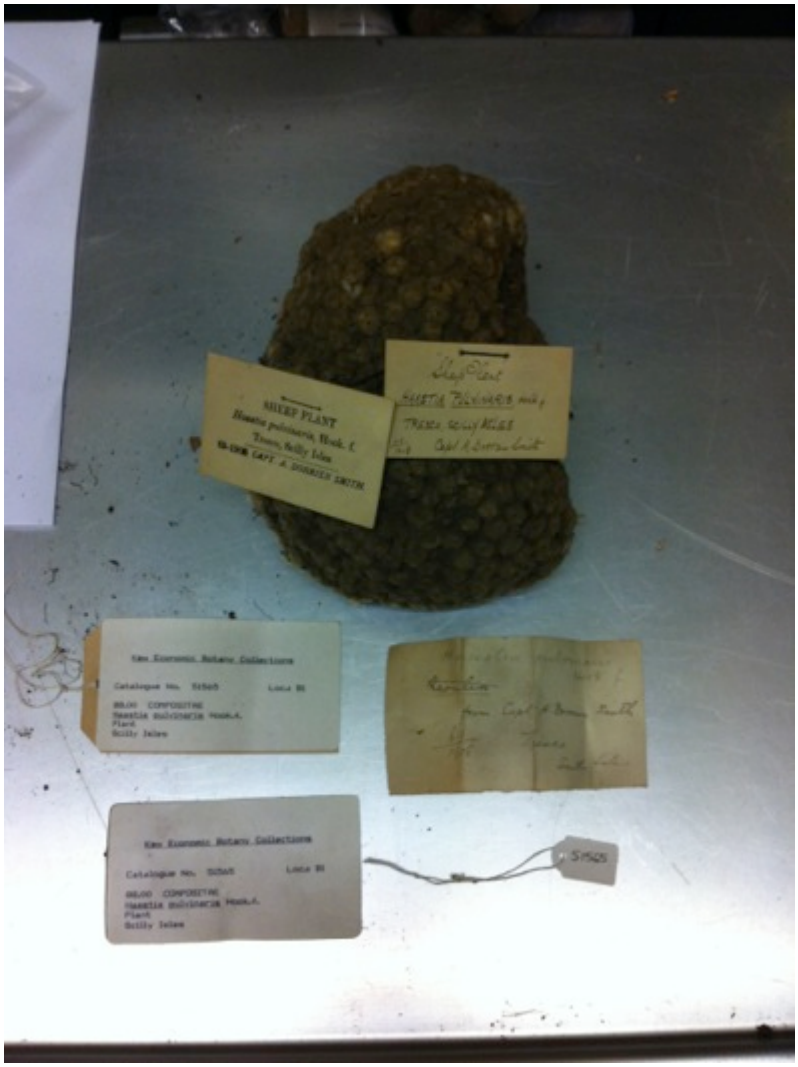
Materials & Method of Manufacture	Organic Plant Material Paper Labels Paper Note
Condition Report	A small, entire specimen of *Haastia pulvinaris*. It is dark brown and easily handled. The flower heads are covered in minute hairs and are textured; some have small indentations and ripples. They are approx 1cm diameter. The specimen is very light, soft and spongy; it is susceptible to damage from pressure. Several flower heads have been knocked open to reveal spoors. The spoors are fine and fluffy. The specimen has a piece of string wrapped across its entirety attached to which are 2 labels. One is letterpress, one is written in cursive – both read the same. There are 2 printed EBC labels. The root system can be seen on the underside of the specimen. Some flaking occurs when handled. Overall the specimen is in good condition.  String around the specimen

Cursive label



Letter press label

Underside

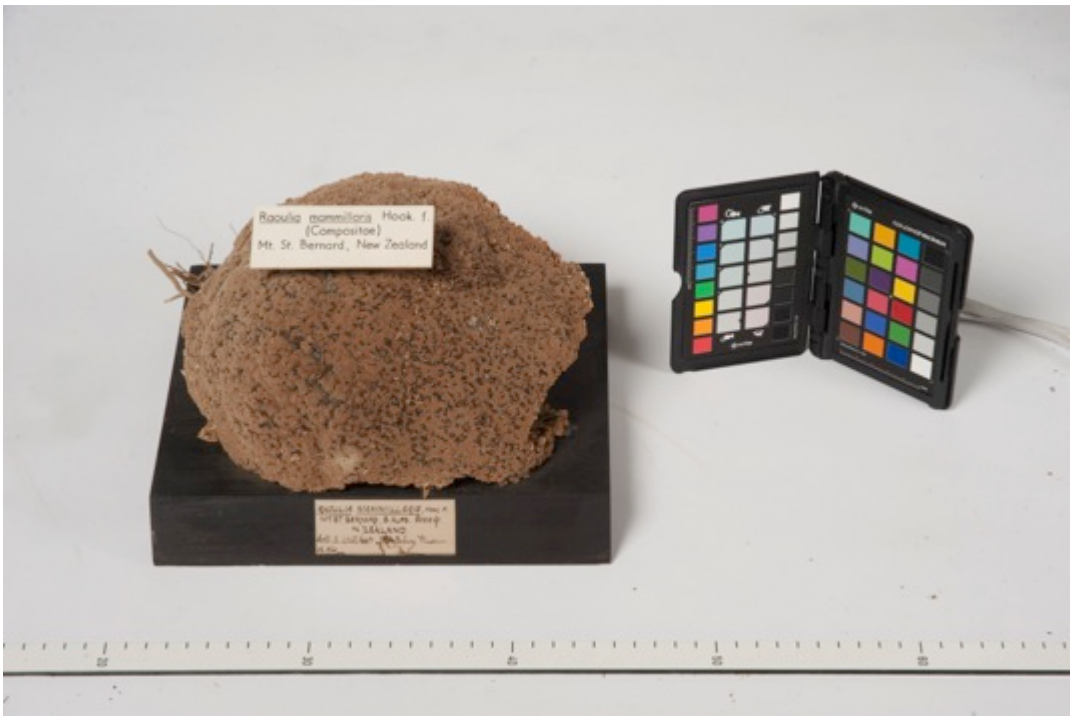


Supporting material with specimen

	 Storage	
Recommendations & Requirements		
Conservation	The string and labels should remain as they are important to the objects biography. Where possible labels should be kept in plastic wallets for preservation. Any debris should be bagged and kept with the specimen.	
Storage	The specimen is kept in a bag on the roller racking shelves. As the plant is soft and compressible, it should be kept in a box with acid-free tissue paper for padding to restrict movement and avoid any pressure on the specimen.	
Handling	Handling should be kept to a minimum as the organic material is loose and may come away. If handling is undertaken, 2 people should be present because of the weight and size of the specimen.	
Environmental Conditions	Relative Humidity Temperature Lux	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).	
Loan	Yes	
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.	

Object	88.00 COMPOSITAE *Haastia pulvinaris* Hook.f.	
Accession Number	51566	
Image		
Provenance & Date	**Collector**	Dr Sinclair
	Geography	Mowatts Mountain, Nelson, New Zealand
	Collection Date	Unknown
	Date of Donation to Kew	Unknown
	Donor	Dr Sinclair
Associated Materials	Kew Online Database EBC Label	
Dimensions	**Width**	12cm
	Depth	9cm
	Height	4cm
Supporting Documentation	**Kew Museum Entry Book Reference: Not Known**	
	Original Label* "From stony? Upwards of 5000 ft high" * Label is now lost but is recorded on Kew's online database	
Materials & Method of Manufacture	Organic Plant Material	
Condition Report	Portion of tuft of Haastia pulvinaris. The specimen is mustard yellow in colour with round flower heads approx. 1.5cm in diameter. The flower heads are covered in minute hairs and are textured; some have small indentations and ripples. The specimen is very light, soft and spongy; it can be handled easily but it is	

	susceptible to damage from pressure. Flower heads are intact. The specimen has a small branch. Overall the specimen is in good condition.	
Recommendations & Requirements		
Conservation	No conservation is needed at this time.	
Storage	The specimen is kept in an archival box and is stored on the roller racking shelving.	
Handling	Handling should be kept to a minimum as the organic material is loose and may come away.	
Environmental Conditions	Relative Humidity Temperature Lux	50% 14'C Florescent Lighting, usually switched off.
Display	Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).	
Loan	Yes	
Security	The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.	

Object	88.00 COMPOSITAE *Raoulia mammillaris* Hook.f.	
Accession Number	71812	
Image		
Provenance & Date	**Collector**	Arnold Wall, Canterbury Museum
	Geography	Mount St Bernard, Southern Alps, New Zealand
	Collection Date	Unknown
	Date of Donation to Kew	30th July 1924
	Donor	Arnold Wall, Canterbury Museum
Associated Materials	Kew Museum Entry Book Kew Online Database Kew Exhibition Label (c.1980) Canterbury Museum Labels	
Dimensions	**Width**	21cm
	Depth	23cm
	Height	16cm
Supporting Documentation	**Kew Museum Entry Book Reference EBN: 42.1924** "30th July 1924, Arnold Wall, Esq. Canterbury College, Christchurch, New Zealand. Plant of Raoulia mammillaris".	
	EBC Exhibition Label (c.1980) **Front:** "Raoulia mammillaris Hook.f. (Compositae) Mt St. Bernard New Zealand" **Reverse:** 92.1924 A.Wall **Original Label (on front of base)**	

	"Raoulia mammillaris, Hook.F. Mt St Bernard, S.Alops, 5000ft, N.Zealand. Coll. A. Wall. Esq. Canterbury Museum. 42.1924"
	Original Label (on bottom of base, at top) "Raoulia mammillaris Mt St Bernard, S.Alps at L. 5000ft, Feb 1923, Coll A.Wall"
	Canterbury Museum Label (on bottom of base, below) "Ex. Herb Canterbury Museum, Raoulia mammillaris, 42/1924, Mt St Bernard, S.Alps at L. 5000ft, Feb 1923, Coll. A. Wall, Identified by A.Wall"
Materials & Method of Manufacture	Organic Plant Material Wooden Stand Paper Labels (4)
Condition Report	Small, whole specimen of *Raoulia mammillaris*. It is circular and light brown in colour and has densely packed flower heads that are 'starburst' in shape and measure approx. 0.7mm. Some flower heads are open and reveal fluffy spoors. The flower heads are interspersed with darker leaf fragments. The root system is exposed on one side. It is attached to the base by wire. It is in overall good condition.  Starburst Flower heads

<table>
<tr><td></td><td colspan="2"> 
Root system
 
Labels on base</td></tr>
<tr><td>Recommendations & Requirements</td><td colspan="2"></td></tr>
<tr><td>Conservation</td><td colspan="2">No conservation required</td></tr>
<tr><td>Storage</td><td colspan="2">The specimen is stored in an acid free, archival box.</td></tr>
<tr><td>Handling</td><td colspan="2">Handling should be kept to a minimum as the organic material is loose and may come away. If handling is undertaken, 2 people should be present because of the weight and size of the specimen.</td></tr>
<tr><td>Environmental Conditions</td><td>Relative Humidity
Temperature
Lux</td><td>50%
14’C
Florescent Lighting, usually switched off.</td></tr>
<tr><td>Display</td><td colspan="2">Does not require standard environmental conditions for loans. These are fairly robust and could cope with most gallery conditions (Nesbitt, pers comms, 2012).</td></tr>
<tr><td>Loan</td><td colspan="2">Yes</td></tr>
<tr><td>Security</td><td colspan="2">The collection is kept in a locked and alarmed storeroom. The storeroom is within the Banks Building at Kew and access to the Banks Building is via staff security swipe cards. The entrance to the Banks Building is recorded on CCTV. Access to Kew gardens is restricted to staff and ticket holders only. Members of the public are not granted access to the collection storeroom unless by prior appointment.</td></tr>
</table>

Appendix 2

Cited correspondence between Jacqueline Winston-Silk and Dr Nicholas Hind, Head of Compositae Research, Herbarium, Library, Art & Archives Directorate at the Royal Botanic Gardens, Kew

I think one of the most obvious things is to show the size of the whole 'plant'. A herbarium specimen is tweaked beyond all recognition – a single or few stems, that may or may not be full length, may only contain a limited number of capitula, etc., etc. The whole 'sheep' is just that. If one needed to check on disposition of flowering shoots, etc., or growth patterns that can't be done with a herbarium specimen. Entomologists/ecologists may also find the whole plant more interesting finding 'things' within the 'sheep' which clearly won't be seen in the herbarium preparations. The other obvious thing is that, provided it's dried properly, the sheep remains just that – a 'sheep'. That's not something that happens with many whole plants, since so much shrivels, senesces, or rots, plus the fact that many shrubs, trees etc., are relatively large, and awkwardly shaped, to store whole.

Raoulia australis is listed in one reference work I have as 'ornamental'. We also have four names listed on the database for the Living Collections here at Kew. I have not seen the material, so cannot confirm that the names listed, and the material grown under those names is what it says it is. I have not trawled through any other institutions to see what they might be growing, but it might be worth a cursory search on your part. Before reading the definition you enclosed I though use would also include 'horticultural' (or recreational in the sense that it is for peoples enjoyment in gardens etc., i.e. ornamental), rather than a definition that seems to exclude this obvious 'use'.

Cited correspondence between Jacqueline Winston-Silk and Ewan Cameron, Curator of Botany, Auckland War Memorial Museum, New Zealand.

In the meantime the main vegetable sheep is accessioned as AK209589 (see label data below). Also it was displayed in Museum Gallery 1931-1996, including 1961-1996 in the Cheeseman Gallery. It is now in a storeroom (an image attached). I should also have mentioned that we have had a small vegetable sheep on display in our current Land Gallery for more than 12 years.

'Walk on the Wild side', the film was c.6 minutes long shown on 3 screens and the only object was the large vegetable sheep centre stage. The vegetable sheep was the only object in the whole Lucy Cranwell 'exhibition' – it was in a single darkened room (in our Tamaki Gallery) with 3 screens, and mirrors at two ends – quite atmospheric with the large screens and mirrors.

Cited correspondence between Jacqueline Winston-Silk and Paul Scofield, Senior Curator Natural History, Canterbury Museum

We have records of only 1 being collected (in 1866). Our only specimen is on display but our entire botany collection (except this 1 vegetable sheep) was transferred to what is now Landcare Research in the 1975. Our display specimen was collected for the North Canterbury Court of the New Zealand International Exhibition (that occurred 200 meters away in the nearby park but it was returned here in May 1907 after the exhibition. Sadly I know of no connection to Kew unless HH Allan was involved (he was a famous botanist that was briefly associated with the museum in the 1920s).

Only the label with the black border is an original Canterbury Museum label the others have been added later I guess. Arnold Wall was a famous NZ literary professor and mountaineer not professionally a botanist. In the 1920s Wall became honorary keeper of the herbarium at Canterbury Museum. He added several thousand sheets of specimens to the collection, mostly gathered by him on trips to the mountainous regions of both islands. Wall discovered a number of new plant species and varieties; seven of these bear his name. He wrote numerous scientific papers and popular articles on botanical subjects. I suspect that the exchange was never formally documented and is contemporary with a collection in the Auckland museum.

Sorry I don't really understand the politics of the movement of our botany collections to Landcare. I guess in the 19th c. no-one in NZ thought of space or was "fiscally responsible". Only with the growth in botanical collections was there a thought that "a whole vege sheep is too much". Whether they are needed now is no different to asking do we need a whole tree or just some foliage I guess.

Cited correspondence between Jacqueline Winston-Silk and Ines Schonberger Herbarium Manager Allan Herbarium, Landcare Research

We (CHR – The Allan Herbarium) do have all the specimens from the Canterbury Museum here in our Herbarium (as "permanent loan" from the Canterbury Museum).The Collection was transferred 1975 and incorporated into the CHR collection. We do hold several Raoulia specimens (some material collected by Arnold Wall).

The reason for the transfer was simply that the Museum didn't have the resources and wasn't set up to look after a herbarium, but the DSIR Botany Division (as we were called back than) did have already a well-established herbarium and plenty of storage space.

Some of the botanist in our institute are actively researching the Vegetable Sheep taxa here in New Zealand.

I have been in touch with our Ethnobotanist regarding any information about the usage of Raoulia: Here is what I got back: "I have never heard of any cultural or

even medicinal use of this plant." Like many daisies her in New Zealand, Raoulia does not contain any "exciting" or useful substances. Someone told me it is a lovely foot massage plant when you step on it barefoot.

Cited correspondence between Jacqueline Winston-Silk and Sue Frisby, Herbarium Assistant, Herbarium, Library, Art & Archives Directorate at the Royal Botanic Gardens, Kew.

In answer to your questions, the project to catalogue and rehouse the economic collections at Kew began in 1987. At this time the collections were spread between two museums, and the plan was to combine everything in the purpose built Sir Joseph Banks building. Three people were involved: Naomi Rumball, Nicky Biggs and myself. We finished in 1994, although by that we were not working exclusively on the catalogue, and as items are being added to the collection, the cataloguing process continues today.

The project involved databasing, photographing and repackaging items from delicate Victorian glass storage jars to more robust new glass containers, or into acid free cardboard boxes according to requirements. All the label details and accompanying letters were databased, and are now available online at Kews Economic Botany Database. The material was catalogued so that the details and information contained within the collections could be made available. There were over 73,000 items involved including a fabulous collection of tropical timbers, walking sticks, artifacts, fabrics, fibres, foodstuffs, medicinal plants, rubbers etc.

The programme we used to catalogue the collections was called Oracle, which has recently been converted to a more user-friendly software for the recently released version of the database.

The collections were catalogued firstly from Museum No. 2, which has now been converted into the School of Horticulture. This museum housed all the wood collections, which were numbered and labelled before being frozen, and moved into the new building. The monocotyledonous plants were also stored here, and they too were numbered, labelled and photographed before being moved.

The dicotyledonous families were all housed in Museum No. 1, which upon being emptied has become Kew's Education centre. The families were all catalogued in order, based on the Bentham and Hooker system of classification (on which the Herbarium here at Kew was also based until 2 years ago when a reorganisation was undertaken to the new APG system).

The details recorded for each item included plant name, family, collector name and number, donor details, dates, geographic origin, uses, cross references with other collections held at Kew e.g. Herbarium sheets, spirit material etc., and any label details on how the plant was utilised and which parts of the plants were useful, vernacular names, etc.

The larger vegetable sheep were displayed in purpose built Victorian glass display cases. Smaller specimens would have been in glass-fronted boxes. I don't recall much in the way of interpretation, unlike the screeds of signage you see in modern museums. I would say the vegetable sheep would have been quite popular.

It was a shame that we couldn't retain some of the wonderful display cases, but they would not have been allowed under current health and safety regulations.

Cited correspondence between Jacqueline Winston-Silk and Sandi Black, Archivist, Whanganui Regional Museum.

Yes, from what I can tell the two vegetable sheep I mentioned are still held in the collection storeroom, though are not currently on display. Trish should be able to help you with more information on the specimens when she returns from leave.

I have searched through our records but unfortunately we don't hold much information on the vegetable sheep in the collection. I have searched through our historic exhibition files but there was little information kept on these early exhibitions in the museum and I am unable to locate any information on the vegetable sheep. We do have a Guide to Principal Exhibition of the museum 1933, but it appears by this date the vegetable sheep had been taken down as there is no mention of them in the publication. I have also looked through our photographic collections, and although we do have some photographs of museum displays throughout the years we do not have any from this time period or any showing vegetable sheep on display.

I have looked through our collection listings and can find two records for vegetable sheep in our collection, but cannot locate any further information such as use in exhibition or where they were collected from. The information I have is as follows:
1909.57.1 Vegetable Sheep, loaned to the museum by George Marriner [Marriner was the curator at the Museum 1908-1909 and I would suspect these were the ones used in the 1909 exhibition]
1931.37 Vegetable Sheep, donated by Mr. W. Izard March 1931.

Appendix 3

Confirmation that the research presented here is covered by UCL's Data Protection.

20120903 Email Confirm
[redacted] on behalf of Estates Data Protection
To: Winston-Silk, Jacqueline
03 September 2012 12:16
This message was sent with High importance.

Dear Jacqueline Winston-Silk
Thank you for the application for Data Protection Registration.

I am pleased to confirm that this project is covered by the UCL Data Protection Registration, reference No Z6364106/2012/09/04, section 19, research: social research.

It is rarely necessary to store electronic personal data on portable devices such as laptops, USB flash drives, portable hard drives, CDs, DVDs, or any computer not owned by UCL. Similarly, manual personal data should not be regularly removed from UCL premises. In the case of electronic data, to minimise the risk of loss or disclosure, a secure remote connection to UCL should be used wherever possible.

Downloading personal data on to portable devices or taking manual personal data off-site must be authorised in writing by the Data Owner, who must explain and justify the operational need in relation to the volume and sensitivity of the data. The data must be strongly encrypted. Users should only store the data necessary for their immediate needs and should remove the data as soon as possible. To avoid loss of encrypted data, or in case of failure of the encryption software, an unencrypted copy of the data must be held in a secure environment. The Computer Security Team's guidance on encryption should be followed: http://www.ucl.ac.uk/isd/common/cst/good_practice/encrypt.

Manual personal data and portable electronic devices should be stored in locked units, and they should not be left on desks overnight or in view of third parties.In order to comply with the fifth data protection principle personal data should be securely destroyed when no longer required, with consideration for the format of the data. The Computer Security Team's guidance should be followed for electronic data:http://www.ucl.ac.uk/isd/common/cst/good_practice/secure_disposal_guidelines.

Personal data must not be disclosed unlawfully to any third party. Transfers of personal data to third parties must be authorised in writing by the data owner and protected by adequate contractual provisions or data processor agreements, agree with UCL's notification and must use safe transport mechanisms. If not already done so, please provide copies of any information sheets and consent forms that you are using. When all essential documents are ready to archive, contact the UCL Records Office by email records.office@ucl.ac.uk to arrange ongoing secure storage of your research records unless you have made specific alternative arrangements with your department, or funder.

Regards,
[redacted]
Data Protection & Freedom of Information Administrator, UCL

Appendix 4

Example of Information Sheet sent to participants in order to obtain consent.

Information Sheet for Participants – Obtaining Consent

Dissertation title (provisional):
Investigating Material Culture: An Object Biography of New Zealand 'Vegetable Sheep' specimens in the Economic Botany Collection of the Royal Botanic Gardens at Kew, London.

Name of student: Jacqueline Winston-Silk
Address: 134 Olney Road, London, SE17 3HR
Email: JWinston_Silk@hotmail.co.uk
Contact telephone: 0044 7834215943 Date:

Dear XXXXX

I am very grateful that you have taken the time to participate in my research project, exploring **the historical trajectories and meanings of Vegetable Sheep specimens.** I would like to take this opportunity to tell you more about the nature of the project, and inform you about how the data you supply to me will be used and the protections of your privacy and confidentiality that are in place.

Who is doing the project
I am a postgraduate student at University College London, undertaking an MA in Museum Studies at the Institute of Archaeology. Course information can be found here: http://www.ucl.ac.uk/archaeology/studying/masters/degrees/ma_museum_studies

What is the project for
My dissertation attempts to construct an object biography of the museum specimens. The collection is previously un-researched and therefore I hope to uncover:

- Provenance
- Value of the specimens within the Museum of Economic Botany displays (now closed)
- Presence in New Zealand Museum/Herbaria collections and as exhibits in World Fair exhibitions
- Narratives associated with the specimens

How you were selected
You were selected because XXXXX

Your role in completing the project/survey
Your role has been XXXXX

Your rights
Your participation in this research is entirely voluntary and you are free to withdraw from the project at any point. If you are uncertain or uncomfortable about any aspect of your participation please contact the researcher listed at the top of this letter to discuss your concerns or request clarification on any aspect of the study.

Protecting your confidentiality
Any information you supply will be treated confidentially, and stored in accordance with the Data Protection Act 1998. All paper and email-based correspondence will be securely stored. **If requested**, I can ensure confidentiality by anonymising respondents in any written assignments.

The research will be carried out in accordance with University College London's Code of Research Ethics, which can be viewed at http://www.ucl.ac.uk/research/images/research-ethics-framework. Please don't hesitate to contact me if any of the above requires clarification.

Thank you once again for taking part in my research.
Yours sincerely,
Miss Jacqueline Winston-Silk

Appendix 5

Collections of selected New Zealand Herbaria & Institutions

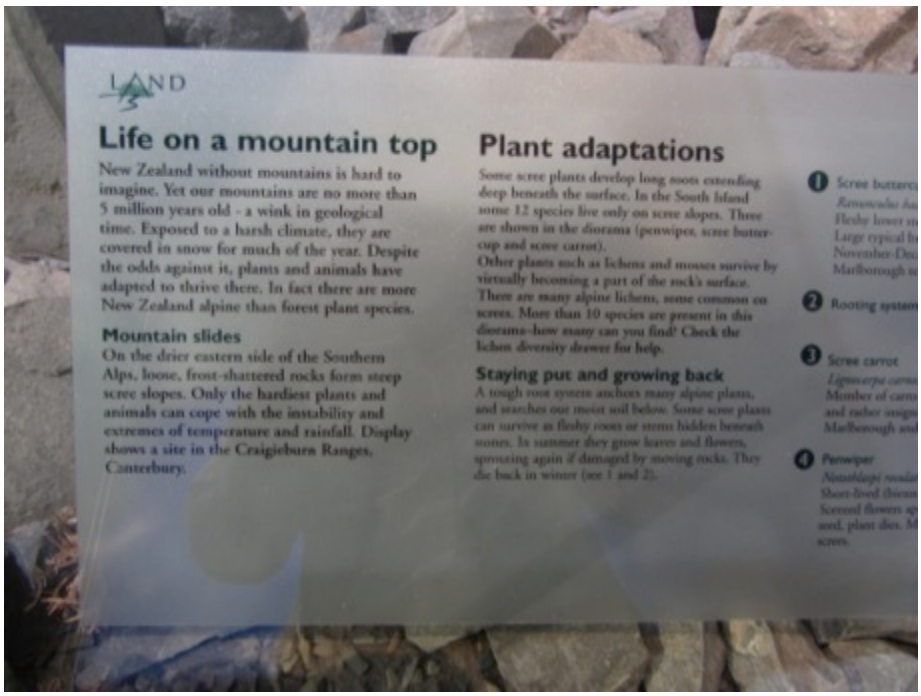
Canterbury Museum	The Canterbury Museum has one specimen in its collection; it was collected for the North Canterbury Court of the New Zealand International Exhibition (that occurred 200 meters away in the nearby park Hagley Park) and returned to the museum in May 1907, after the close of the exhibition. The museum also has records of a specimen being collected in 1866 (Scofield, pers comms, 2012). The entire botany collection (except this display vegetable sheep) was transferred to what is now *Landcare Research* in 1975. *Landcare Research* defines their purpose as "to drive innovation in New Zealand's management of terrestrial biodiversity and land resources in order to both protect and enhance the terrestrial environment and grow New Zealand's prosperity. Landcare Research will fulfil its purpose through the provision of research and transfer of technology and knowledge in partnership with key stakeholders, including industry, government and Māori". The organisations Māori name means to "care for the land in the sense that the environment is inextricably linked to economic, societal and cultural well-being" (http://www.landcareresearch.co.nz/, 2012). It can be asked why the museum retained this specimen while the rest of collection was transferred. It perhaps suggests that the Canterbury Museum, following Hooker, Smith and Jackson, also outlined size as a correlative of display value. Making this specimen a 'fine tuft' and representing an archetype of all Vegetable Sheep forms. Additionally, the specimen's size may have altered its classification of the from a strictly botanical Herbarium specimen, to an object *of* the museum.

	 **Canterbury Specimen, Courtesy of Paul Scofield ©Canterbury Museum**
Auckland War Memorial Museum	The main vegetable sheep in the collection is accessioned as *AK209589*, it was collected by Lucy Cranwell, the museum's botanist. The specimen was displayed in the *Museum Gallery* 1931-1996, including 1961-1996 in the *Cheeseman Gallery*. It is now in a storeroom (Cameron, pers comms, 2012).  **Specimen AK 209589, Courtesy of Ewan Cameron © Auckland War Memorial Museum**

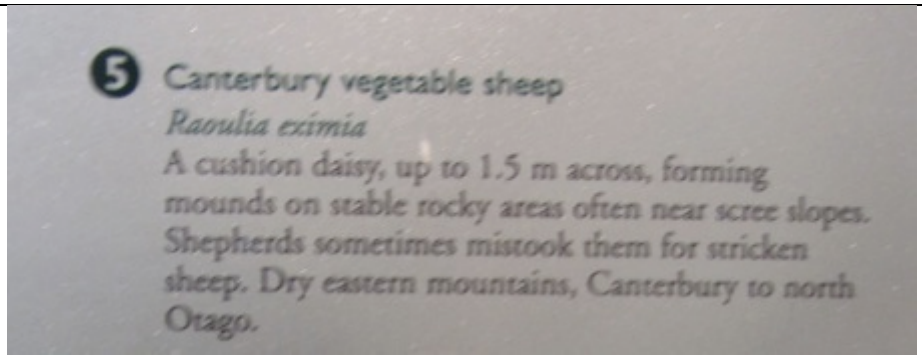
	Collection Database Information *AK 209589* *ASTERACEAE* *Raoulia eximia Hook.f.* *Loc. New Zealand, South Island, Canterbury, Mount Torlesse, south-west face* *Map K35 20-58- Alt. c.1500m* *Lat. 43° 23' 0" South Long. 171° 54' 0" East* *Coll. L M Cranwell, L B Moore, A Wall Date 05 Jan 1931* *Det. L M Cranwell, L B Moore, A Wall Date 05 Jan 1931* *Notes Outsized specimen* Cranwell regularly wrote the 'Botanist' summary in the *Annual Report of the Auckland Institute and Museum,* describing how she displayed specimen AK209589. "Accessions have been numerous, especially in economic botany… these were put on display with twelve planks of native and two of exotic timbers, twelve transparencies of exotic conifers grown in New Zealand, a large 'Vegetable Sheep' from Mt Torlesse, Canterbury, and a set of medicinal plants" (Cranwell, 1932: 17). The same specimen was exhibited in 2010 as part of the *Lucy Cranwell: Walk on the Wild Side* exhibition. The *Annual Report* details occasions when (and how) the museum displayed alpine plants and documents the Botany departments' various accessions. Entries also express Cranwell's interest in the subject of economic botany, reflected in the curators displays: • The botanist worked on "display work… showing... Canterbury shingle-mountain plants" and "a smaller exhibit of South island alpines" (Cranwell, 1933: 180) • A Native Plant Table was arranged "in an attempt to suggest to visitors the beauty, interest and possible utility of the flora, and to imbue city-dwellers with some regard for the march of the seasons as expressed by plant-life" (ibid: 19) • "Noteworthy additions to the herbarium include… alpine cushion-plants form Mr Wm Martin" (Cranwell, 1934: 18) • "Of greater general appeal have been gifts of plant products for display… chief amongst accessions of economic interest have been specimens and

	photographs dealing with rubber, sugar-cane, tea, and the production of tobacco and wine in New Zealand" (ibid: 19) • "Special exhibition on "Basic Economic Plants of the Pacific" by Miss L.M Cranwell…. has been kept up as an extended feature" (Cooper, 1942: 9). The museum also has a small Vegetable Sheep (Raoulia eximia), which has been on display in the current *Land Gallery* for over 12 years (ibid).  **Land Gallery installation. Photograph taken by Ewan Cameron for the purpose of this research.**

Land Gallery installation, detail. Photograph taken by Ewan Cameron for the purpose of this research.

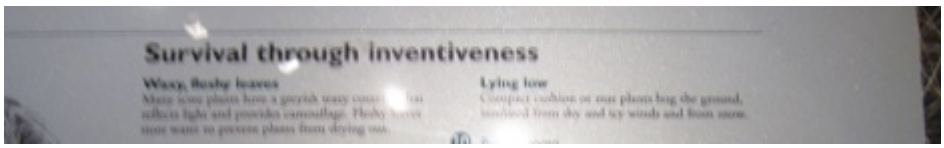


Land Gallery interpretation label. Photograph taken by Ewan Cameron for the purpose of this research.

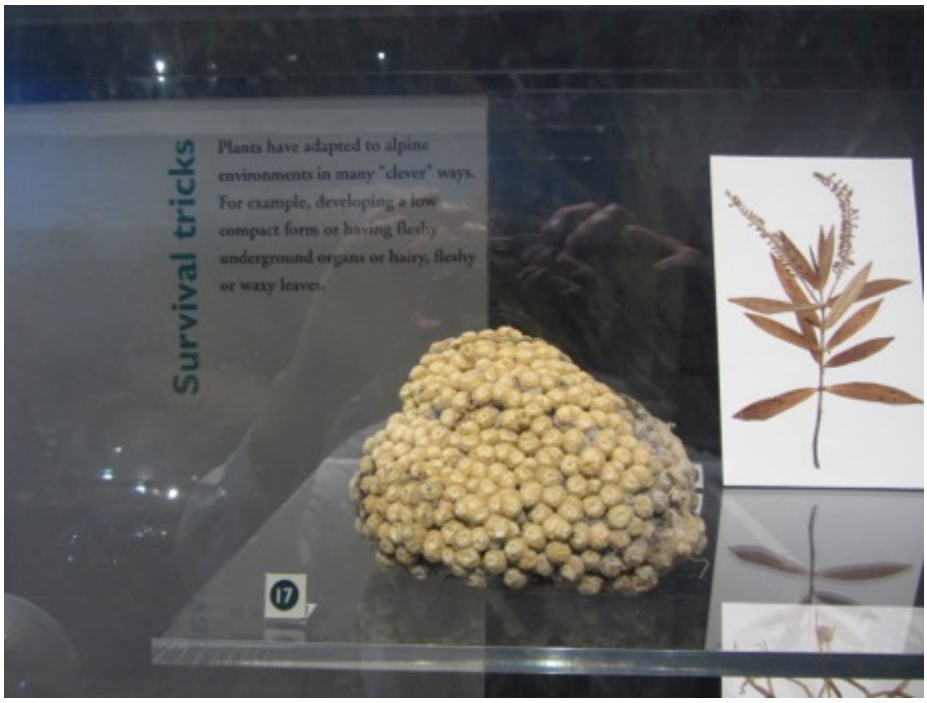


Land Gallery interpretation label, detail. Photograph taken by Ewan Cameron for the purpose of this research.

The museum holds a small Haastia pulvinaris specimen.



Land Gallery interpretation label, detail. Photograph taken by Ewan Cameron for the purpose of this research.



Land Gallery interpretation label. Photograph taken by Ewan Cameron for the purpose of this research.

Whanganui Regional Museum	The Whanganui Regional Museum's Vegetable Sheep display was featured in the 'Curators Report' in the local *Whanganui Herald*, 2nd June 1909. The article demonstrates the type of knowledge and narratives that were associated with the 'Queer Plant'. The report also demonstrates George Marriner's (Curator, 1908-09) synopsis of species within his displays – similar to the MEB's approach.

The museum's current Archivist, Sandi Black, identified the likely exhibited specimen as *1909.57.1.,* which was loaned to the museum by Marriner. Information on the specimens is limited, however it is possible to conclude the Whanganui displays enjoyed a considerably shorter life span then those of Canterbury or Kew.

THE MONTH'S WORK.

THE MAIN HALL.

The sloping show cases have been filled up with a few interesting exhibits, after having been cleaned out and renovated.

Instead of the large collection of moa bones, there is now a set of typical portions of the moa's skeleton on view, with numerous gizzard stones and feathers.

Near these is a collection of fossils from South Canterbury, showing very perfect specimens of rare shells and echinoderms. At the far end are some very interesting botanical specimens, namely "Vegetable Sheep."

A QUEER PLANT.

These plants grow on the rocky tops of the mighty mountains of the Southern Island, where the huge shingle slips, so characteristic of our N.Z. Alps, cover acres upon acres of country. Dr. L. Cockayne describes them as follows:—"Here are the wonderful "Vegetable Sheep." They grow, not on the shingle, but on the rocks that have nearly been buried. Large examples form great hummocks; six feet by three feet across or even more. Really they are shrubs of the daisy family, and are provided with a thick, stout woody stem and strong roots which pass far into the rocky crevices." They are peculiarly adapted for their environment. Their long roots pierce the thick layer of shingle and act as anchors to prevent them being carried away on the ever-shifting stones. The branches and leaves are all packed into a dense greyish or yellowish cushion, and owing to their woolly appearance are called vegetable sheep.

This dense cushion arrangement serves the plants in two ways. First, in winter the heavy layer of snow fails to crush these hardy plants and in summer when the snow has gone and the intense heat of the sun beats down upon these great shingle slopes, so that one cannot bear to touch the stones with the bare hand, this dense close arrangement stops undue evaporation and so prevents the plants from being dried up. There are three kinds on view, but the specimens are all small owing to the limited space in the show cases.

Raoulia eximia, found on Mt. Torlesse, Canterbury.

Rasoulia Hanstii, found on the Kaikoura mountains.

And Haastea pulvinaris, found on the hills around Hanmer.

George Marriner's 'Curator's Report', Whanganui Herald, Volume XXXXIV, Issue 12785, 2 June 1909, Page 7, Courtesy of www.paperspast.natlib.govt.nz

"We do not hold much information on the vegetable sheep in the collection… there was little information kept on these early exhibitions… we do have a Guide to the *Principal Exhibition* of the museum 1933, but it appears by this date the vegetable sheep had been taken down" (Black, pers comms, 2012).

The museum holds a second specimen in its collection:

1931.37 Vegetable Sheep, donated by Mr. W. Izard March 1931

Landcare Herbarium

The Canterbury Museum's entire botany collection, notwithstanding the Vegetable Sheep specimen collected by Lucy Cranwell, was transferred to the *Allan Herbarium* of *Landcare Research* in 1975.

The current Herbarium Manager, Ines Schönberger, confirmed details of the transfer of the material,

	"We have all the specimens from the Canterbury Museum here in our Herbarium, as a 'permanent loan' from the Canterbury Museum… we do hold several Raoulia specimens, some material collected by Arnold Wall. The reason for the transfer was simply that the Museum didn't have the resources and wasn't set up to look after a herbarium, but the DSIR Botany Division (as we were called back than) did have already a well-established herbarium and plenty of storage space" (Schönberger, pers comms, 2012). The Museum herbarium was established by Julius von Haast in the 1860's and the principal collectors represented areHaast, Armstrong, Kirk, Cheeseman, Enys, Petrie, Cockayne, Laing and Wall (Macmillan, 1977: 159). Several of these prominent collectors are represented by Vegetable Sheep specimens at Kew. Botanical research continues to take place on the species that are held at *Landcare*, "Some of the botanists in our institute are actively researching the Vegetable Sheep taxa here in New Zealand" (Schönberger, pers comms, 2012). Schönberger and Kate Boardman, a Herbarium Technician, were able to locate one *Raoulia* specimen in the collection (*CHR 295226*) that had been transferred from the Canterbury Museum, indicated by a label on the Herbarium sheet.

CHR 295226, Photograph courtesy of Kate Boardman and Ines Schönberger © Allan Herbarium, *Landcare Research*

There are other *Raoulia* specimens in the Allan Herbarium that were donated by individuals who were collecting for both Canterbury and Kew. However, the majority of these specimens are very small (approx. 2cm), and therefore "are not good examples of vegetable sheep" (Boardman, pers comms, 2012).

Boardman provided a selection of other specimens "that give a range of what the specimens look like – 3 small specimens and 2 larger specimens" (ibid). This is demonstrable of the importance of retaining whole Vegetable Sheep specimens within Museum and Herbaria collections.

CHR 295226 – *Raoulia bryoides*
CHR 8869 – *Raoulia eximia*, collected by Haast
CHR 8879 – *Raoulia mammillaris*, collected by A. Wall
CHR 542286 - *Raoulia bryoides*, collected by D. Petrie
CHR 542235 - *Raoulia eximia*, Herb. F G Gibbs
CHR 571417 – *Haastia pulvinaris*, Herb. F G Gibbs

CHR 8869, Photograph courtesy of Kate Boardman and Ines Schönberger © Allan Herbarium, *Landcare Research*

The above specimen demonstrates the active role Kew played in identifying species and collaborating with New Zealand institutions.

"The specimen was collected by Dr Haast who was the director of Canterbury Museum and a passionate botanist. He pre-identified it as *Raoulia mammillaris*. The specimen (or a duplicate) was sent to Kew when N.E Brown (British taxonomist, Herbarium Assistant from 1873 and Assistant Keeper at Kew from 1909-1914) re-identified it as not *Raoulia mammillaris* but *Raoulia eximia.* The plant was either sent back after identification was completed, or the Kew label was sent back to New Zealand for the duplicate" (Schönberger, pers comms, 2012).

CHR 571417, Photograph courtesy of Kate Boardman and Ines Schönberger © Allan Herbarium, *Landcare Research*

CHR 542325, Photograph courtesy of Kate Boardman and Ines Schönberger © Allan Herbarium, *Landcare Research*

Appendix 6

Arnold Wall, How they brought the good sheep from Torlesse to Christchurch

The way was long, the wind was rough, the enterprise was parlous,
Upon the thrice-accursed screes and ridges of Mt Torlesse,
When five went forth to conquer and collect the great Raoulia,
Three of the genus Homo, and three of the genus Mulier.

A fierce nor'wester battered hard against the mountain faces,
High peaks were shifted on that day some distance from their bases,
The ancient rocks themselves were cowed and quivering like jellies,
We often could not stand, but moved, like armies, on our bellies.

Those damsels were not fragile things of porcelain or faience,
They resolutely followed up the rugged paths of science;
They bawled to one another and incurred some little odium,
By prating of Ranunculus, Pyhylachne, Lycopodium.

Long poles of mountain beech we bore, and in between them sacking,
A great ungodly pickaxe for the scrabbling and hacking,
And knapsacks, kodaks, provender, with heaving and with lugging;
Bowed down with burdens, up we strove, the lee of the spur always hugging.

We struggled up the mountain in a shocking ragged column,
Our speeches were infrequent, but were very loud in volume,
For though we yelled and roared as if our very throats would crack again,
As soon as words had left our lips the foul wind blew them back again.

Now to avoid the bullying blast, the tumult, and strepitus,
We sought to lunch in shelter, just behind a crag precipitous,
Unheeding Helichrysums, Epilobiums, and Geraniums,
We dropped our date stones and our crumbs on one another's craniums.

From that high vantage we looked down on valleys, farms and stations,
The yellow foothills and the lines and squares of dark plantations;
Far off we saw the turquoise sea against the sky uptilted,
The roads, the rivers, and the hills, in dreamy purple melted.

The naughty plants were growing in the most exposed locality.
We labored sore an hour or more and courted dire fatality,
Before the monster yielded to our picking and our harrying;
We laid his carcase on the bier to start the dreadful carrying.

Then we drove forward, staggering, zigzagging and perspiring,
The ladies lent the willing hand, undaunted and untiring,
We crawled, we fell, and on the steepest pinches rather ran well,
And ever in the van were found Misses Moore and Cranwell.

We shed our gore, broke knees, and suffered bruises and abrasions,
Such as we'd not experienced on anterior occasions,
Grimly resolved we battled on with very frequent truces,
And ever in the van were found the inimitable Lucies.

Upon the narrowest col of all a gust came good and hearty,
And dashed upon the cruel stones the whole devoted party.
Our playful foe grinned horribly as to our cries he harkened,
With hat and scarves and haversacks the very air was darkened.

We toiled and spelled and toiled, our ponderous burden hating
And nearer, ever nearer, grew the car beneath us waiting,
Till arching, gasping, gibbering, some wheezing and some grumphing,
Upon the grass beside the Pass we laid him down triumphing.