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Global Commodity Chains and Local Use-Value: William Colenso, natural history collecting and Indigenous labour

Megan Kuster
University College Dublin

On 20 January 1842, the joint botanical-missionary expedition led by Church Missionary Society printer William Colenso (1811–99) was making its way on foot from the hill of Te Wairere to the *pa* of Tapiri, through the interior of New Zealand’s North Island. The travelling party was still regrouping following a poor night’s sleep. The day before, two local guides had deserted the expedition, leaving behind some of the gear in a forest after deciding to return to Mokomokorea. Without access to camp bedding, the remaining travellers had been obliged to endure an uncomfortable, rainy night in the company of innumerable mosquitoes. In this final leg of what had been a strenuous three-month journey, the last stages were proving to be the most arduous. It is at this point in his “bush notes” that Colenso records detailed impressions of Abraham, an Indigenous man who had been travelling with the expedition and helping to deliver sermons since it set out from Paihia in November. Noting Abraham’s skills as a negotiator and navigator, alongside his judgements of Abraham’s life-story, Colenso wrote: “In passing over the road Abm. shewed me the spot where when a Child he was seized... by the Ngapuhi Tribe.... The present was the *first* time of his passing the spot since his capture.”¹

This episode, a strikingly vivid and personal account of an Indigenous life-story, is entirely omitted from the 1844 published version of the expedition, which appeared in the third volume of the *London Journal of Botany*. The story’s omission suggests that the *Journal*’s scientific aims led it to prefer genres that were somewhat distinct from those of the contemporary travelogue.² The printed account of the expedition was revised to include the expected tropes of Romantic discovery and to conform to the contemporary objectives of the natural history scientific community, pointing to at least two likely reasons as to why the published version contained no mention of Abraham, or any of the other named Indigenous guides and informants mentioned in Colenso’s bush notes.³ In exploring how these two discourses—Romantic and scientific—may

have impacted on Colenso's experiences as a colonial collector and on his practices of composition, revision, citation and publication, this essay explores both Indigenous responses to natural history collecting in nineteenth-century colonial New Zealand, and the methodological limitations and possibilities of using the colonial archive to explore such questions. In particular, the essay emphasizes the themes of knowledge production and the use-value of labour, raising questions about how scientists, collectors and Indigenous informants interacted with one another along the global commodity chain of the natural history specimen.⁴ It asks: Whose production of natural history knowledge is approved, reproduced and recorded in Colenso's archive, for what purpose and in what format? And what are the different valuations or hierarchical gradations of labour that emerge in his various accounts (published and unpublished) of the expedition?

Writing in the present day, Kwakwaka'wakw scholar Sarah Hunt argues that citational politics is about whose work is being authorised in the context of knowledge production and reproduction: "It's really about who we cite in our work, whose work we hold up, which really validates and legitimizes that as knowledge."⁵ Expanding on Hunt's understanding of citation politics, I suggest that issues surrounding the citation of Indigenous labour in nineteenth-century natural history knowledge production are entangled with the valuation of natural history specimens as commodities in the global imperial marketplace. My first claim is that differentiated forms of labour surface in relation to tropes of natural history "discovery," and that Colenso's mode of citation reveals the division of primary and secondary labour-value in the field of imperial natural history collecting. I suggest, in other words, that Colenso's citation of Indigenous intermediaries follows a logic of labour differentiation that is enmeshed within tropes of "discovery" and which manifests differently across different textual forms.⁶

My second claim is that scientific specimen discovery had a value in a wider commodity chain that was both recognised and resisted by Indigenous peoples. As formulated by Intan Suwandi, the labour-value commodity chain framework allows for an analysis of both the local labour and the labour exploitation that exists behind complex global commodity chains.⁷ Simultaneously addressing both macro and meso aspects of specimen production, this framework provides a way of thinking about how

imperial relations governed global natural history collection's relationships between the metropolitan centre and the colonial periphery in ways that perpetuated exploitation at the periphery, including through colonial collectors' extraction of Indigenous labour. More specifically, I argue that the differentiation of labour and the use-value of natural history specimens provides a way of reading Indigenous traces in the colonial archive, adding to understandings of the material practices of natural history some sense of how Indigenous people responded to coercions for assistance by European collectors.⁸ Despite the absences, biases and fragmentation of the colonial archive, I demonstrate that it is possible to uncover traces of Indigenous intermediaries who, at times, respond to the commodity value of the natural history specimen in ways that undermine the differentiated labour economy of European natural history collecting.

Archival Bias and Indigenous Knowledge

Following early work that established imperialism as a key driver and context of scientific enquiry, more recent scholarly approaches to nineteenth-century natural history collecting have drawn on actor-network theory and "new biography" to explore the continual making and remaking of connections between human and nonhuman entities and to disrupt the persistently dominant "solo hero" colonial exploration narrative in favour of an understanding of scientific exploration as a collaborative project.⁹ As an early groundbreaking intervention, Mary Louise Pratt's *Imperial Eyes: Travel writing and transculturation* opened up the field of European science as a domain of imperial meaning-making to arguments about decolonising knowledge.¹⁰ As Pratt has shown, natural history travelogues were marked by highly visual and analytic language, and their narrative pattern was standardised through tropes of encounter with nature, transforming nature into natural history knowledge through the repetitious aggregations of observances on geology, flora and fauna.¹¹ In contrast to "encounter" paradigms, the more recent "eco-cultural network" model offers several conceptual advances, including a rethinking of ideas about agency in terms of human intention and nonhuman aim, thus challenging the tendency to revert to nature/culture dualism by emboldening a view of historical change in relation to multiple, interlinked human and more-than-human factors.¹²

Building on research that established links between nineteenth-century natural history collecting, science and imperialism, Coote et al. contributed a key breakthrough

in scholarly debates about the nineteenth-century global trade in natural history specimens, offering a conceptual framework for the natural history trade that maps various pathways between field collectors, traders and end users of specimens.¹³ This work has subsequently been advanced by scholars investigating how different agents, such as field collectors, public institutions, commercial businesses and private collectors, made choices about the various pathways specimens might circulate within the natural history trade.¹⁴

Despite these advances, a serious and ongoing gap in current scholarship involves the relationships that Indigenous people and societies had to networks of imperial science, as well as Indigenous responses to natural history projects.¹⁵ Critical Indigenous Studies approaches to eighteenth- and nineteenth-century scientific networks have, to date, mainly focused on geologic and geographic scientific expeditions and their ethnographic undercurrents. Describing the limitations of common terms used to refer to non-European knowledge makers, such as “local” and “Indigenous,” these studies have usefully advanced the figure of the “broker,” “intermediary” or the “go-between” to discuss the ways that knowledge is translated through the process of exploration.¹⁶ In framing expeditions as collaborative projects, some of this research has expanded insights from postcolonial studies about the importance of power relations, especially imperialist hierarchical constructions of race and gender, to establish the contingent nature of explorer-intermediary relations as slippery, “uneasy partnerships” in which people co-produced knowledge together but rarely with the same aim and in ways that were overdetermined by colonial institutions and terms of knowledge production.¹⁷

This essay focuses on a specific, understudied subset of scientific explorations, namely natural history excursions. Despite the recent emphasis on scientific networks in Darwin studies, very little research considers how the roles of non-Western intermediaries shaped natural history explorations and participated in the creation of specimens as commodities, a key element in the translation of knowledge about biological life. My essay aims to contribute to the growing body of scholarship that focuses on recontextualising rather than “recovering” the history of Indigenous participation in nineteenth-century natural history.¹⁸ I distinguish between recovery and recontextualisation because the former implies reading the subjects of the colonial

archives, while the latter emphasises the need to reflectively read the colonial archives as subject. I therefore present an alternative and multi-scalar approach to the colonial archive that highlights the local, regional and transregional labour practices within scientific networks that included Indigenous peoples, coalesced around natural history institutions and produced specimens as global commodities.

There are at least two significant, interrelated limitations to my approach. The first issue relates to the extent to which it is appropriate for me, as a non-Indigenous person, to write about Indigenous histories. Cultural appropriation is a recurrent theme in the history of colonialism and it includes non-Indigenous people personally benefitting from writing down Indigenous stories in ways that undermine the wishes of those to whom the stories belong. This issue of a story's tellability is related to justice and the expansion of capabilities for Indigenous peoples, raising questions about the return of agency to those silenced by colonial-imperial narratives.¹⁹ While guided by theorisations drawn from Critical Indigenous Studies, I do not claim or aim to produce Indigenous knowledge in this essay, but rather to present a reading of the absent presences in the colonial archive as a mode of recontextualisation that may contribute to more fully Indigenous-centred projects aimed at decolonising natural history museums and botanical gardens.

The second issue is methodological and relates to archival integrity and interpretation. There are both limitations and possibilities in using colonial archives to make arguments about restoring agency to those silenced by the archives. The key problem of the colonial archive's inherent bias has been discussed by several scholars including Ann Laura Stoler, whose "ethnography of the archive" traced the logic of the colonial archive to show how they reveal more about the structures of the colonial powers who maintain them than they do about the subjects of the records.²⁰ One manifestation of the inherent bias of the colonial archives is in the subordination of Indigenous knowledge placed in juxtaposition to Western knowledge. Rather than being accorded equal value, colonialism places these "incommensurable ontologies" in a hierarchical relationship.²¹ A result of the submergence of Indigenous agents and knowledges by the archival authority is what other scholars have variously termed the "fragmented," "thinly archived" and "partial visibility" of "feather-light" records of Indigenous lives that are "virtually unrelatable."²²

Colonial mechanisms for elevating Western knowledge and devaluing Indigenous knowledge are rife in nineteenth-century narratives of scientific expeditions. Scholars have noted that although Indigenous intermediaries were vital to much of this fieldwork, “the knowledge and labour they provided became ‘hidden’ or ‘invisible’ (or only ‘partially visible’) within exploration texts.”²³ It has been further argued that the trace presence of Indigenous lives in the colonial archive represent just the exceptional instances in which colonial observers took notice of Indigenous people, knowledge and labour in response to particular colonial requirements of expeditions, such as the need for reliable and faithful brokers and translators. Following this logic, scholars have observed that one consequence of this is that archivally Indigenous peoples always appear “in roles sanctioned by colonial-imperialism and their total identity and experiences are always obscured.”²⁴ The issue of interpreting these absent presences in ways that “release the residue” of their meaning beyond what colonial explorers and the keepers of their exploration narratives have often attributed to them warrants purposeful theorisation.²⁵

Issuing cautions against archival seduction, Helen Freshwater’s demystification of the archive’s allure projects the question of determinacy back on the researcher.²⁶ In theorising the archive’s “thingness,” Freshwater illuminates the archive’s interpretative indeterminacy as a function of the researcher’s awareness of the beguilement of the unattainable object of desire. Primarily concerned with ideas of censorship and in recognition of the partiality that shapes the entire archive, Freshwater’s methods insist on a rigorous interpretive process that keeps thing and theory united and are related to Kate Fullagar’s arguments about how colonial bias shapes the traces of Indigenous lives in the archives and the extent to which “[p]roxies can also say a lot, if provisionally or speculatively.”²⁷

Critical Indigenous Studies continues to advance a substantive range of methods for addressing the problems posed by drawing on sources whose integrity has been compromised by colonial bias, sometimes framed in terms of the need to more skilfully theorise projects that would seek to interpret colonial archives for the creation of “‘hidden’ histories.”²⁸ Additionally, issues related to the recontextualisation of colonial archives recur as part of a goal widely advanced in Critical Indigenous Studies to

develop and employ research methods that contribute to its intellectual aims, a goal which includes but is not limited to conducting research that Indigenous people deem to be of benefit to Indigenous communities.²⁹ In relation to methods for working with the colonial archives, Lynette Russell writes that the key concern is “to create archival systems to which Indigenous peoples and Indigenous knowledge can be interactively added” as part of the development of “systems that not merely acknowledge the inherently different nature of Indigenous knowledge but celebrate the ontological incommensurability of various knowledge systems and work towards making the two systems at least comprehensible and of equal value.”³⁰ Tactically, this archival reclamation may take the form of, for example, mechanisms for restricting access to Indigenous knowledge deemed sensitive by Indigenous people, processes for facilitating Indigenous people’s right of reply, as well as archival institutions and researchers taking responsibility for continuous engagement with the community and following community consent.³¹ Aiming to overcome some of the biases of the colonial archive, a broadened conceptualisation of the archive could bring together alternative forms of records, such as oral testimony, literature, dance and performance, landscape, and art studies.³² An expanded definition of “the archive” based on a wider range of records could bring into closer conversation museum professionals, historians and literary scholars and identify some areas of shared interest. Cross disciplinary debates on similar topics, may yield new interpretations and alternative arguments about how to reconfigure the textual sources of colonial archives.

The work of archival reconstruction is thus a deeper, more involved, relational process than implied by the metaphor of a solo researcher lifting the lid to reveal a hidden history within. In the context of recreating the archive of nineteenth-century scientific networks, such alternative approaches do not simply embolden the networks, practices and resources on which scientific exploration depended; they are also led by present day Indigenous communities, whose ancestors were directly impacted by historical exploration.

Colenso’s Archive

In many ways, Colenso’s archive is unexceptional in its ordinariness.³³ It is overwhelmingly comprised of sources that “preserve [some] of the textual detritus” produced by the pedestrian activities of the CMS: quotations of Bible verses, the

numbers of Christian converts, and income and expenditures receipts.³⁴ The accretion of the archive's fragmented layers build up a patchy impression of sustained and uneven contact with Indigenous groups over Colenso's 65-year tenure in colonial New Zealand. Traces of Indigenous collectors and informants are scant in his botanical archive, but are partially illuminated, I suggest, when read in the wider context of natural history's commodity chains that connect Colenso as a resident New Zealand botanist to local Indigenous informants and collectors across colonial Australasia and then to networks of scientists in the imperial metropole.

Colenso's long-term residency and familiarity with Indigenous people were among the key factors that recommended him as a natural history collector to the leading scientists of the day. William Jackson Hooker, the Director of the Royal Botanic Gardens, Kew, from 1841 to 1865, elevated Colenso's work as a natural history collector above other amateurs such as John Edgerley, John Logan Campbell and Andrew Sinclair, and even above scientists such as John Carne Bidwill, Ernst Dieffenbach and Joseph Dalton Hooker. W.J. Hooker noted that Colenso was deserving of "particular mention" for his contributions to New Zealand botany and natural history, enumerating Colenso's many "advantages" as a collector, writing: "[h]is continued residence in the Islands, his entire familiarity with the language, his acquaintance with the character of the Aborigines, his influence as one of the most energetic of the Church Missionary Society, his liberality and hospitality to visitors... and his frequent journeys."³⁵

Colenso began to cultivate his natural history interests by building relationships with visiting scientists soon after his arrival in the Bay of Islands as a CMS printer in 1834. On Christmas Day 1835, he briefly met Charles Darwin, who was on a nine-day stop-over collecting in the Bay of Islands during his *Beagle* voyage. More influential on the development of Colenso's practical skills in observation and identification, however, were the three months he spent doing fieldwork with naturalist Allan Cunningham, Government Botanist for New South Wales, during Cunningham's second visit to the Islands in 1838, and his steadfast relationship with the Hooker family.³⁶

Colenso's correspondence with British scientists in London largely aligned with the norms of botanical communication between metropolitan scientists and colonial collectors, revolving around the topics of scientific specimen exchange and publications.³⁷ Primarily descriptive, the specimen lists Colenso frequently enclosed in his familiar letters to J.D. Hooker evidenced the knowledge Colenso had developed through the personal library his scientific correspondents had helped him to acquire, although this knowledge did not stop him from regularly making claims to species "discovery."³⁸ Colenso's sustained correspondence with some of the leading philosophical natural historians of his day, combined with his broad network of local acquaintances which he developed primarily through his official missionary work, helped to crystallise his position as a natural history collector. As a private collector, Colenso completed local, regional and trans-regional transactions for specimens. These specimens moved along global trade pathways until they arrived at an "end user," typically a museum, an educational institution or another private collector.³⁹ The main recipient of Colenso's collected specimens was Kew. Upon reaching the state-funded botanical complex, specimens were documented in the "Goods Inwards" accounting book and could then be compared, classified and scientifically analysed for their biological properties. Yet, this process did not necessarily move specimens out of the global marketplace as specimens were sometimes re-circulated through distributions to other museums, including the British Museum or school museums.⁴⁰ In other words, the completion of transactions, such as when Colenso sent his specimens to the Hookers, did not necessarily signal the removal of the specimen from the marketplace as other agents, including Kew, might re-circulate the objects to other agents via different methods of transaction and according to different valuations of the specimens.

Ian St George, following Bruce Hamlin, divides Colenso's collecting activities into two periods: the missionary years, 1836–52; and the retirement years, 1879–99.⁴¹ In the later period Colenso largely relied on settler-friends, whereas in the earlier period most of his specimens were acquired through expeditions. Although the official purpose of Colenso's travels was CMS missionary work, the journeys afforded frequent opportunities for collecting. Colenso's expeditions between 1836 and 1852 included four short journeys along the East Coast in 1836, 1838, 1840 and 1841, when he was based at the Mission Station in the Bay of Islands; two extended three-month expeditions in the summers of 1841–42 and 1843–44; and biannual journeys in

Wairarapa, down the East Coast to Wellington and back via the Valley from December 1844 soon after he was installed at the new Hawke's Bay Mission Station.

Differentiated Labour and Use Value

Some scholars working with the Colenso archive have remarked on the relative absence of Indigenous collectors. For example, St George notes that "Maori companions" helped obtain specimens from inaccessible places but that Colenso "rarely record[ed] the names of [these local] collectors in [his] missionary period."⁴² The archive contains references to Colenso's fear of heights and his reliance on unattributed Indigenous labour to scale trees and navigate steep cliffs to gather fruit and flowers. Although they often remain unnamed, the difficulties within Colenso's relationships with Indigenous collectors is sometimes revealed.⁴³ At the same time, too narrow a focus on Colenso's failure to name specific Indigenous collectors obscures the broader contexts in which he acknowledged Indigenous participation in making his collections. In particular, it obscures the named and unnamed guides, baggage bearers, trainees and informants that appear regularly, if fleetingly, throughout his bush notes but then disappear in his published writings—often in ways that reveal European ideas about the aesthetics of discovery and the economics of natural history.

Reading the archive from this perspective, Colenso's often-repeated mantras, "I took," "I collected" and "I obtained," signal not just his elision of Indigenous participation but also his ambition to be recognised for his contributions in the context of natural history's aspirations to advance a philosophical basis as a way of elevating its status within the nineteenth-century hierarchy of scientific disciplines.⁴⁴ Colenso's personal ambition was entangled with his conformity to the differentiated labour value practices that underpinned the philosophical development of scientific knowledge in the nineteenth century, including the secondary valuation of manual and Indigenous labour. In the process of developing natural history knowledge into an increasingly philosophical science a higher status was afforded to more intellectually demanding, abstractive or taxonomical labour.⁴⁵

Like the standing of natural history among the scientific fields, the status of the natural historian was in flux in the nineteenth century. Endersby's *Imperial Nature* is, in part, a story of how J.D. Hooker's personal aspirations to secure a good, professional

role drove his career and cultivation of relationships with colonial collectors on whom he relied—most of whom were unpaid (like Colenso and the Tasmanian botanical enthusiast Ronald Campbell Gunn) and others who were commercial collectors (like the West Australian collector James Drummond).⁴⁶ These economic realities are reiterated in natural history travelogues through models of differentiated labour. A primary labour value is associated with the types of work that lead to Western intellectual scientific discovery, such as observation, identification, categorisation, classification, naming and analysis. Composed of information-processing and intellectual activities, primary labour is associated with high sociocultural status even if the work is unpaid. Yet not all primary labour activities held the same status. Endersby points out, for example, that “[c]lassification was useful but unglamorous work, often thought to be intellectually undemanding and thus a relatively low-status activity.”⁴⁷

By contrast, secondary labour included all the embodied knowledge, physical work and manual activities that needed to happen to move specimens from the place of “discovery” to elsewhere—either a place where primary labour value could be added, or, in the case of some economically valuable plants, to plantations where they would be cultivated through exploited manual labourers. This secondary labour included knowing where to find specimens, being able to navigate the topography and the elements, transporting the instruments needed to care for and store the specimens properly and securing as far as possible the chance that the specimens would survive transport from one location to another. This work relied on and required Indigenous scientific knowledge and local embodied creativity, even while such local knowledge and manual labour was simultaneously undervalued by the commodification value of discovery.

The labour of the resident colonial collector moved between these primary and secondary values. Being recognised by metropolitan scientists depended on the colonial collector’s ability to access the right scientific instruments (including Wardian cases, vascula and microscopes) that would aid in transporting and preparing desirable specimens, as well as their ability to traverse cultures, thrive within diverse networks, make careful observations and keep accurate records of where plants were found in order to assist the philosophical development of ideas about geographical distribution.⁴⁸

Importantly, resident collectors could observe in situ, adding another layer of value to their work for scientists who wanted to understand distribution at scale.⁴⁹

Accounts of the 1841–42 Expedition

A close examination of Colenso's archive reveals that different genres use different citational strategies to cite Indigenous labour in ways that are aligned with primary and secondary labour distinctions. The labour-value commodity chains of global natural history cast (peripheral) manual labour as secondary compared to (metropolitan) intellectual labour. Colenso's writing shows how he tried to align his work with primary intellectual labour while submerging, through various strategies of omission and anonymization, the labour of Indigenous people who aided his collection work. That Colenso's citational politics changes in relation to these macro- and meso-level expressions of differentiated labour is evident when comparing two different textual versions (the published *Journal of Botany* account and the semi-private bush journal) of his three-month expedition from 19 November 1841 to 22 February 1842.

A dedicated diarist, Colenso's surviving journals date from 1833 to 1897. Often, in the case of longer expeditions, he kept a separate bush journal. These detailed field notes typically record observations from the day's sermons, place names, miles walked and an appended "botanic memoranda" section. The expedition journals were semi-private/semi-public documents, as Colenso extracted from them to produce Annual Reports for the CMS and scientific publications on topics ranging from ferns and moa bones, to shells and tide lore. To some extent, he incorporated natural history genre conventions when revising the bush journals for publication in scientific journals. For example, Colenso extracted material from his 1841–42 bush journal to produce his 1844 article for *The London Journal of Botany*. Bible quotations, Christian conversions and details of a fortnight's game of cat-and-mouse with a Roman Catholic priest are replaced with specimen lists, Latin names and plant morphology.

The version of Colenso's bush journal cited here is St George's transcription of Colenso's 1833–52 bound manuscript held at the Alexander Turnbull Library (ATL 80-038-01). The curated version of the expedition was published in the third volume of *The London Journal of Botany* (1844), appearing under the title "Journal of a Naturalist

in some little known parts of New Zealand” with an introduction by W.J. Hooker. At 21,600 words, approximately the same length as the bush journal, the published version takes the form of a familiar letter from Colenso to W.J. Hooker dated 1 September 1842. Extracts from some of Colenso’s letters had appeared in the first volume of the *Journal* and, in the second volume, Colenso’s name is mentioned fleetingly.⁵⁰ However, the 1844 piece is the first time the *Journal* had printed a significant full-length account of one of Colenso’s expeditions.

The writing style of Colenso’s published work was very different from that of the scientific, philosophical Hooker. Pratt’s arguments about the aesthetics of natural history travelogues is especially relevant to Colenso’s “explorer style” as seen in his published expeditions which rewrite the botanical collector as “a sentimental hero” at the centre of his own story, one who faces an “epic series of trials, challenges, and encounters with the unpredictable.”⁵¹ The published “Journal” article recounts, for example, a rainy New Year’s Eve, lost in the forest after the only guide with local knowledge had deserted the group:

The heavy rain and rattling hail which unceasingly poured down, – the vivid lightnings and hollow-sounding thunder reverberating awfully in never-ending echoes among the hills, – the angry winds which furiously rushed in fitful roaring blasts through the ancient forests, rocking, and cracking, and lashing the monarchs of centuries as so many saplings of a year, stripping their leafy honours, and breaking off their branches, hurled them to the earth, – the hooting of owls, and shrieking of parrots, which flew affrightedly about seeking shelter, – all united to declare, in a voice too plain to be misunderstood, the great commotion Nature was undergoing; – fit knell for the departing year.⁵²

By contrast, the bush journal entry dated 31 December 1841 recorded miserable rain and another desertion by an Indigenous guide, bare of the conventions of the Romantic sublime evident in the “Journal” article, which function as a mode of erasure of Indigenous presence on the landscape.⁵³ In the “Journal” article, details about Indigenous life are minimised and intermediaries are unnamed; they appear only as the manual workers whose physical labour helped Colenso stay alive and shielded him

from less desirable tasks. Indigenous guides carry him across steep ravines, fend off his hunger with roasted “coleopterous insects” and perform camp duties freeing up Colenso to “botanise.”⁵⁴ By contrast, the bush journal renders the landscape less through Romantic conventions and more through the complex field of Indigenous culture. It also contains more detail about the network, roles and payment of Indigenous intermediaries, particularly guides.

Largely associated with mobility and orienteering, the guides’ labour is a complex form of physical work. While both the “Journal” article and the bush journal represent an extensive network of mobile Indigenous guides, the conventions of representing guide labour differ. Both texts indicate that the expedition had at least one Indigenous traveller who accompanied Colenso from the Bay of Islands and demonstrate a predictable, repetitive rhythm in which the expedition would enlist local guides, who would temporarily move alongside the expedition for varying lengths of time. However, the expedition regularly needed to wait for support with onward conveyance as guides could desert or refuse offers of employment.⁵⁵ Whereas the “Journal” article features empty landscapes and infrequent encounters with Indigenous people, the bush journal depicts a familiar and highly-populated land of mobile Indigenous people, many of whom were known to Colenso. The bush notes are richer in details of Colenso’s perceptions of the guide network and his frequently unsuccessful attempts to engage intermediaries. They include episodes of Indigenous people travelling with the natural history expedition as a way of fulfilling Indigenous cultural practices that have nothing whatsoever to do with botanical fieldwork.

Whereas the published “Journal” article shows Indigenous culture and life within only the narrow confines of guides and hosts, the bush journal contains traces of Indigenous mobility and scenes of autonomous Indigenous life. For example, on 17 February 1842, near the end of the expedition, Colenso notes he was accompanied to the next community by an unnamed Indigenous person undertaking their own business: “Leavg. them I proceeded on to *Parua*, a young native going thither with me to obtain some Medicine for *Te Amo*.”⁵⁶ The month before, he had fallen in with Indigenous travellers who were wild-crafting: “abt. 1½ hour’s travellg. fell in with a large party of Natives fm. *Raroera*—returning with more than a 1000 eels wh. they had strung on sticks.”⁵⁷ Intended not to be read in its raw form, the bush journal represents some

aspects of Indigenous culture in terms that exceed natural history's differentiation of labour and submergence of Indigenous work to a secondary value. It reveals something of the price of such labour extraction, too, including some fragments of Indigenous resistance amongst the prices of extracting Indigenous labour for natural history projects.

Fragments from the bush journal indicate that the price of Indigenous labour was not fixed and that Indigenous rejection of unsuitable payment offers was common. In some instances, payment took the form of exchange. Colenso notes, for example, on 2 February 1842 at Otahuhu that: "Natives kindly gave us 3 baskets potatoes I in return gave them some Books."⁵⁸ Indeed, books were Colenso's preferred currency. He mentions on 8 January 1842 that he "distributed some Books, payg. Baggage Bearers with same, much to their satisfaction."⁵⁹ None of these payments or exchanges were mentioned in the published "Journal" article.

In some cases, no guides could be secured for any price Colenso was willing to pay. At Watawata, where different currencies and a variety of traders were circulating, he recorded that

[p]roceedg. thither & landg., I sat down & conversed with natives while the Canoe, (wh. was pointed out & turned over to me) was gettg. ready. They told me they were Missy. Natives & a young man, named Jonah, was to go with me; so I opened my box & gave the Chief a Test. for the loan of the Canoe, at the same time giving about 25 small Books, (Cats. Hymns, Primers, &c) for the party generally. I had occasion to go to the Canoe, in wh. my natives & baggage were, to obtain something, & on my return found, to my great annoyance, that I cod. not have the Canoe! I instantly saw how it was; had I given Tobacco, or Money, or Garments I cod. have had not only that Canoe, but anything besides:—I reasoned but to little purpose: hearg. them say, there was anor. Canoe at hand, & if I pd. for the fetching the same I might have this, I agreed to do so, payg. at the same time, for the draught of cold water I had taken, the Fern wh. had been rooted up for the Canoe, & for some Childn. to go & gather caterpillars from Jonah's crop, who, too, had also found an excuse

to keep him from going—wh. done we left this people, heartily sick of their avariciousness.⁶⁰

This is a rare instance in which Colenso included amounts paid for labour. Although he preferred to pay in Bibles, it is clear he understood that requests for payment in tobacco, money-currency and clothing were, at times at least, more desirable and effective. As an example of “market failure,” where no agreement was reached between Colenso as the buyer and locals as the suppliers, this moment also identifies price variability and some of the high costs associated with cross-cultural field collecting transactions.⁶¹

Both the “Journal” article and the bush journal render similar accounts of Colenso buying a live bird specimen during a chance encounter with an Indigenous traveller: “A little below Ngaruawahie we met a native in a canoe with a live and elegant specimen of the genus *Fulica*. I hailed the man, and purchased the bird, which he had recently snared for a little tobacco.”⁶² In contrast to the bush journal, payment of any kind is rarely mentioned in the published “Journal” article, so its mention in the form of tobacco in this episode suggests the value of the *Fulica* bird as a novel item within the global commodity chain of natural history specimens and that it would have been of special interest to readers of the *Journal*.

Indigenous responses to European intervention, let alone episodes of Indigenous agential resistance, are scarce in colonial archives, but it is important to highlight any archival evidence of structures that assert sovereign Indigenous governance structures and refuse to rescind.⁶³ Almost a decade after the 1841–42 expedition, in a letter dated 17 September 1850 addressed to the Tasmanian botanist Ronald Campbell Gunn, Colenso replied to Gunn’s entreaties for flightless birds. Colenso described how access to Indigenous labour for collecting natural history specimens had changed since his arrival on the islands in 1834. According to Colenso, changes in the availability of Indigenous labour were the direct effect of Indigenous recognition of the use-value of a natural history specimen and its status as a commodity.

Explaining why he could not fulfil Gunn’s request for *Apteryx* specimens, Colenso noted that: “The fact is—the younger Natives do not know *how* to take them,

and the elder ones having but few wants and these fully supplied, do not care to do so.”⁶⁴ In pin-pointing the satisfaction of needs and wants as the reason why Indigenous “elders” would not work for natural history collectors, Colenso identifies a relationship between use-value, labour and the natural history specimen.⁶⁵ Where social needs and wants are already satisfied, the second form of use-value, its social function, is redundant, reducing or removing the appeal of the commodity attached to it. For the “elders,” the redundancy of the use-value of the natural history specimen as commodity permits the pursuant act—the choice to refuse to labour—as an agential resistance strategy, as a possibility for subversion.

A second reference to a natural history labour-shortage in the context of use-value appears further along in the letter. In response to Gunn’s request for moa fossils, Colenso writes: “But really, now that the Natives have such a preposterous idea concerning the transcendent value of every-thing after which a European enquires—which is sure to be connected in their minds with gold—that it is a very difficult matter to get them to procure any specimen, however trivial or common.”⁶⁶ Colenso’s temporal reference to “now” suggests a prior time of relative ease in extracting Indigenous labour, emphasizing a link between present difficulty in exploiting Indigenous labour and an Indigenous resistance based on a recognition of commodified value. Locating gold at the crux of Indigenous understandings of commodity value, Colenso’s ironic criticism that gold has distorted Indigenous understandings of value also reveals his understanding of the use-value of the commonplace natural history specimen, normally worth, according to him in the 1841–42 expedition bush notes, payment in Bibles or, in truly exceptional instances, payment in tobacco or gold.⁶⁷ The price paid to Indigenous collectors for their work obtaining natural history specimens in the field appears to have been linked to how desirable the species may have been to Colenso’s international correspondents in Tasmania, London and elsewhere.

Colenso, like Gunn, was a field collector who received primarily non-monetary payments from the agents he supplied with specimens. In supplying the Hookers at Kew, for example, Colenso typically engaged in a mix of exchange and donation transactions. These transactions were not necessarily based on the market price of any particular, or complete lot of, specimen(s). Rather, a specimen’s value was based on a mix of factors including its scarcity, peculiarity, scientific quality, aesthetic quality,

and/or its educational quality.⁶⁸ Colenso's transactions with Indigenous collectors typically took the form of barter, and more rarely monetary purchase, but he did not earn a wage or financially profit from his work moving natural history commodities along the global supply chain by sending his collections to Gunn and the Hookers. Colenso utilized the scientific books and instruments sent to him by the Hookers in exchange for his specimens, diligently developing his skills in observation and classification. While philosophical botanists may have considered collecting work as secondary manual labour, perhaps Colenso was hoping to be recognized through a lower-status form of primary labour. While Colenso criticises what he claims is a misunderstanding of commodity value on the part of Indigenous people, accurate conceptions of commodity value and Indigenous sociocultural norms informed choices of labour resistance. In this reading, Indigenous labour shortage in the field of natural history collecting is not the result of Indigenous misconception of gold's use-value or a misunderstanding of the use-value of natural history specimens, but rather a consequence of Indigenous actions that undermine European use-value, an act of agential resistance in the form of refusal to participate in natural history collecting.

Colenso's "Shadow" Archive

Tracey Banivanua Mar has explored the extent to which Australia's colonial past was entangled with Indigenous sites of trade and cultural reciprocity, arguing that an Indigenous network of subaltern travellers, as "crew and steerage, as hostages and companions, as servants and hosts," persisted in the "shadow" of imperial networks that themselves frequently followed and extended existing, precolonial Indigenous pathways of mobility.⁶⁹ Unfolding the enmeshed nature of Indigenous mobility in the nineteenth-century Pacific world, one simultaneously marked by autonomy and coercion, in which Indigenous peoples were more than victims but less than free agents, Mar emboldens the significance of the unknown extent of such mobility.⁷⁰

Colenso's archive suggests the existence of a similar "shadow" network of Indigenous intermediaries in the world of nineteenth-century natural history collecting. Colenso's bush journal contains traces of how the Indigenous intermediary network functioned, the forms of acceptable payment for Indigenous natural history labour and a dynamic, complex representation of Indigenous culture in which Indigenous people

collected and used botanical specimens for their own purposes. Colenso recorded more local intermediaries by name in his bush journals compared to his scientific writing, probably in conformity to the norms of scientific publication and his desire for recognition by metropolitan scientific professionals for his contributions to botanical knowledge. A comparison between the bush journal and the “Journal” article describing the 1841–42 expedition shows that Colenso’s revisions conformed to the generic conventions of the natural history travelogue, drawing on an aesthetics of natural history’s discovery value which included a sharp differentiation between primary intellectual labour and secondary manual work. In the bush journal, Indigenous traces reveal something of how the natural history collecting system depended on the exploitation of Indigenous labour. The key point here is that a nuanced analytic approach needs to be developed in order to more fully interpret the dissonances that surface between published accounts as “official” sources and the bush journal as a less official source. In other words, distinguishing between the published account as an “official” source and the bush journal as a less official source reveals how, in critical readings of the colonial archive, “official” sources need to be supplemented with less official ones because it is these less official sources that contain traces of complex “shadow” networks of agency, resistance and autonomy.

In arguing for nuanced critical readings of the colonial archive, my analysis is based on textual sources, investigating colonial bias in Colenso’s archive while staying alert for subtle moments of Indigenous resistance that are revealed through his writings. One potential direction for future research, and aligned with broader arguments for expanding the definition of “the archive,” would be to analyse together textual and non-textual sources, such as the evidence from specimens that Colenso and Indigenous intermediaries collected during the expeditions.⁷¹ Anna Haebich has described the importance of combining textual and non-textual sources in order to re-evaluate the past from the vantage point of the present.⁷² Citing a 2018 international conference in Berlin on the politics of natural history and decolonising museum projects, Haebich described the value of bringing Indigenous custodians and historians into closer conversation to reflect on issues of climate change. Drawing on the field notebooks of professional botanist Johann August Ludwig Preiss written during collecting expeditions in the Colony of Western Australia from 1838 to 1842, Haebich observes that these sources may have important contributions to offer contemporary discussions

of environmental knowledge, without discounting the fact that Preiss's writings suggest he followed the colonial practice of collecting plants without the permission of local, including Nyungar, people. In turn, Haebich describes how her research has led to her involvement with the Healing Land Healing People project, led by Nyungar Elder Darryl Kickett, which aims to bring together "the knowledge of Nyungar families, botanists, historians and artists to restore the biodiversity of the land and community cultural strengths."⁷³ Broadening the archive to include non-textual sources is a key part of decolonisation and archival reconfiguration projects.

In the context of nineteenth-century imperial science, the true scale of interaction between Indigenous knowledge brokers and colonial collectors may never be fully known or evaluated. But uncovering traces of how colonial science used, categorised and surveilled Indigenous knowledge has potential implications for present-day institutions such as natural history museums and botanical gardens whose foundations were forged through colonial practices and knowledge production. One way of responding to contemporary calls to "decolonise" institutions might, for example, include institutional engagement with Indigenous-led projects aimed at the recreation of colonial archives. Perhaps there is now even the will to demonstrate present-day responsibility for how the principles, methods and histories of science as a story-telling practice are accessed and disseminated in ways that elevate the submerged knowledge systems that supported the foundations of such institutions to equal significance.

For correspondence: megan.kuster@ucd.ie.

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Notes

¹ William Colenso, *William Colenso: The early journals: The missionary years, 1834–1853*, ed. Ian St George (Wellington, 2019), 410. I use the term “Indigenous” throughout because not all of the intermediaries who supported Colenso’s expeditions were local; many were travelling from elsewhere. The prejudices and power asymmetries contained within Colenso’s use of the term “native,” and Nikki Hessell’s reminder of the problematic history of that term in Aotearoa New Zealand’s colonial history, informs my choice not to use that term. *Romantic Literature and the Colonised World: Lessons from Indigenous translations* (Cham, Switzerland: Palgrave Macmillan, 2018), 9. Furthermore, the term Māori was not commonly used until after the period of expeditions that are the focus of my essay and different origin terms were and continue to be used to distinguish between different populations. As Linda Tuhiwai Smith has pointed out, different terms emerge from various classification systems that are particular to distinct imperial contexts and describe different relationships and meanings between and within specific groups. *Decolonizing Methodologies: Research and Indigenous peoples* (London: Zed Books, 1999), 6. I am aware that the term “Indigenous” is itself problematic, not least because it appears to unify many different populations whose experiences under colonialism were distinct and suggests an authenticity even though, as Zoë Laidlaw and Alan Lester have reminded, just as in settler society where there is no “pure” British identity so too in a colonized world, there is no authentic Indigenous identity. *Indigenous Communities and Settler Colonialism: Land holding, loss and survival in an interconnected world* (Basingstoke: Palgrave Macmillan, 2015), 4. My interest here in the local, regional and global connections that underpinned the movement of natural history specimens around the world in the nineteenth century combines, like Kate Fullagar and Michael McDonnell’s comparative Indigenous history of empire, present-day and historical understandings of who counted as Indigenous in the time period I am most concerned with here, namely the first half of the nineteenth century and, more particularly, the 1840s. *Facing Empire: Indigenous experiences in a revolutionary age* (Baltimore: Johns Hopkins University Press, 2018), 8.

² William Colenso, “Journal of a Naturalist in Some Little Known Parts of New Zealand,” *The London Journal of Botany* 3 (1844): 1–62. On the imperial travelogue:

Mary Louise Pratt, *Imperial Eyes: Travel writing and transculturation* (Abingdon: Routledge, 1992).

³ On the professionalisation of natural history: Jim Endersby, *Imperial Nature: Joseph Hooker and the practices of Victorian science* (Chicago: University of Chicago Press, 2008), 21–26.

⁴ On the various agents and pathways comprising the supply chain of the global nineteenth-century natural history trade see: Anne Coote, Alison Haynes, Jude Philp and Simon Ville, “When Commerce, Science, and Leisure Collaborated: The nineteenth-century global trade boom in natural history collections,” *Journal of Global History* 12/3 (2017): 319–39. I draw on the concept of commodity chains in this essay because I am interested in the labour networks and production processes that transformed the nonhuman natural object into a scientific specimen.

Consideration of natural history commodities as display and/or educational specimens is beyond the scope of this essay.

⁵ “The Politics of Citation: Is the peer review process biased against Indigenous academics?” *CBC Radio*, 23 February 2018. Accessed 27 February 2020. <https://www.cbc.ca/radio/unreserved/decolonizing-the-classroom-is-there-space-for-indigenous-knowledge-in-academia-1.4544984/the-politics-of-citation-is-the-peer-review-process-biased-against-indigenous-academics-1.4547468>. On the politics of citation: Sarah Ahmed, “Making Feminist Points,” *Feminist Killjoys*. 11 September 2013. Accessed 27 February 2020. <http://feministkilljoys.com/2013/09/11/making-feminist-points/>.

⁶ On the aesthetics of “discovery”: Lynn Festa, “Global Commerce in Raynal’s *Histoire des deux Indes*,” in *Sentimental Figures of Empire in Eighteenth-Century Britain and France* (Baltimore: The Johns Hopkins University Press, 2006), 205–32.

⁷ Intan Suwandi, *Value Chains: The new economic imperialism* (New York: Monthly Review Press, 2019).

⁸ On nineteenth-century political economy and colonial labour: Onur Ulas Ince, *Colonial Capitalism and the Dilemmas of Liberalism* (Oxford: Oxford University Press, 2018).

⁹ On the biopolitics of imperialist expansion: Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge: Cambridge University Press, 1986); on the colonial, global origins of environmentalism: Richard Grove, *Green Imperialism: Colonial expansion, tropical island Edens and the origins of*

environmentalism, 1600–1860 (Cambridge: Cambridge University Press, 1995); on economic botany: Lucile Brockway, *Science and Colonial Expansion: The role of the British Royal Botanic Gardens* (New York: Academic Press, 1979); Richard Drayton, *Nature's Government: Science, imperial Britain, and the "improvement" of the world* (New Haven: Yale University Press, 2000); on natural history projects, colonial environments and imperial networks: Timothy Barnard, *Nature's Colony: Empire, nation and environment in the Singapore Botanic Gardens* (Singapore: National University of Singapore, 2016); Brett Bennett and Joseph Hodge, eds., *Science and Empire: Knowledge and networks of science across the British Empire, 1800–1970* (Basingstoke: Palgrave Macmillan, 2011); on New Biography approaches: Lisbet Koerner, *Linnaeus: Nature and nation* (Cambridge: Harvard University Press, 1999).

¹⁰ Pratt, *Imperial Eyes*.

¹¹ Pratt, *Imperial Eyes*, 51.

¹² James Beattie, Edward Melillo and Emily O’Gorman eds., *Eco-Cultural Networks and the British Empire: New views on environmental history* (London: Bloomsbury, 2015); James Beattie, Edward Melillo and Emily O’Gorman, “Rethinking the British Empire through Eco-Cultural Networks: Materialist-cultural environmental history, relational connections & agency,” *Environment and History* 20/4 (2014): 561–75.

¹³ Coote et al., “When Commerce, Science, and Leisure Collaborated.” On nineteenth-century natural history collecting, science and imperialism see especially John MacKenzie, *Museums and Empire: Natural history, human cultures, and colonial identities* (Manchester: Manchester University Press, 2009), and Endersby, *Imperial Nature* (Chicago: University of Chicago Press, 2008).

¹⁴ Simon Ville, Claire Wright and Jude Philp, “Macleay’s Choice: Transacting the natural history trade in the nineteenth century,” *Journal of the History of Biology* 53/3 (2020): 345–75.

¹⁵ See, however, Susan Scott Parrish, *American Curiosity: Cultures of natural history in the colonial British Atlantic world* (Chapel Hill: University of North Carolina Press, 2006); and James Beattie, *Empire and Environmental Anxiety: Health, science, art and conservation in South Asia and Australasia, 1800–1920* (Basingstoke: Palgrave Macmillan, 2011). Parrish and Beattie gesture towards the archival silences of Indigenous participation in the making of natural history knowledge but it is neither’s project to dwell on the limitations and possibilities of using the colonial archive to interpret these absences.

¹⁶ Dane Kennedy, *The Last Blank Spaces: Exploring Africa and Australia* (Cambridge, Mass.: Harvard University Press, 2013); Shino Konishi, Maria Nugent and Tiffany Shellam, eds., *Indigenous Intermediaries: New perspectives on exploration archives* (Canberra: Australian National University Press, 2015); Tiffany Shellam, Maria Nugent, Shino Konishi and Allison Cadzow, eds., *Brokers and Boundaries: Colonial exploration in Indigenous territory* (Canberra: Australian National University Press, 2016).

¹⁷ Felix Driver, "Intermediaries and the Archive of Exploration," in *Indigenous Intermediaries*, edited by Shino Konishi, Maria Nugent and Tiffany Shellam (Canberra: Australian National University Press, 2015), 15; Maria Nugent, "Jacky Jacky and the Politics of Aboriginal Testimony," in *Indigenous Intermediaries*, eds. Shino Konishi, Maria Nugent and Tiffany Shellam (Canberra: Australian National University Press, 2015), 67–84.

¹⁸ For very recent work that engages critical methodological approaches to colonial archives and makes arguments about reclaiming Indigenous stories: Tiffany Shellam, *Meeting the Waylo: Aboriginal encounters in the Archipelago* (Crawley: University of Western Australia Publishing, 2020).

¹⁹ This theory of justice follows the capabilities approach: Amartya Sen, *Commodities and Capabilities* (Amsterdam: North-Holland, 1985); Amartya Sen, *Development as Freedom* (Oxford: Oxford University Press, 1999); Martha Nussbaum, *Creating Capabilities: The human development approach* (Cambridge, Mass.: Harvard University Press, 2011).

²⁰ Ann Laura Stoler, "Colonial Archives and the Arts of Governance," *Archival Science* 2/1-2 (2002): 87–109.

²¹ Lynette Russell, "Indigenous Knowledge and Archives: Accessing hidden history and understandings," *Australian Academic and Research Libraries* 36/2 (2005): 161–71.

²² Kate Fullagar, *The Warrior, the Voyager, and the Artist: Three lives in an age of empire* (New Haven: Yale University Press, 2020), 9–13; Driver, "Intermediaries and the Archive of Exploration," 11–29; Tracey Banivanua Mar, "Shadowing Imperial Networks: Indigenous mobility and Australia's Pacific past," *Australian Historical Studies* 46/3 (2015): 340–55; Alice Te Punga Somerville, "Living on New Zealand Street: Māori presence in Parramatta," *Ethnohistory* 61/4 (2014): 655–69.

²³ Nugent, "Jacky," 67.

- ²⁴ Nugent, “Jacky,” 79.
- ²⁵ Driver, “Intermediaries and the Archive of Exploration,” 17.
- ²⁶ Helen Freshwater, “The Allure of the Archive,” *Poetics Today* 24/4 (2003): 729–58.
- ²⁷ Fullagar, *The Warrior, the Voyager, and the Artist*, 12.
- ²⁸ Russell, “Indigenous Knowledge and Archives,” 161.
- ²⁹ For a dynamic overview of the field of Indigenous Studies as constructed by leading, multidisciplinary scholars: Chris Andersen and Jean M. O’Brien, eds., *Sources and Methods in Indigenous Studies* (Abingdon: Routledge, 2017).
- ³⁰ Russell, “Indigenous Knowledge and Archives,” 170.
- ³¹ Russell, “Indigenous Knowledge and Archives,” 161–71; Ashley Glassburn Falzetti, “Archival Absence: The burden of history,” *Settler Colonial Studies* 5/2 (2015): 128–44.
- ³² Carolyn Hamilton, Verne Harris and Graeme Reid, “Introduction,” in *Refiguring the Archive*, edited by Carolyn Hamilton, Verne Harris, Jane Taylor, Michele Pickover, Graeme Reid and Razia Saleh (Dordrecht: Kluwer, 2002), 10.
- ³³ A majority of Colenso’s papers are located in the National Library of New Zealand (Alexander Turnbull Library); the State Library of New South Wales (Mitchell Library); the National Library of Australia; the Royal Botanic Gardens, Kew, Library and Archives; the Auckland Central City Library; Puke Ariki Heritage Collections; and the Museum of New Zealand / Te Papa Tongarewa. Any scholar working on Colenso is indebted to Sydney Shep and Ian St George, who have done much to increase the accessibility of his archive. In writing this essay, I have benefitted from Ian St George’s transcriptions of Colenso’s journals, letters and publications (<http://colensoandtherepublicofletters.weebly.com/data.html>) as well as the William Colenso data and bibliography compiled by The Colenso Project (<https://www.zotero.org/groups/62194/colenso/library>).
- ³⁴ Freshwater, “Allure of the Archive,” 731.
- ³⁵ Colenso, “Journal,” 3.
- ³⁶ William Colenso, *Colenso’s Collections: Including the unpublished work of the late Bruce Hamlin on William Colenso’s New Zealand plants held at Te Papa*, ed. Ian St George (Wellington: New Zealand Native Orchid Group, 2009), 397.
- ³⁷ Endersby, *Imperial Nature*, 84–111.

- ³⁸ In a letter to J.D. Hooker, 23 February 1855, Colenso claimed he had more than 4,500 books: Colenso, *Colenso's Collections*, 306.
- ³⁹ On nineteenth-century global natural history trade pathways: Coote et al., “When Commerce, Science, and Leisure Collaborated”; on transaction costs and prices in the context of the trade: Ville, Wright and Philp, “Macleay’s Choice.”
- ⁴⁰ On Kew’s Museum of Economic Botany (founded in 1847) as a conduit for specimens: Caroline Cornish and Felix Driver, “‘Specimens Distributed’: The circulation of objects from Kew’s Museum of Economic Botany, 1847–1914,” *Journal of the History of Collections* 32/2 (2020): 327–40.
- ⁴¹ Colenso, *Colenso's Collections*, 4.
- ⁴² Colenso, *Colenso's Collections*, 402.
- ⁴³ Colenso, “Journal,” 11, 26.
- ⁴⁴ Endersby, *Imperial Nature*, 41.
- ⁴⁵ On scholarly status and subfields of natural history study: Anne Secord, “Corresponding Interests—Artisans and gentlemen in nineteenth-century natural history,” *British Journal of the History of Science* 27/94.4 (1994): 383–408; Endersby, *Imperial Nature*, 41–42.
- ⁴⁶ Endersby, *Imperial Nature*, 68–69.
- ⁴⁷ Endersby, *Imperial Nature*, 18; Driver, “Intermediaries and the Archive of Exploration,” 11–29. Bruno Latour’s concept of “immutable mobiles” helps to illuminate a relationship between natural history specimens and the colonial periphery and imperial metropole in the context of labour and the construction of scientific knowledge: David Jones, “In Conversation with Bruno Latour: Historiography of *Science in Action*,” Massachusetts Institute of Technology (Fall 2005): 15–18. Accessed 16 June 2020. <https://dspace.mit.edu/bitstream/handle/1721.1/103818/sts-310-fall-2005/contents/assignments/paper2.pdf>.
- ⁴⁸ Endersby, *Imperial Nature*, 59–81.
- ⁴⁹ Endersby, *Imperial Nature*, 41–42, 45, 233, 236.
- ⁵⁰ “Botanical Information,” *Journal of Botany* 1 (1842): 298–305; W.J. Hooker, “Notes on the Botany of H.M. Discovery Ships *Erebus* and *Terror* in the Antarctic Voyage,” *Journal of Botany* 2 (1843): 272.
- ⁵¹ Pratt, *Imperial Eyes*, 75.
- ⁵² Colenso, “Journal,” 34.
- ⁵³ Colenso, *Early Journals*, 375–76.

⁵⁴ Colenso, “Journal,” 15, 21, 46, 58.

⁵⁵ The bush journal suggests it was consistently difficult for Colenso to engage and retain local guides, challenges the “Journal” article largely passes over: Colenso, *Early Journals*, 366, 374, 403–4, 408.

⁵⁶ Colenso, *Early Journals*, 441.

⁵⁷ Colenso, *Early Journals*, 418.

⁵⁸ Colenso, *Early Journals*, 424.

⁵⁹ Colenso, *Early Journals*, 404. Also see episode at Kaupapa Mission Station: Colenso, *Early Journals*, 361.

⁶⁰ Colenso, *Early Journals*, 419–20. Colenso’s price was also rejected at Omokoiti: Colenso, *Early Journals*, 429.

⁶¹ Ville, Wright and Philp, “Macleay’s Choice,” 366.

⁶² Colenso, “Journal,” 53–54; Colenso, *Early Journals*, 420.

⁶³ On the politics of refusal: Audre Simpson, *Mohawk Interruptus: Political life across the borders of settler states* (Durham: Duke University Press, 2014).

⁶⁴ Colenso, *Early Letters*, 113. The generational difference in knowledge and desire maybe be read as evidence of colonisation and how the British Empire’s money-worlds affected Indigenous behaviour.

⁶⁵ On the two forms of money’s use-value, as both a commodity and in relation to its social functions, see Karl Marx, *Capital*, trans. Ben Fowkes, vol. 1 (London: Penguin, 1976), 184–85.

⁶⁶ Colenso, *Early Letters*, 113.

⁶⁷ In a letter to W.J. Hooker, 7 March 1844, Colenso noted that he had tried in vain, offering gold to Indigenous intermediaries, to obtain tawitirahi: Colenso, *Colenso’s Collections*, 179.

⁶⁸ For a detailed discussion of a range of transaction costs and price formation mechanisms in a case study of nineteenth-century, Sydney-based private collector William John Macleay see: Ville, Wright and Philp, “Macleay’s Choice,” 345–75.

⁶⁹ Mar, “Shadowing Imperial Networks,” 355.

⁷⁰ Mar, “Shadowing Imperial Networks,” 354.

⁷¹ Such a project would benefit from starting with Ian St George’s *Colenso’s Collections* (Wellington: The New Zealand Native Orchid Group Inc, 2009). That volume, based on work begun by Bruce Hamlin, details Colenso’s herbarium,

specimen collection locations and lists of plants Colenso sent to the Royal Botanic Gardens, Kew.

⁷² Anna Haebich, “Fever in the Archive,” *Thesis Eleven* 135/1 (2016): 92, 95.

⁷³ Anna Haebich, “Negotiating Botanical Collections: Dr Johann Preiss in Germany and Western Australia,” *Griffith Review* 69 (2020): 121–28.