Flora Tasmaniae: Tasmanian Naturalists and Imperial Botany, 1829-1860

Eleanor Catherine Cave BA (Hons) BSc

Submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy

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Abstract

This thesis examines the practices of botanical collectors in nineteenth-century Van Diemen’s Land, their involvement in the Flora Tasmaniae and their contribution to broader scientific debates. When Joseph Hooker wrote his introductory essay on the Australian flora for Flora Tasmaniae in 1859, it was the first published case study supporting Charles Darwin’s theory of natural selection. Much of Hooker’s evidence for his essay was based on plant material collected by self-trained resident naturalists of Van Diemen's Land, including Robert Lawrence, Ronald Gunn and William Archer. In recent years Darwin, Hooker and their contemporaries have been thoroughly examined, but as yet there has been little concentration upon the colonial collectors who contributed to their research.

Instead of a centre-periphery study, this thesis provides a periphery-centre focus, exploring the role of the colonial naturalists, their contribution to the development of scientific knowledge, and the realities of operating as naturalists in the Antipodes. This thesis argues that resident colonial collectors in Van Diemen's Land made a significant contribution to botanical science during a time of taxonomic and classificatory flux.

By using correspondence, journals, plant specimens and collecting notes this thesis examines one facet of a larger imperial movement. Analysis of these sources demonstrates the nuances of the colonial scientific experience, how knowledge was gained, how contacts and friendships were made and sustained, and what sort of work self-trained enthusiasts undertook. Numerous men and women contributed to a broad discussion on the native flora and fauna, including
landed gentlemen, medical men, public servants and convicted criminals. As the *Flora* grew from their efforts, colonists questioned the source of power in the scientific world. This thesis discusses these changing tensions, and how those with a deeper local understanding balanced their colonial knowledge with the views of those in the metropole.
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**Figure 1** Tasmanian native plants by Willliam Buelow Gould. Clockwise from top left: *Banksia marginata; Lomatia tinctoria; Dianella tasmanica, Dodonaea viscosa*. QVMAG WBG 37, 61, 95 and 103.
‘To New Holland we export criminals for our convenience and safety, and from thence import furs for our covering and flowers for our amusement. So far the balance of trade is in our favour.’

Henry Andrews, *The Botanist’s Repository* 9 (1809), t. DLXIX.

Henry Andrews tongue in cheek remark captured the contemporary British view of Australia at the beginning of the nineteenth century. The colony promised to be a source of botanical and zoological novelties, and a sink for society’s ‘undesirables’. James Lee was one such undesirable. Transported to Van Diemen’s Land for fourteen years for stealing a box of tools, he had previously spent six months in prison for breaking into a green house. Lee was a Londoner in his early twenties, a man who when asked his trade at the docks in Hobart Town in the early Autumn of 1835, described himself as a ‘Gentleman’s Servant’ who ‘understands Stuffing Birds & Beasts’.¹ It was this latter comment that brought Lee to the attention of the Superintendent of the Prisoner’s Barracks, William Gunn.

William’s younger brother Ronald was the superintendent of convicts in Launceston. Between them, they kept an eye out for new arrivals with particularly interesting skills. Lee’s training as a taxidermist ensured he was quickly assigned to Ronald, who had a passion for natural history. Although an aspiring botanist, Gunn’s correspondent in Glasgow, Professor William Hooker, had requested bird skins and insect specimens a few years earlier. For the next five years Lee lived with Gunn and his family, preparing birds, mammals and plants under Gunn’s

¹ James Lee Appropriation List, AOT CSO1/1/788 16831.
direction. During this time Gunn dispatched boxes of botanical and zoological specimens to some of the great societies in Britain including the British Museum, the London Zoological Society, the Linnean Society of London and the Royal College of Surgeons. Other specimens were sent to William Hooker and the ornithologist John Gould, and examples of Lee’s plant specimens remain today in the Tasmanian Herbarium.

When Lee was not preparing specimens to be sent overseas, Gunn kept him busy with taxidermy for the local colonial societies. Lee’s other capacity as a gentleman’s servant did not go unnoticed, as he attended to Gunn and his children as they moved about the colony. Although Lee was compelled to work for Gunn as both servant and bird stuffer, he was a man who enjoyed his vocation. After he had received his ticket of leave, he continued to work for the local scientific societies and maintained correspondence with his old master.

James Lee does not fit any established ‘type’ of natural history collector. He was an expert displaced from his home, a convicted felon and an assigned servant. He was the criminal exported for the safety of Britain, who upon reaching the colony prepared furs and flowers for a London audience, precisely in the mode suggested by Henry Andrews’ snide gibe.

This thesis aims to shed new light upon the practice of colonial science, and the changing relationship between centre and periphery, colony and metropole. By following the experiences of people like Gunn and Lee, it examines the process by which men like Hooker worked to recruit and shape colonial natural history practices.
In James Secord’s 1983 article ‘Natural History in Depth’, he discussed the need for a more intensive study of the global community of naturalists. He noted the lack of a notion of a natural history community and that ‘individuals prove difficult to locate within coherent intellectual and social traditions.’ In the intervening years, the community Secord was looking for has largely been identified. In particular there has been a great deal of work on what Secord referred to as the ‘grand metropolitan savants who controlled the learned societies’.

Other works, however, have attempted to trace corresponding networks beyond the shores of Britain. This thesis seeks to contribute to this literature, adding to the discussion of colonial scientific communities. It is informed by ideas of centre/periphery as well as the larger body of work on science and empire, methodologically taking its cue from the study of correspondence, and previous research on Australian scientific practices.

The concept of ‘centre and periphery’ has been used frequently in the history of science, although these terms can appear as an undefined and vague way of writing the less academic sounding ‘us and them’. A centre is often determined geographically, as an area that is socially, culturally, politically or

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economically dominant over another subservient location – the periphery. Jonathan Topham further reinforced the concept of separateness and space inherent in centre/periphery discussions, arguing that the periphery is viewed at a distance from ‘a central zone in which authority is invested’. Recently Gavroglu et al. as part of the Science and Technology in the European Periphery (STEP) research network redefined the concept of centre and periphery in a European context, stressing the concept as a dynamic one, and not a static dipole of cause and effect. Further, it has been argued that studying the transmission of ideas from the active centre to a ‘passive’ periphery is too simplistic, and it is more informative to examine how those on the peripheries appropriated ideas from the centre.

This concept of a dynamic relationship between the centre and the periphery has been explored in some recent publications. In *Imperial Nature*, Jim Endersby described how the location and definition of the British Empire’s centre and periphery were in flux during the nineteenth century. He instead used terms such as ‘colonial’ and ‘metropole’ to convey a differentiation between historical actors. He believed the relationship between the two could be most usefully measured in compliance/non compliance, and the power of a colonist to choose what aspects of metropolitan science they adopted.

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Susan Scott Parrish engaged with the Atlantic world in *American Curiosity*, noting that by the eighteenth century the concept of who was the centre and who the periphery ‘flip-flopped about’ with deference shifting according to need. If a colonial wanted admittance to a London scientific society they would be the deferential periphery. But when a Londoner wanted specific items to add their collections, they became the periphery.8

I find both Endersby and Parrish’s approaches useful for a wider discussion of colonial and metropolitan science. Although the terms of ‘centre’ and ‘periphery’ may be careworn and sometimes misused, they are still terms of immense value in capturing the sense of two (or more) separate interacting spheres. Once it is understood that one does not outweigh the other, nor does either exist in isolation from the other, we can use these terms in a useful manner.

In this thesis I wish to take these ideas further, exploring what happens when the naturalists from the centre travel to the periphery and vice versa, or when the periphery appropriates ideas from the centre.

The broader literature on the scientific expansion of the British Empire often embraces the definition of centre and periphery. Many excellent works have explored how empire and science developed in parallel, each impacting upon the other.9 They discuss institutions such as Kew Gardens and the British Museum

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and the people that made them, including Joseph Banks, Robert Brown, William Hooker and Joseph Hooker. Examining their correspondence with like-minded enthusiasts in the far-flung corners of Empire, it is possible to explore the complex relationship between the European centre and what can too easily be dismissed as a diffuse, shapeless colonial periphery.¹⁰

James E. McClellan broadened this discussion of science and colonialism beyond Britain with his case study of the French West Indian colony of Saint Domingue. He described science and colonialism to be a ‘Janus-like topic’, with scientific study facilitating colonial development on one side, and the colonial experience affecting this same study and enterprise on the other. McClellan argued that not only were science and empire connected, they were dynamically interlinked, concluding that science and medicine were integral elements of the colonising process.¹¹

In order to further our understanding of the relationships between geographically distant naturalists, David Phillip Miller proposed a dynamic model based upon Latour’s ‘centres of calculation’, where every participant in a corresponding and collecting cycle was dependent upon the other, regardless of

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location or social status.\textsuperscript{12} Anne Secord found this model useful for understanding relationships spanning a geographical distance, but it risked being concerned for the most part with the centre rather than periphery, and therefore could not explain the full range of natural history relationships in the nineteenth century.\textsuperscript{13}

Secord proposed using Susan Leigh Star and James R. Griesemer’s concept of different intersecting social worlds interacting through scientific items or ‘boundary objects’, each historical actor ‘translating’ the item as it best suited them.\textsuperscript{14} A boundary object could be a physical thing like a plant specimen, or it could be more abstract, such as a newly published plant name. This model provides the flexibility for participants to attribute a different value or meaning to an item from others in the network, whilst not rating the participation of one person as worth more than another in the relationship. It also allows the role of non-scientists to be considered and discussed as part of a larger scientific network, where previously their participation might have been discounted or omitted. Jim Endersby has added that the relationships formed around boundary objects are not the only social interactions that are worthy of exploration, finding in New South Wales relationships were also formed around barter, gift-exchange and


patronage. James Secord highlighted this trend to refocus around ‘practices of entanglement’, but added that on its own it was not enough, calling for further focus on the circulation of knowledge and the search for patterns in the circulation of material objects (letters, specimens, scientific instruments and so on).

During the past three years there has been resurgence in the popularity of science and natural history, in part buoyed by celebrations of the sesquicentennial anniversary of the publication of On the Origin of Species. Aside from discussing Darwin, such works encompassed his colleagues and followers such as Alfred Russel Wallace, Joseph Hooker and Thomas Huxley. These publications show the wide audience for the history of science and have been joined by an increasing number of more popular publications on natural history. Although enriching the field, these books tend to focus upon succinct spaces in the history

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17 The proliferation of popular books discussing the history of science and the history of natural history over the past decade has been discussed by David Philip Miller, ‘The “Sobel Effect”: The Amazing Tale of How Multitudes of Popular Writers Pinched All the Best Stories in the History of Science and Became Rich and Famous while Historians Languished in Accustomed Poverty and Obscurity, and how this Transformed the World. A Reflection on a Publishing Phenomenon’, Metascience 11 (2002), pp. 185-200. The sesquicentenary did not create the upsurge in popular scientific works, but it did inflate a little bubble of works on Darwin and his contemporaries.
of science, or upon ‘significant’ contributors to the field, reinforcing – perhaps unwittingly – the assumption that the centre is superior to the periphery.

To understand these ideas of centre/periphery, empire and science and the circulation of knowledge through historic objects, I have found it useful to use Tony Ballantyne’s concept of webs of empire. He used the image of the web as a means to avoid falling into the idea of a colonial/metropole dipole, allowing multiple positions and relationships to be upheld by a colony, community or individual at any one time.\textsuperscript{20} This removes a simple inward or outward focussed history, and replaces it with a flowing, multi-intersecting model. In this way colonial actors are not only regarded as vehicles to send material to the centre, but are part of a larger dynamic network. No longer are contributors lumped into an amorphous mass of a distant periphery, but begin to be recognised as individuals each operating within their own sphere of influences, drivers and knowledge.

In some cases it is only the activity and relationships of the peripherals with the centre that are regarded as useful to scientific history. The concept of intra-colonial activity as being an equally important topic of study is somewhat of a novelty, but was a crucial component of a correspondent’s scientific practice. By examining the documents of people with a correspondence network in their own right, we can glimpse how people participated in natural history between colonies and within communities. The number of people forming a loose community of plant collectors in nineteenth century Australia is difficult to ascertain, although there has been a steady revision upwards of the numbers of people involved.

\textsuperscript{20} T. Ballantyne, \textit{Between Colonialism and Diaspora: Sikh Cultural Formations in an Imperial World} (Durham, 2006), pp. 30-31.
One method employed by historians wanting to examine scientific
networks, the creation of theories and the complexity of relationships has been to
deply immerse themselves in the correspondence and manuscripts of naturalists.
Janet Browne’s exemplary work on Charles Darwin – and the ongoing Darwin
correspondence project – is perhaps the best example of this.21 Rather than
focussing primarily upon major discoveries in the history of science, this method
explores the layers underlying such research, and how new theories were
developed. Building upon this Latourian concept the idea is that this approach will
provide a richer understanding of the creation of scientific ideas by examining the
minutiae of practicing natural historians.22 There are fewer large-scale published
works dedicated to the correspondence of Antipodean naturalists, but the quality
and scope of works by Ducker, Roderick, and Home et al. from the Mueller
Correspondence Project show that there is a great potential for growth in this form
of research in Australia.23 Other excellent studies that focus upon certain aspects

of Place (London, 2002); www.darwinproject.ac.uk. Darwin is not the only person to have a
focussed online presence, http://linnaeus.c18.net/ has made all the Linnaean letters accessible
online, with the Linnean Society of London adding the Linnean Society Collections Online,
creating a digital archive of the Society’s collections including botanical and zoological
specimens. Kew Gardens is in the process of digitising its director’s correspondence as part of the
JSTOR Plant Science Website, http://plants.jstor.org/ This site includes the largest digitised
collection of plant type specimens from around the world, currently containing 600,000
specimens, the project estimates by completion to have included 2.2 million. Aside from the
specimens are copies of published research articles, the Kew correspondence and paintings and
photographs.

22 Aside from Browne, other notable works based upon a detailed analysis of an Englishman’s
correspondence includes: A. Desmond and J. Moore, Darwin: The Life of a Tormented
Evolutionist (New York, 1991); A. Desmond, Huxley: The Devil’s Disciple (New York, 1994); A.
Desmond, Huxley: Evolution’s Highest Priest (London, 1997); and Endersby, Imperial Nature.

23 Mueller was a prolific writer, perhaps only matched by Allan Cunningham. Currently there is no
comprehensive publication of the Cunningham correspondence and journals. S. Ducker, The
Contented Botanist: Letters of W.H. Harvey about Australia and the Pacific (Melbourne, 1988); C.
Roderick, Leichhardt, the Dauntless Explorer (North Ryde NSW, 1988); R. Brown, Nature’s
Investigator: The Diary of Robert Brown in Australia, 1801-1805, eds. T.G. Vallance, D.T. Moore
Voigt and M. Wells, eds., Regardfully Yours: Selected Correspondence of Ferdinand von Mueller,
of Australian naturalists and their source materials include Burns and Skemp’s *Van Diemen’s Land Correspondents* and Davis’s *Early Tasmanian Ornithology.*

Whilst these make a valuable contribution, they are limited in scope to a relatively small collection of archival sources.

There has been extensive discussion on the development of scientific discourse during the nineteenth century in Australia. Work such as Finney’s *Paradise Revealed* show the richness of scientific communication in the early colonies, and the contributors to Rod Home’s edited volume, *Australian Science in the Making* provides a wealth of information on other facets of the colonial scientific experience. The history of indigenous plant knowledge has recently been illuminated in Philip Clarke’s *Aboriginal Plant Collectors,* although huge
scope remains in this area. There are many other works that tend to offer either distinct geographical histories or more sweeping accounts of people and places. For a close botanical study, geographical limits may be necessary for clarity, but many of the works in this area are generalist studies, unable to examine the detail of scientific practice or the complexity of personal relationships.

In tandem with historians, Australian botanists have produced work on the development of science in the colonies, often focusing upon plant collectors themselves or specific collecting trips. Contributions to Phillip Short’s edited History of Systematic Botany in Australia include articles on herbaria and botanical art, but largely consist of articles about botanists and botanical collectors. While tending to be more factual and less analytical, these and other works written by botanists can be of immense use when closing the gap between the disciplines of botany and history.

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26 Bill Gammage has recently made a significant contribution to this literature in The Biggest Estate on Earth (Sydney, 2011), in which he discusses the complexity of Aboriginal land management across the Australian continent, and how much the landscape has changed since the arrival of Europeans in 1788.


Botanical collecting was a popular pastime and herbarium specimen sheets can be used to locate participants. For example, Ray Desmond’s *Dictionary of British and Irish Botanists* from 1977 lists scores of botanists, collectors and artists from Britain who worked in Australia. In 1999 Tony Orchard produced a biographical listing of 216 people whose names appeared as botanists, collectors, or early voyagers in descriptions of Australian plants names to the present day. Perhaps of greater interest is the list recently compiled by Alex George of approximately 2,660 people whose names have appeared on herbarium specimens of Australian plants collected before 1900. By using information from specimen sheets George has widened the meaning of collector to its broadest possible definition, this figure including many who would otherwise not be recognised by botanical history, including Aborigines, women and convicts. By examining the collections themselves in tandem with textual sources it is possible to gain a closer idea of who made contributions. George’s work is not definitive, however, as some collectors found on specimens remain known only by initials. As research continues, the number of recognised plant collectors in Australian botany is set to increase.

In this thesis I bring the colony and metropole together by focussing on the process by which botanical knowledge was amassed through a series of interlinked collecting exchanges. In doing so I will focus upon a small group of colonial collectors of natural history whose primary interest was botany. These

32 A.S. George, *Australian Botanist’s Companion* (Kardinya WA, 2009), pp. 259-610. George helpfully includes a chronological list here as well.
33 Buchanan has noted several cases like this in *Collecting Localities*, pp. 39-45.
people contributed to global scientific knowledge and corresponded with the scientific elite including Robert Brown, William and Joseph Hooker, Richard Owen, William Harvey and John Lindley. The aim of this thesis is to use an analysis of metropolitan and colonial collecting networks as a means of exploring the relationship between naturalists on intra- and inter-colonial levels.

Nineteenth century Van Diemen’s Land forms the temporal and geographical skeleton for my dissertation for several reasons. Being settled at the opening of the nineteenth century (1803), it was established as a colony at the beginning of a new era of British imperial science. By the early nineteenth century a set of established scientific techniques, collecting procedures and preservation methods had developed, although debates over classification systems continued. This knowledge allowed natural historians to step into Australia as if stepping into a laboratory. Indeed, collecting methodology for most biological specimens remains the same today as it was in 1803, it being the transport and analysis of specimens that has changed. Plants are still pressed in the field between sheets of paper and card, sandwiched by pieces of plywood and encircled with adjustable straps. The straps today may be man-made fibre with plastic clips rather than leather with metal buckles, but the working principles remain the same.

As botanical laboratories went, Van Diemen’s Land was a particularly appealing destination. At approximately 64,000 square kilometres, it was geographically manageable as a natural history sampling site. Its climate was mild, there were fewer environmental hazards to be met with in the field compared to tropical locations, and it sported a wealth of new specimens, some unique from New Holland. With such features, it is not difficult to imagine that by
the 1820s William Hooker looked to Van Diemen’s Land as an ideal site to target a concentrated collecting effort. Accordingly he (and later his son Joseph), encouraged colonists to collect everything they found. Theoretically on an island of this size, it was possible to catalogue the entire flora and therefore capture an overview of a temperate Pacific environment.

Van Diemen’s Land presents similar advantages for the historian, as the relatively small population makes it easier to understand the intricacies of the island’s scientific network, and their connections with scientists in Britain and other colonies. These collectors created an active colonial scientific community of their own, producing the first comprehensive scientific journal in Australia and establishing the first Royal Society outside of Britain.

Methodology and discussion of sources

The history of botanical science is generally approached from either a historical viewpoint, or a scientific perspective. As a result authors from different backgrounds tend to give weight to their discipline’s preferred source materials. Thus while botanists focus upon databases of herbarium specimens, historians tend to overlook the likes of collecting lists, focussing instead upon more traditional archival sources such as manuscripts, diaries, letters, and articles published in contemporary scientific journals. As a result, the plant specimens themselves (and any documentation associated with them) are often overlooked.

Many natural histories leave the items that were at the heart of the collecting endeavour in the shadows. Botanists writing history tend to focus upon different themes than historians. Peter Stevens, for example, has written in great
technical detail of taxonomic precedence, systems of classification and species limitations, rather than the social effects of scientific theory. Closer to this study, Alex Buchanan used the collecting locations on Gunn’s herbarium specimens to map his movements across the Tasmanian landscape. This provides a far more detailed analysis of Gunn’s movements than could be ascertained using his letters and other manuscripts.

Although this is a historical rather than a botanical study, I have endeavoured to include botanical specimens in my research and use them as a historical primary source in their own right. This is expressed in each chapter by the inclusion of case studies of Tasmanian native plants, each selected for its scientific and historic importance, along with some plants considered Tasmanian icons such as the Huon pine (*Lagarostrobos franklinii*), or deciduous beech (*Nothofagus gunnii*).

This study has also made use of a wealth of manuscript material, including correspondence, journals and other collecting notes available for Lawrence, Gunn and Archer. Unfortunately there are scant Gunn papers that are truly personal such as a diary, inadvertently making him appear stiffer and more serious than his counterparts. Aside from these written sources, I examined collecting lists and notes, species checklists, and botanical inventories, all being uncommon sources in standard historical research. These lists can become even more enlightening

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when cross referenced with herbarium specimens – sometimes even linking the object back to its original collecting notes. A large amount of information can be gleaned from a specimen sheet which can provide specific details of who the collector was, the collection date, location, and collecting sequence.

Other information can be ascertained from a herbarium sheet. The size and quality of the specimen and the way it has been pressed and mounted reveals the knowledge and expertise of the collector. Other indicators of this may be provided by the volume and usefulness of a specimen’s accompanying notes. Sketches of various plant organs are not uncommon, particularly with Archer’s specimens, and some of these were adapted to illustrate the Hooker-edited botanical journals. Unlike a historical manuscript or book, a botanical specimen as a scientific object does not age—it remains unchanged from when it was collected, and is the same as species alive today.

I use Latin names throughout this thesis to avoid the all-too-easy confusion of common plant names. Occasionally I will use a common name when the plant had a common name before a scientific one, as happened with Huon Pine. Where practicable I include notes or images that will assist in forming a connection between a scientific name and the physical plant.36 Scientific names are continuously revised and updated, and I include all currently accepted names alongside their historical counterparts. All the names have been revised according

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36 Each herbarium in the world is identified by a unique code, often an abbreviation. For example K denotes the Kew herbarium, HO the Tasmanian herbarium. When specific herbarium materials are used and discussed throughout this thesis, these abbreviations can be found at the front of specimen reference numbers. All herbaria abbreviations used can be found listed alphabetically as part of the manuscript bibliography at the end of the thesis. K.J. Cowley and J.G. West, eds., Resources of Australian Herbaria: A Guide to the Herbaria Located in Australia (Canberra, 1999).
to the Australian Plant Name Index (APNI) and the Tasmanian Vascular Plant Census. As a historical work it is inevitable that many plant names have changed, and I have included both the original and current recognized names when this issue arises.37

When formally written, a plant name consists of three parts: the generic name and species epithet, followed by the authority – usually cited in abbreviation – which indicates the author(s) who first published the description of the plant.38 The use of the binomial was solidified by Linnaeus and has been continued in all variants of classificatory systems since. Taxonomists are still debating the finer points of classification in an attempt to arrange plants according to their order of evolution. Simultaneously there is a constant review of existing plants and their relationship with each other, which can result in them being moved around the classificatory tree, or being renamed when evidence of an earlier name is identified.

The term ‘botanist’ to describe the work of a qualified plant scientist is relatively new and its use therefore can be misleading within a historical work. Barker and Barker defined a botanist as someone who had published in the field. Using this distinction, Joseph Banks and Daniel Solander for example, should be regarded as collectors.39 I have found this a useful starting point for shaping my vocabulary, and accordingly refer more often to ‘botanical collectors’ rather than

37 Australian Plant Name Index (APNI) is regularly updated and can be found at: http://www.anbg.gov.au/cgi-bin/apni; Baker, M.L. and Duretto, M.F., A Census of the Vascular Plants of Tasmania and Index to the Student’s Flora of Tasmania and Flora of Tasmania Online (Hobart, 2011), online access at: http://tmag.tas.gov.au/index.aspx?base=1273
38 For example Eucalyptus gunnii Hook.f. The abbreviated authority refers to Joseph Hooker. A list of authors and their abbreviations can be found on the website for the International Plant Names Index (IPNI): www.ipni.org.
‘botanists’. In the second half of the nineteenth century colonially based collectors such as Archer began to describe themselves as botanists, as they were people who went out and ‘botanised’. This has led to a relaxation in the use of the term in the second half of this thesis, in keeping with contemporary language.

Chapter overview

My first chapter ‘Place’ introduces the Australian environment as it was first experienced by Europeans and received by the scientific world. It puts European knowledge of the Australian vegetation into context by examining floras published in the late eighteenth and early nineteenth century, including a work created in the Australian colonies. The chapter also contains a contextual discussion of knowledge systems in the first half of the nineteenth century, and an account of how the exploration of the Australian flora aligned with changing ideas about botanical systematics.

The second chapter ‘Making Connections’ grounds the thesis in Van Diemen's Land as a location separate to the mainland of Australia. It discusses how residents began to engage with science, and how William Hooker made his first links with colonists.

The third chapter ‘Vandemonian Realities’ focuses upon Ronald Gunn, whose work in Van Diemen's Land later made him one of the most significant contributors to Australian botany during the nineteenth century. Through him we can examine the social and biological setting of the island penal colony, and the manner in which this environment could both hinder and support the pursuit of science.
Chapter four, ‘Into Imperial Science’, explores how Gunn fitted into a larger, British scientific network. The chapter includes discussion of the behaviour and expectations of participants in gentlemanly correspondence. In particular it examines the relationship that developed between Gunn and William Hooker. Analysis of this correspondence reveals the complex expectations of the metropolitan expert and the colonial collector, an exchange that resulted in the transmission of books, equipment, and ideas, as well as specimens. The chapter also explores Gunn’s expanding scientific network within metropolitan and colonial circles.

The fifth chapter ‘Friendship and Change’ explores Joseph Hooker’s journey to Hobart and the formation of his plan to publish a flora of the island. This spurred Gunn on to a new phase of his career. The periphery had a new purpose, and Gunn was in a position to harness the knowledge of his botanical network to assist in amassing a representative sample of the island’s vegetation. By this time his botanical contributions were highly valued and sought after, but his reliance upon a government salary limited his capacity to fully immerse himself in the pursuit of colonial science.

The sixth chapter ‘Creation and Conflict’ introduces a younger naturalist who aspired to contribute to the Flora Tasmaniae. William Archer was colonially born, and unlike Gunn, came from a wealthy landed family. A committed Anglican, Archer had been educated in England as an architect and possessed great ability as a botanical artist. As his interest in botany grew, he engaged more with the local scientific community, although his liberalism in politics and science led to increasing friction with Gunn. To Gunn’s alarm Archer had no qualms
correcting the work of the English scientific elite, displaying a confidence that Gunn lacked. As Archer’s engagement with the botanical world increased, Gunn withdrew further, although this chapter does encompass the one plant genus that became a source of debate between Hooker and the usually deferential Gunn.

The final chapter, ‘Collaboration’, explores how the periphery literally took itself to the centre when Archer returned to England with his family. He enjoyed meeting the scientists to whom he had written, and whose work he had read so thoroughly. With his illustrations in hand, Archer worked alongside Joseph Hooker at Kew Gardens, assisting in the preparations for the Flora Tasmaniae. Not one to miss an opportunity, he used the superabundance of Kew’s specimen collection to supplement his own personal herbarium. On his return to Tasmania, Archer applied his knowledge from Kew and the London scientific societies to the colonial scientific community, making it more efficient. The chapter closes with a discussion of the reception and impact of the Flora and the changes in botanical collection in the island, 1830-1860.
CHAPTER 1: PLACE
Eucalyptus obliqua L’Hér.

Figure 2 Eucalyptus obliqua in C. L’Héritier de Brutelle’s Sertum Anglicum, (Parisiiis, 1788-1792), t. 20.
'On the whole this noble genus may be said to have taken undisturbed possession of these Australian regions, clothing as it does with its stupendous mantle the surface of both Van Diemen's land and New Holland. For the intermixture of other plants which the lordly tribe occasionally permits, compared with its great extent is but small and partial. Wherever you go the gum tree of one species or other presents itself before you.'


Introduction

Late-eighteenth and early nineteenth century Europeans were fascinated with the Australian environment. The natural makeup of the continent was seen as novel and unique. There was an enthusiasm to discover Antipodean natural history treasures, and a desire to catalogue, name and order each item. In the space of sixty years (1800-1860) the scientific placement of Australian plants moved from that of oddity to part of an understanding of a wider global flora.

In order to explore this change from outlier to insider, it is important to have a broad understanding of how botanical theories were formed and informed by each other over time. After discussing European appraisals of Van Diemen's Land, this chapter closes with a discussion of the knowledge systems used in the nineteenth century, and the evolving science of botany and natural history classification. To name and order the natural world was a particular preoccupation of Victorian naturalists. They had a desire to fashion order from chaos, by discovering the classificatory ‘truth’, and assigning names to all things. The importance and power of naming, particularly in newly settled areas cannot be underestimated. Botanical naming in this sense was part of a wider process of colonisation.
Australia: a ‘mine of botanical novelty’

Australia provides a baffling environmental setting. Environmental historian Tom Griffiths described it as a paradox: how could a country be considered both a new land and an ancient land at the same time? New because Europeans who recently colonized it, regarded it as bare and ready for settlement. It was also biotically new, novel in its flora and fauna. Simultaneously, Australia was recognised as an ancient land, with ‘primitive’ people and base, underdeveloped animals, a land of ‘living fossils’. As Adrian Desmond put it – it was a ‘paleontological penal colony’.¹

Botanically, New Holland was noted for its uniqueness, possessing richness in diversity that had to be explored, collected, catalogued and cultivated by European naturalists. Henry Andrews in his Botanist’s Repository described the continent in 1797 as an ‘endless source of botanical research’ and that plants from Australia were ‘perfectly new’, and thus required new generic names to accommodate them.² James Edward Smith thought the Australian landscape to be

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¹ James Smith commented on this confusion: ‘When a botanist first enters on the investigation of so remote a country as New Holland, he finds himself as it were in a new world. He can scarcely meet with any fixed points from whence to draw his analogies; and even those that appear most promising, are frequently in danger of misleading, instead of informing him. Whole tribes of plants, which at first sight seem familiar to his acquaintance, as occupying links in Nature’s chain, on which he has been accustomed to depend, prove, on a nearer examination, total strangers, with other configurations, other economy, and other qualities; not only all the species that present themselves are new, but most of the genera, and even natural orders’. J.E. Smith, A Specimen of the Botany of New Holland 1 (1791-1793), pp 9-10. T. Griffiths, ‘Introduction’, in Ecology and Empire, Environmental History of Settler Societies, eds. T. Griffiths and L. Robin (Melbourne, 1997), pp. 1-18; A. Desmond, Archetypes and Ancestors: Palaeontology in Victorian London, 1850-1875 (Chicago, 1982), p. 104.

² H. Andrews, The Botanist’s Repository Comprising Colour’d Engravings of New and Rare Plants only with Botanical Descriptions &c. in Latin and English after the Linnean System 1 (London, 1797) t. II; H. Andrews, The Botanist’s Repository... 2 (c.1798), t. LXXIV.
'so extremely unlike all those best known to Europeans’, that is was a ‘mine of botanical novelty’.\(^3\) Sixty years later Joseph Hooker called the Australian flora ‘the most remarkable that is known, owing to the number of peculiar forms of vegetation which that continent presents.’\(^4\)

On first appearances it seemed nearly all the plants were new to science – Australia today hosts a very high proportion (93.25%) of species endemic to the continent.\(^5\) The impression of uniqueness was heightened by the dominance of *Eucalyptus* and *Acacia* in plant associations across the country, two genera that have a limited natural occurrence outside of Australia, cloaking the landscape with their unusual silhouettes. To a European eye, the muted greens and browns of the Australian landscape were considered ‘dull and sombre’ if not backwards. Many remarked upon the native trees with strange vertical foliage, that kept their leaves, but shed their bark.\(^6\)

The novelty of the flora, however, is a matter for debate. Although sporting high levels of endemism amongst the species, at a higher taxonomic level the Australian flora slots neatly into existing global plant families. In his introductory essay to the *Flora Tasmaniae* of 1859, Joseph Hooker included a survey of all published and unpublished plant records for the entirety of Australia.

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\(^3\) Smith, *Specimen of the Botany of New Holland* 1, p. vii.


\(^5\) Estimation of endemism taken from A.D. Chapman, *Number of Living Species in Australia and the World*, 2nd ed. (Toowoomba, 2009), p. 44.

\(^6\) The surgeon John Henderson was particularly interested in botany and established the first natural history society in Van Diemen’s Land. Despite his knowledge of plants and his botanical prowess he was disinterested in the Australian flora, as it did not appear to be useful or beautiful to him. He preferred the aesthetics of introduced plants in the colonies. J. Henderson, *Observations on the Colonies of New South Wales and Van Diemen's Land* (Calcutta, 1832), p. 131. James Smith noted of the London appreciation for Australian plants, ‘It has lately been a complaint among cultivators of plants that the vegetable productions of New Holland, however novel and singular, are deficient in beauty’. Smith, *Specimen of the Botany of New Holland*, pp. 45-6.
He found evidence of approximately 8,000 angiosperms on the continent and anticipated that eventually 9,000–10,000 would be described.

Today it is estimated there are approximately 19,500 flowering plants in Australia. That Hooker was aware of a little less than half of the vascular flora of the continent in 1859 is extraordinary considering the capabilities of early colonial botany. Using this data, Hooker ranked the Australian plant families according to how many species were represented in each family. He then compared his list with similar ones for Europe, India, South Africa and a general ‘World’ list. He found that over half of all the known Australian species were represented in the top nine ranked families, and of those nine, seven were in the top ranking lists of other global regions. Only two families, Proteaceae and Goodeniaceae, were unique to Australia and possessed a high level of speciation. Hooker could therefore argue that the Australian flora on a grand taxonomic scale was not as unique as previously thought.

In the 150 years since Hooker published his essay, thousands of new Australian plants have been described. Remarkably, however, Hooker’s broad thesis remains intact. Work by Robert Hill and Tony Orchard have found that

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7 Hooker’s 8,000 species he said ‘will not probably be increased by further investigations’, but lower on the same page when discussing the varying estimates made by other botanists including Brown and Mueller agreed that ‘we may assume 9,000 – 10,000 flowering plants an approximation to the number that will eventually be found to be indigenous to Australia.’ Hooker, ‘introductory essay’, p. xxx.

8 Hooker, ‘introductory essay’, p. iii. Current species estimate from Chapman, Number of Living Species in Australia, p. 44.

today only one of Hooker’s original nine families has changed, Goodeniaceae now being superseded in species numbers by Euphorbiaceae.

Hooker identified three main elements within the Australian flora: an Australian element comprising the endemic or mostly endemic temperate plants, a tropical element associating taxa from Australia with those found in southeast Asia and India, and an Antarctic element, represented by temperate rainforest and alpine plants. This last group he found shared similarities with the plants of New Zealand and temperate South America, supporting a tentative idea that the Australian flora had been formed from separate invasions of species, possibly occurring at different times.

Hooker’s multiple invasion theory was formed earlier than any ideas relating to continental drift or the earlier existence of supercontinents (the ‘Gondwanan relicts’ talked about in the Australian flora today). Rather, he thought the dispersal of species had occurred during periods of low sea levels via land bridges.10 These concepts remained the core theory for Australian phytogeography for the next century, and were not rigorously challenged until the work of Nancy Burbidge in 1960.11

European visitors

Even before Hooker recognised the uniqueness of the Australian flora, the eighteenth century exploration of new lands had introduced a rich array of novel

natural treasures to the western world. These discoveries stimulated a wave of scientific, economic, political and cultural changes.\textsuperscript{12} Although Cook’s 1770\textit{ Endeavour} voyage with Joseph Banks and Daniel Solander is often viewed as the ‘discovery’ of Australia and its extraordinary native vegetation, by this time the continent had experienced over 150 years of scientific exploration from Dutch, Spanish and English explorers. The Spaniard Luis Vas de Torres sailed the straits between New Guinea and Australia in 1606, Dutch ships touched ‘the unknown southland’ during the seventeenth century, with Tasman naming the southern-most tip for Anthony van Diemen in 1642. William Dampier, the British buccaneer and pirate who landed at Shark’s Bay, Western Australia in 1688, made the first known observations of the Aboriginal population and collected a few plant specimens. The Dutch went on to chart the Australian coastline from Cape York to the eastern end of the Great Australian Bight, as well as the southern coast of Tasmania.\textsuperscript{13}

Following the return of Cook’s \textit{Endeavour} voyage, Australia and the South Seas became an object of exploration for the French. The comte de La Pérouse (1741-88) travelled with a suite of naturalists to chart the coastline and collect specimens for the Paris Museum. On board his two vessels \textit{La Boussole} and \textit{L’Astrolabe}, in addition to officers and crew with training in natural history, were two astronomers, a naturalist, a botanist, a mineralogist-meteorologist, a geographer, a gardener and landscape draughtsmen. The two ships arrived in Port Jackson only a few days after the First Fleet in January 1788. The French remained in port for six weeks, and following their departure were wrecked off

\textsuperscript{12} D.P. Miller, introduction to \textit{Visions of Empire}, pp. 1-18.
\textsuperscript{13} Moyal, \textit{Scientists in Nineteenth Century Australia}, p. 8.
Santa Cruz, where the remains were located in 1828. Following the disappearance of La Pérouse in 1791 Antoine-Raymond-Joseph Bruni d’Entrecasteaux (1737-93) was sent to discover the fate of the previous expedition and continue charting the coast. His expeditions included the ships *Recherche* and *Esperance*, with the naturalist Jacques-Julien Houton de Labillardière (1755-1834) on board. As a result of this voyage Labillardière published his seminal work on Australian botany, *Novae Hollandiae Plantarum Specimen*, in two volumes between 1804 and 1807.

D’Entrecasteaux’s voyage was eclipsed by that of Nicolas Baudin (1754-1803), who spent three years in Australian waters between 1801 and 1803 with his ships *Géographe* and *Naturaliste*. Notable French scientists including Bougainville, Cuvier, Jussieu, Fleurieu and Laplace drew up Baudin’s programme of scientific research with encouragement from Napoleon, then First Consul. Along with cartographer-surveyor Louis-Claude Desaulses de Freycinet (1779-1842), they completed hydrographical studies around the Australian coast, receiving help from the colonial authorities. The ill-fated voyagers battled hunger, scurvy, sickness and resignations; resulting in the original scientific crew of twenty-two being reduced to half that number by the time they reached Van Diemen’s Land in 1802. They included botanist Jean-Baptiste Louis Leschenault...

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16 This comprised a description of plants collected by Labillardière from 1792 arranged according to the Linnaean sexual system. George, ‘Background to the Flora of Australia’, pp. 3-24.
de la Tour, zoologists Francois Péron and René Maugé as well as an astronomer, gardener, artists and Charles Bailly, the first mineralogist to reach the island.  

Three months after Baudin’s expedition sailed, Matthew Flinders departed Spithead in the *Investigator*, for his second expedition to New Holland, with a scientific crew of five. These included botanist Robert Brown, botanical artist Ferdinand Bauer, and collector and gardener Peter Good. From this trip Brown amassed 3,600 botanical specimens from Australia, only 400 being duplicates, as well as birds, insects, minerals and animals. He was sponsored by Joseph Banks, and his production of the *Prodromus Florae Novae Holandiae et Insulae Van-Diemen* is regarded as a milestone in taxonomic botany, and Brown as arguably Britain’s greatest ever botanist. Joseph Banks supported Brown as part of his ever-growing number of overseas collectors. Banks had risen from financier and scientific leader aboard Cook’s *Endeavour* to friend and confidante of King George III, President of the Royal Society, providing guidance on colonial administration, African and Arctic exploration, and the business of the Board of Trade, the Privy Council, the East India Company and the Admiralty.  

Banks’ correspondents and collectors constituted the most extensive scientific network in the world between 1770 and 1820. David Mackay identified

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20 Banks also advised on matters of agriculture, whaling, commercial policy, weights and measures, the adulteration of flour, bullion and coinage and naval stores. Drayton, *Nature’s Government*, p. 91; see also Gascoigne, *Science in the Service of Empire*, pp. 111-146.
126 collectors working outside Britain during this period that sent specimens to Banks or to Kew Gardens. Of this, Banks – on behalf of Kew – commissioned twenty-one naturalists for collecting missions, and of those nine were sent to the Pacific region. These men were instructed to investigate every aspect of natural history in their surrounding environment, taking detailed notes and specimens and sending all their collected material back to London for further research. Civil and military officers joined Banks’ informal network, in Australia notably Lieutenant-Governors Arthur Philip, David Collins and William Paterson; Paterson’s contribution being recognised by his election to the Royal Society in 1798.

Tasmania: the ‘land of mystery’

Tasmania is an island cut off from the mainland of Australia with a mountainous topography and a variable, oceanic climate. At forty-two degrees latitude, the island is latitudinally similar to southern France, but the heightened maritime element yields cool summers, mild winters, and an elongated autumn and spring. The island is geologically complex and can be broadly divided into western and eastern halves. The western half has a pre-Carboniferous geology.

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22 Mackay, ‘Agents of Empire’, p. 42. There were other members of this group including Governor P.G. King, who made notes of a wide variety of natural history and other observations. The men corresponding with Banks were often engaged in far more complicated communications also writing to India, Europe and the Americas, exchanging seeds and information. For a seventeenth century example of exchange networks, especially of medicine and seeds, see H. Cook, Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age (New Haven, c2007).

Known as the ‘fold structure province’ hundreds of thousands of years of erosion have left only hard quartzitic rocks forming long, jagged ridges. This side of the island houses major rivers, receives the heaviest rainfall, has thin, nutrient poor soils, and a cooler average daily temperature.

The eastern part of the island has been termed the ‘fault structure province’, reflecting the post-Carboniferous geology accented with mountains formed along fault lines. Less visually striking than the ridgelines in the west, the mountains in the east are still dramatic, with many instances of vertical dolerite cliffs. Remaining in the rain-shadow of the western mountains, the eastern portion of the island receives less rainfall, but it boasts large tracts of fertile soil, particularly in areas based on the rich red soils derived from basalt.

The Tasmanian environment was one of variation. It was like England, but it was different. The fluctuating climate, rainfall, soil quality, and mountain skyline all rested upon the differing nature of the bedrock. The forests were seen to provide economic opportunity at the same time as concealing dangers for the unwary. It promised a wealth of new species to science because of its highly varied nature. The island allowed for intellectual comprehension of it as a single, discreet entity. It was just the right size to be tested by the elite and the emerging science of botany.

Australia fed the European imagination. Michael Hoare called it ‘the legendary antipodean inversions and aberrations in nature’s economy’. The island of Van Diemen's Land seemed even stranger, and promised even greater

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treasures than New Holland. Matthew Curling Friend FRS, arrived in 1830 with instructions from the Royal Society, Geological Society, Zoological Society, Medico-Botanical Society and British Museum to establish correspondents in Van Diemen’s Land, a place viewed as ‘still a land of mystery, supposed to abound with anomalies, which if verified and ably described, would tend to illustrate many of the most abstruse and important questions in the history of organic life.’ There was a particular desire to locate ‘transition forms’, species that shared similar attributes that could then be fitted into ‘the great chain of being’.27

Friend went on to state that research should focus upon the platypus, the skulls and placentas of all other animals, mountain heights, geological strata, mineral deposits and the precise location of the island. Botany also required attention: ‘No botanist has trodden your fields, or if he has traversed them it has been so lightly and rapidly as to leave scarce a print of his footsteps’. In all of these pursuits he encouraged keen observation and note taking, whilst discouraging theorising – or worse – hypothesising.28 This was a long-standing concern amongst the metropolitan naturalists. It was not the place of the colonial settlers to waste precious collecting time by thinking. That was best left to the experts in London.29

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27 Hobart Town Courier, 29 May 1830.
28 C. Friend in Hobart Town Courier 29 May 1830; Hoare, “‘All Things Are Queer and Opposite’”, pp. 199-201.
29 Two good examples are demonstrated in Joseph Hooker’s Introductory Essay to the Flora Novae-Zelandiae (London, 1853), and the co-authored J. Hooker and T. Thompson Introductory Essay to the Flora Indica (London, 1855). Hooker wrote that collectors were not equipped to understand their own plants and as they lacked reference works and herbaria to make sound judgments of what was a new species and what was not. Janet Browne discusses this in J. Browne, ‘Biogeography and Empire’, in Cultures of Natural History, eds. N. Jardine J.A. Secord and E. Spary (Cambridge 1996), pp. 305-21. See also Finney, Paradise Revealed, pp. 1-3; Endersby, Imperial Nature, pp. 162-165, 208-210.
Europeans were drawn to the Vandemonian environment. With magnificent mountains, cool rainforests, open dry eucalypt forests and broad grassy plains, the island promised new vegetative productions ripe to be explored. A landscape of contrasts opened up to settlers as they moved into the interior, and published descriptions of the island reflected this. While Matthew Friend appealed to scientific curiosity, in the same period books by local newspaperman Henry Melville and other contemporaries noted how much Van Diemen's Land was like home with its favourable healthful climate. 30 Although some saw Friend’s ‘land of mystery’ as a source of discomfort, the lure of the ‘untrodden fields’ was inescapable. 31 The mountainous topography intermittently broken with open grassy plains had been maintained for thousands of years by the Aboriginal population, and promised seemingly endless new genera and species.

Many natural historians visited Van Diemen's Land and found it enthralling – it displayed many of the same unusual plants found in New Holland – but it also hosted a whole suite of new species. How could an island so close to a mainland like New Holland posses so many unique species? The opening of Van Diemen's Land to botanical minds coincided with a growing interest in philosophical botany, moving beyond the ‘traditional’ focus of naming new

30 H. Melville, Van Diemen’s Land: Comprehending a Variety of Statistical and other Information likely to be Interesting to the Emigrant, as well as to the General Reader (Hobart Town, 1833); J. Dixon, Narrative of a Voyage to New South Wales, and Van Diemen's Land, in the Ship Shelton, During the Year 1820 (Edinburgh, 1822); H.M. Hull, Practical Hints to Emigrants intending to proceed to Tasmania: And a Full Description of the Several Counties and their Products; with a Paper on Local Industries, written by Edwin Craddock Nowell, Esq., Government Statistician, and Clerk of the Councils (Hobart Town, 1871); E. Curr, An Account of the Colony of Van Diemen’s Land, principally designed for the use of Emigrants (London, 1824). See also E. Cave ‘Pleasure or Punishment?: The Importance of Food Gardens to Secondary Penal Settlements, Hons. diss., University of Tasmania (Hobart, 2007), pp. 6-18.

31 For more on settler’s ideas and impact upon the Tasmanian environment see J. Boyce, Van Diemen’s Land (Melbourne, 2008).
species and fitting them within a greater classificatory complex, to determining
why plants occurred where they did – and how similar plants could be found in
vastly different places on the globe. Understanding these processes was key to
pursuing economic ends – this was not for the glory of science, but the glory of
Empire.32

Visitors and settlers enthused about the congenial climate, productive soil,
and the beauty of the island. Descriptions could be contradictory, praising the
beautiful forests in one sentence and then warning of hostile Aborigines and
poisonous beasts the next. One anonymous visitor to the island described it as a
combination of ‘the climate of Italy, the mountain scenery of Wales [and] the
fertility of England’. After praising the bountiful harvests and rapidly increasing
stock numbers enjoyed by colonists, the author moved on to describe the flora:

The stock of timber is most beautiful, and apparently inexhaustible. Pine,
oak, stringy bark, peppermint wattle, cedar, gum-wood, rose-wood, and
light-wood, abound in trees of majestic growth inconceivable to an
Englishman. The heaths, wild flowers, and fruits are exquisitely delightful.
The air is impregnated with the perfumes of odoriferous plants. The
peppermint which gives a cinnamon scent, the camphor plant, musk plant,
geraniums, myrtles and honeysuckles, grow spontaneously to the size of
trees. A walk in the woods is enchanting, but then you take it at the hazard
of being transfixed by the spear of a native; or, more likely, finding your
leg entangled by a fearfully large snake, with a hint to your feeling from
his fangs, as much as to say, ‘How would you like to be trod upon’?33

Colonists had multifaceted feelings towards their environment. There were
trees suitable for construction and fuel, which were accompanied by the violent-
sounding ‘spontaneous’ growth of smaller woody understorey shrubs. Van

32 McClellan discusses the intertwining interests in science, empire and economics in Colonialism
33 Hobart Town Courier, 23 Jan 1830.
Diemen's Land offered economic opportunities for those willing to work, but despite appearances it was not a benign place.

**Context for the *Flora* as a published work**

When it came to the experts in London, it was William Hooker, then director of the Royal Botanic Gardens at Kew, who devised the *Flora Tasmaniae* as an early part of the ‘Colonial Floras’ scheme of the 1850s. It was to be the first comprehensive flora of an Australian colony. Botanical inventories were increasingly seen as an important element of exploration and systematic surveys of Imperial territories. These surveys were intended to discover the species richness in each place, as well as to assess the ability of the environment to support crops such as coffee, tea and sugar. Hooker’s publicly funded floras were envisioned to include Hong Kong, British India, the Cape, West and South Africa, the British West Indies, New Zealand, Ceylon, British Guiana, Honduras and Australia. 34

The *Flora Tasmaniae* was only a small fragment of this greater work, and was later complemented by George Bentham’s *Flora Australiensis* (1863–1878). The scheme was funded by the British Admiralty and the Colonial and Foreign Offices, many colonies offsetting the cost – the newly gold-rich Australian colonies, for example, agreed to pay £1200 to Bentham. 35

Prior to the publication of the *Flora Tasmaniae* in 1860, botanical publications on Australian plants were diffuse and incomplete in their treatment of native plants. In 1793 James Edward Smith, purchaser of Carl Linnaeus’s herbarium and first president of the Linnean Society, published a description of Sydney plants sent to him by early settlers, and Antonio Cavanilles published a similar collection from a Spanish Expedition in 1800. Joseph Banks and Daniel Solander had returned triumphant to Britain, stepping off the *Endeavour* with thousands of specimens and hundreds of illustrations, but their lavish *Florilegium* remained unpublished, except for some black and white engravings. The first full colour edition of their work arrived two hundred years later in the 1980s.\(^{36}\)

It was specimens from this voyage that Carl Linnaeus (son of the great systematist) used to honour Banks with the new genus *Banksia*. It was from Cook’s third voyage to Van Diemen's Land in 1777 that the first collection of *Eucalyptus* was made by Kew-trained gardener David Nelson at Adventure Bay on Bruny Island. This defining tree of the Australian landscape, although collected by the British, was described, named, and published by a Frenchman. Charles-Louis L’Héritier de Brutelle (1746-1800) was a wealthy botanical enthusiast who chanced across Nelson’s specimens while he was in London preparing his book *Sertum Anglicum*.\(^{37}\) Ironically, for what is today recognised as

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\(^{36}\) Barker and Barker, ‘Botanical Contributions Overlooked’, p. 38; Endersby, *Imperial Nature*, pp. 155-156; Miller, introduction, pp. 1-18, Miller, ‘Joseph Banks’, pp. 21-37. This mammoth work has only recently been published between 1980-1990, using the engraving plates that Banks commissioned, based on the watercolours of Sydney Parkinson, the *Endeavour* botanical illustrator. For more detail see B. Adams, *The Flowering of the Pacific: Being an Account of Joseph Banks’ Travels in the South Seas and the Story of his Florilegium* (Sydney, 1986).

\(^{37}\) As Kantvilas discusses, it is fortuitous that Nelson’s collections provided the type specimen for the genus, as this was not the first ever eucalypt collected – Banks and Solander had collected specimens in 1770 on the east coast of Australia, but did not publish them. German botanist Joseph Gaertner did publish some of these specimens, but did not recognise the eucalypt as
the iconic Australian tree, L’Héritier de Brutelle provided a scant three and a half lines of description, or twenty-three Latin descriptives.\textsuperscript{38} The generic name was taken from the Greek $\textit{eu}$, ‘well’, and $\textit{calyptos}$ ‘covered, with a lid’, in reference to the operculum, the woody cap that covers and protects the stamens in bud that is shed as the flower opens (see the first and second detailed sketches, fig. 2).\textsuperscript{39}

Jacques Julien Houtou de Labillardière in his \textit{Novae Hollandiae Plantarum Specimen} (1804-1806) made the next major contribution to the description of \textit{Eucalyptus} and the Vandemonian flora (including five new eucalypts) from his expedition with Bruni d’Entrecasteaux. He published 265 plants, arranged using the Linnaean sexual system of classification.\textsuperscript{40} Labillardière’s work not only provided scientifically valuable material, but also illustrated how science could transcend global politics in the interest of knowledge. Labillardière’s return to France was fraught as the voyage was caught up with bouts of illness and revolutionary politics. In Java, Labillardière’s collection and papers were taken and sent to Europe by the Dutch, his ship was then attacked three times before being taken by the British and the collections ending up in the hands of Joseph Banks. Banks returned the specimens, untouched, to Labillardière, despite the political tension between Britain and

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\textsuperscript{38} C.-L. L’Héritier de Brutelle, \textit{Sertum Anglicum, seu Plantae Rariores quae in Hortis Juxta Londinium, Imprimis in Horto Regio Kewensi Excoluntur, ab anno 1786 ad annum 1787 Observatae} (Parisii, 1788-1792), t. 20, p. 11.

\textsuperscript{39} Aitken, \textit{Botanical Riches}, p. 151; M. Wapstra, A. Wapstra and H. Wapstra, \textit{Tasmanian Plant Names Unravelled} (Launceston, 2010), pp. 189, 229.

\textsuperscript{40} George, ‘Background to the Flora of Australia’, pp. 14-16.
France. In this instance the value scientific knowledge was strong enough to transcend geo-political divisions.

The *Plantarum Specimen* was not without its problems. Containing material collected over vast areas over a period of years, the work sported numerous errors, particularly regarding the locality of species. As E. Charles Nelson described, Labillardière recorded *Eucalyptus ovata* (a new species) as occurring in south-western Western Australia, despite this tree being restricted to south-eastern Australia and Tasmania. Labillardière claimed a further four plants were collected in Western Australia that do not occur in that region, and eleven that were in the broader area, but in significantly different locations to those he claimed. One plant (*Knightia strobilina* (Labill.) R.Br. ex DC.) was native to New Caledonia, not occurring in Australia at all. Two species from other locations do not exist today in any of the regions visited by Labillardière, suggesting that although he described them, he did not gather them himself, and relied upon the notes of another – uncredited – collector. Labillardière clearly suffered from muddled labels or inadequate notes, aside from using the material of other botanists.

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41 Gascoigne, *Science in the Service of Empire*, pp. 158-161. Duyker, *Citizen Labillardière*, pp. 206-211. For a botanist’s view of this event it is interesting to read G. Kantvilas, ‘Labillardière and the Beginnings of Botanical Exploration in Tasmania’, in *Rediscovering Recherche Bay*, eds. J. Mulvaney and H. Tyndale-Biscoe (Canberra, 2007), pp. 35-44. 42 In a letter to Jussieu regarding the specimens Banks wrote: ‘I confess I wish much to learn from his [Labillardière’s] specimens some of those discoveries in the natural order of plants which he must have made, but it seemed to my feelings dishonourable…I shall not retain a leaf, a flower, or a Botanical idea of his collection’. Banks to Jussieu, 10 Aug 1796, in G. de Beer, *The Sciences were Never at War* (London, 1960), p. 65. See also E.C. Nelson, ‘The Collectors and Type Locations of Some of Labillardière’s “Terra Van-Leuwin” (Western Australia) Specimens’, *Taxon* 24 (1975), p. 325. 43 One of these uncredited collectors is believed to be Leschenault de la Tour, botanist on Baudin’s voyage, 1800-1804. Kantvilas, ‘Labillardière and the Beginnings of Botanical Exploration in Tasmania’, p. 5; Nelson, ‘Collectors and Type Locations’, pp. 327-334. For more discussion of the
Despite these inaccuracies the *Plantarum Specimen* did contain many original descriptions and names, several of which remain valid today. It was one of a very few directly related reference works available for Vandemonian botanists, and was viewed as a foundation that could be built upon and improved.44

Labillardière’s *Specimen* was pioneering, but it was Brown’s *Prodromus Florae Novae Hollandiae et Insulae Van-Diemen* (1810), that was truly extraordinary. It was the first work that attempted to encapsulate the flora of the Australian continent, extrapolated from Brown’s collections made in New South Wales, Victoria and Tasmania, and using Banks and Solander’s herbarium in London. The *Prodromus*, unlike Labillardière’s *Specimen*, was arranged according to Jussieu’s natural system of classification. Although the natural system had been welcomed in Europe, when it was printed British botanists had not been as enthusiastic about it. At the time this decision may have made Brown’s work unpopular, but it ensured its usage for decades. For example, Ronald Gunn enthused to William Hooker about its strengths in 1843: ‘I can

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44 One resident enthusiast, Ronald Gunn, delighted in an opportunity to retrace the French botanist’s footsteps around Adventure Bay during December 1838, forty-five years after the *Recherche and Esperance* had weighed anchor. R.C. Gunn journal, ML A316. See also R.C. Gunn to W.J. Hooker, 6 Dec 1843, Burns and Skemp, *VDL Correspondents*, p. 97. As a modern parallel, Tasmanian botanists today manually update their main reference works, just as Gunn and others did with the *Plantarum Specimen* and later Brown’s *Prodromus*. They rely on Curtis’s *Student’s Flora of Tasmania* published in five parts between 1952 and 1994. Since printing there have been countless name changes and taxonomic reshuffles, and botanists update their personal copies as they need. To assist in this the Tasmanian Herbarium releases *A Census of the Vascular Plants of Tasmania* most years, which includes any name changes with a cross-reference to Curtis to allow for easy corrections. This practice may produce heavily worn and annotated texts, but recognises that any published work will be essentially out of date within a year of publishing a hard copy. There is a current project to revise and republish the Tasmanian Flora in an online format that can then be constantly updated as required and bypass hand-annotations, but due to the slow nature of this large project, hand-written corrections will remain standard practice for some years.
never sufficiently express my admiration of Brown’s Prodromus – it is so exceedingly accurate. It is to me a source of astonishment how he saw so many of our rarer plants. I wish he had completed it.  

Brown’s work documented approximately 1000 species of Australian plants in 464 genera. He named 187 new genera, of which all but forty-one still stand today. From his findings he had extrapolated various theories about the greater Australian flora and its distribution; however only the second of an intended two volumes was ever published. Brown never provided an adequate explanation for this rather strange state of affairs. Due to this odd publishing arrangement the *Prodromus* begins on page 145, and contains no suggestion of what was originally intended to fill the first half of the book. Despite this, the work became a template for the floras that followed, which makes it all the more surprising that the *Prodromus* was a commercial failure – much to Brown’s mortification. At first press 250 copies were produced, but by 1816 with only twenty-six sold, Brown withdrew the remainder from sale.

The reason for its gross unpopularity remains unclear, although it is likely it was a combination of the inaccessible Latin, a declining interest in natural history, and the use of a natural rather than artificial classification system that was preferred at the time. As David Mabberley described in his biography of Brown, *Jupitus Botanicus*, it was ‘singularly unattractive, being a small, unfinished, unillustrated, unindexed, and indeed expensive volume in Latin, on bad paper, and

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45 R.C. Gunn to W.J. Hooker, 6 Dec 1843, Burns and Skemp, *VDL Correspondents*, p. 97.
46 Mabberley, *Jupiter Botanicus*, pp. 161-164. More discussion of this frustration from the perspective of a resident collector in Australia is given in chapter 2.
poorly printed'. Its Latin would have reduced the audience from a popular to a scholarly one, but even a scholarly audience was not receptive to the natural order that Brown used throughout the *Prodromus*, as the majority of botanists still used the Linnean system rather than ‘French botany’. The unpopularity and infrequent use of Jussieu in Britain resulted in Brown’s book only being appreciated by those who were willing to make the effort to learn another classification system. Its immense failure as a popular work would later make Hooker anxious about the success of his own floras.

Robert Brown had also written an appendix to Flinders’ voyage in 1814, in which he had written more generally on the Australian flora and geography. In 1859, forty-five years later, Hooker acknowledged it as one of his most important references, it being the last time the Australian flora had been considered from a ‘general’ point of view. Brown’s superior knowledge of the flora was also acknowledged by William Hooker, who began the herbarium that Joseph was later to rely so much upon. In June 1836 Joseph Hooker wrote to Ronald Gunn that Brown was the foremost scholar in Australian botany, with the second-most knowledgeable being Allan Cunningham, the Kew-trained Banksian botanist who had lived for many years in New South Wales.

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49 Hooker, ‘introductory essay’, pp. i-ii.
50 W.J. Hooker to R.C. Gunn, 24 June 1836, ML GC 8.
The local Flora: improvements and solutions

Ronald Gunn had toyed with the writing of a colonial flora during his first decade of collecting. In 1835 he assisted James Backhouse to produce the first flora of Van Diemen's Land, the ‘Index Plantarum, or an attempt towards a popular description of some of the most common and remarkable indigenous plants, of Van Diemen's Land’, printed as a part of James Ross’s Hobart Town Almanack for that year.\(^5\) This was Backhouse’s second botanical publication – the previous year he had anonymously published a short paper, ‘Some Remarks On the Roots and other Indigenous Esculents of Van Diemen's Land’.\(^2\) This included the discussion of twenty plants and three fungi, and how best to consume them. The leaves of Correa and Acacia could make tea, the berries of Gaultheria and Polygonum could be used in tarts, and some shrubs and grasses that could be boiled and eaten as ‘Botany Bay Greens’, as early settlers had done to avoid starvation.

Alongside these European methods of eating native plants, Backhouse provided some longer description of what the Aborigines ate, and how they prepared each plant. For example, the Aborigines called native bracken (Pteridium esculentum) ‘Tara Fern’, roasting the roots in the fire, peeling and eating it with cooked meat as a European would eat bread. Backhouse described the orchid tuber Gastrodia sesamoides or ‘native potato’, also roasted and eaten, as tasting like beetroot, and that a similar-looking fungus ‘native bread’ could

\(^5\) J. Ross, Ross’s Hobart Town Almanack, and Van Diemen’s Land Annual for 1835 (Hobart Town, 1835).
\(^2\) J. Backhouse, ‘Some Remarks On the Roots and other Indigenous Esculents of Van Diemen's Land’, in (Ross's) Van Diemen's Land Annual and Hobart Town Almanack, for the Year 1834, ed. J. Ross (Hobart, 1834), pp. 129-134.
grow to the size of a child’s head and tasted like boiled rice (fig. 3). He also included some notes about how the Aborigines would split open and eat the inside of the trunk of *Dicksonia antarctica*, and that the crown of *Xanthorrhoea australis* could be eaten after the flowering heads and leaves had been stripped away.53

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Backhouse concluded his paper apologetically, stating that the foodstuffs he had described were not ‘worthy of comparison with the commonest English kinds’. Despite this appraisal, William Hooker was delighted with the paper when Gunn sent him copies of the almanacks. Hooker found the works ‘put to shame the almanacks of our own country a very few years back’, and printed the entirety of Backhouse’s paper on esculent plants, followed by a selection of fifty-five entries from the ‘Index Plantarum’.

The ‘Index Plantarum’ numbered fifty-three pages, listing approximately 540 plants from *Acacia* to *Zostera*. It was an excellent field guide written in an extremely accessible style. Scientific and common names were included, as were interesting nomenclatural notes or unique plant properties. For example, *Banksia australis* had useful wood that made ‘a stout and impervious hedge’ and could be used as a brake or drag when harrowing in grass and small seeds. The sap from the grass tree *Xanthorrhoea australis* could be collected and boiled with oil to cover the bottom of boats rather than pitch, as Captain Smith of the *Caledonia* had done in 1825. This flora did not have the same academic tone as that of Labillardière or Brown, but it was ideal for the colonial audience it was intended for. It could be argued that unlike Robert Brown, Backhouse and Gunn read and

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54 R.C. Gunn to W.J. Hooker, 30 Mar 1835, Burns and Skemp, *VDL Correspondents*, p. 41.  
56 J. Backhouse, ‘Index Plantarum, or an Attempt Towards a Popular Description of Some of the Most Common and Remarkable Indigenous Plants, of Van Diemen's Land’, in *Ross's Hobart Town Almanack and Van Diemen's Land Annual for 1835*, ed. James Ross (Hobart Town, 1835), pp. 69-70. Note that Gunn’s name was not printed in the publication, although he is recognised as a contributor to the work.  
understood their market. Backhouse’s background as a nurseryman had given him plenty of experience in communicating with the public about plants.

To further legitimise their work, Backhouse and Gunn included numerous mentions of other botanists, particularly Labillardière, Brown, Allan Cunningham ‘the King’s botanist at Sydney’, and William Hooker. They also included quotations from Hooker’s *Miscellany* and his personal correspondence, with sentences beginning: ‘The learned botanist, Dr. Hooker, in his recent letter to Mr. R.C. Gunn, at Launceston…’, that added even more weight to their work. There is some suggestion that Gunn had thoughts of attempting a more complete scientific flora on his own in the mid-1840s, encouraged by colonists such as Charles Stuart and William Archer who offered help in gathering specimens. Archer was enthusiastic for such a work to help him to order his herbarium, ‘I wish you would publish the descriptions of all the known plants in Tasmania!’58 Once Archer knew of Joseph Hooker’s work, his enthusiasm only gained in momentum, writing to Gunn how he longed for it.59

Gunn was equally keen to help with the new work, and offered to write voluminous notes ‘which you [Hooker] can avail yourself of or not as you like’, and to send further duplicate specimens, and later, ‘all my Plants’ to be used to write the *Flora*.60 At the end of the same letter Gunn suggested himself as an agent to Hooker’s publisher Lovell Reeve charging no commission, wanting payment ‘in a Copy or copies’ of the *Flora*. As a cheeky reminder of his situation

58 C. Fraser to R.C. Gunn, 29 Jul 1842, ML GC 5; W. Archer to R.C. Gunn, 27 Apr 1849, GC 4.
60 R.C. Gunn to J.D. Hooker, 6 Oct 1844, Kew DC 218.
in a penal colony, he added he would only charge the freight – ‘You can tell them I am middling honest for V.D.L.!’.61

His enthusiasm for the project was in contrast to his regular grumblings about being short of time. It is surprising that Gunn, who had so little time ‘that I am utterly unable to tackle the plants except by snatches’, could have enough time to write detailed notes that Hooker was then not expected to read.62 Joseph Hooker encouraged brevity on plant labels, and suggested labels be approximately one by two inches in size. This obliged colonial collectors to conform to metropolitan practices, and from Hooker’s perspective saved him time in reading long descriptive notes. From the collector’s point of view, it reduced the opportunity for locals to show their expertise and extensive knowledge, thereby limiting their ability to be involved in a later publication.63

At no point was the botanical or environmental knowledge of the Aboriginal population addressed, Backhouse’s notes on edible native plants being the only significant publication that addressed the Aborigines’ engagement with the flora at all. In the wake of settler/Aboriginal clashes during the first thirty years of settlement, colonists did not value indigenous knowledge, and believed the Tasmanian Aborigines (unlike the Maoris of New Zealand), were beings that could not name or organise objects in a useful way. William Hooker echoed this sentiment, introducing the efforts of Backhouse and Gunn to a London audience, stating the ‘rapid progress of Civilisation and Science in this remote region of the globe’, improved upon a place ‘so recently occupied only by unfriendly

61 R.C. Gunn to J.D. Hooker, 6 Oct 1844, Kew DC 218.
62 R.C. Gunn to J.D. Hooker, 23 Sep 1844, Kew DC 218.
63 Endersby, Imperial Nature, pp. 139-40.
savages’.  

Joseph Hooker went further in *The London Journal of Botany* in 1845, explaining that in Van Diemen’s Land there was a ‘want of an intelligent class of natives, such as inhabit New Zealand, who may direct the man of science, or the settler, to what tradition and experience have taught the aboriginal inhabitant to value in his savage state.  

The *Flora Tasmaniae* was the triumph of European over Aboriginal systems of knowledge, imposing a new order and new system of classification. It was by no means complete, but it was the most comprehensive work on the subject in the nineteenth century.

**Classification and knowledge systems in Australia**

The *Flora Tasmaniae* contained 2203 species, identified, named and described from dried specimens collected in the field. The project also involved examining all the Australian plants held in London herbaria, particularly at Kew and the Natural History Museum. In this manner, Joseph Hooker trawled through and inspected an impressive 8000 flowering plants, 7000 of them catalogued by him alone. He organised these specimens into genera and families, taxonomically ‘tidying up’ many thousands of specimens that had been erroneously classified, or placed in new and unnecessary genera, or were claimed as species when they were simply variants. This was not an easy task by any

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67 Hooker, ‘introductory essay’, p. iii.
standard, particularly as Hooker had to tread fine lines – he was a taxonomic ‘lumper’ – grouping large numbers of plants together – rather than splitting into minutely differentiated ones. This lumping attitude was one of his most ardently held beliefs, and one that brought him into conflict with some of his colonial collectors.

Examining 7000 plant specimens was no easy task, but it was a luxury that only Hooker could indulge, having such a vast herbarium at his disposal. Hooker needed a large herbarium and within it a manageable number of genera and species, which informed his taxonomic preferences.68 His frequent advice to collectors was to look for intermediate plant forms that would bridge between two similar species, reducing his massive load of specimen sheets. As Endersby discusses, to confer a name upon an object is a powerful act, and there has always been a sense that names can be ‘right’ or ‘wrong’. Centres of power and authority such as Kew were created by the accumulation of specimens, and the holders of these collections would often propose classificatory practices that best suited their own needs.69 Hooker reinforced the Kew principles of classification in the *Flora Tasmaniae*, and this in turn provided a published model for colonial collectors to follow and aspire to.

The system of classification used by botanists and other biologists is still flexible, although names bend now at the will of appointed committees rather than

68 The power of the herbarium in the relationship between colony and metropole is discussed in Jim Endersby’s “‘From having no Herbarium.’ Local Knowledge versus Metropolitan Expertise: Joseph Hooker’s Australasian Correspondence with William Colenso and Ronald Gunn”, *Pacific Science* 55 (2001), pp. 343-358.
the personal beliefs of ‘rightness’ held by individuals.\textsuperscript{70} Currently the Plant Names Project has compiled The International Plant Names Index (IPNI), maintaining a record of all the vascular plant names in the world.\textsuperscript{71} Changes to the classification are not uncommon, for example over 27,000 plant names in the index underwent some form of change in 2009. Many of these changes were minor, but major movements do occur.\textsuperscript{72} Prior to this period of scientific cooperation and communication regarding the rules of classification, an author’s work could be compromised if his choice of classification system was not in common use by the reading public, as Robert Brown found with his \textit{Prodromus}.

During the nineteenth century the Linnaean System that grouped plants by the number and position of their stamens and pistils (thus the sexual system), was superseded by Jussieu’s natural system. Linnaean classification had large deficiencies, often grouping plants together that had only superficial similarities, and separating those which only differed in their sexual organs. The natural system considered the plant as a whole, not just the sexual organs in isolation. The entire flower structure was used as a means of identification. Throughout the nineteenth century the binomials of Linnaeus and the basic structure of Jussieu was the basis for further revision and development.\textsuperscript{73} As botanical names are authorised by publication, so are additions and changes to systems of classification. These debates and alterations often surrounded publications on the

\textsuperscript{70} David Knight has discussed the development and detail of scientific classification systems of the eighteenth and nineteenth centuries in \textit{Ordering the World: A History of Classifying Man} (London, 1981).
\textsuperscript{73} Burns and Skemp, \textit{VDL Correspondents}, pp. 13-14.
Australian vegetation, as it was the plants of this continent that had so challenged previous ideas about the number and variety of global species.

Several of the major publications of the nineteenth century drew upon the Australian flora as a basis for changes to classification systems. Labillardière’s *Novae Hollandiae Plantarum Specimen* was arranged according to the Linnaean system, and Brown’s 1810 *Prodromus* was one of the first major works to turn away from the sexual system in favour of the natural. Between 1823 and 1873 Augustin Pyramus de Candolle published his *Prodromus Systematis Naturalis Regni Vegetabilis*, described by Alex George as ‘one of the greatest botanical works’. De Candolle intended to cover all global flowering plants, but only managed to complete the dicotyledons. His principles were the basis for the *International Code of Botanical Nomenclature* (ICBN).\(^{74}\) John Lindley was another enthusiastic supporter of the natural system, and publicly stressed this in Britain where the use of the Linnaean system remained into the 1850s. Lindley produced popular works such as *Ladies’ Botany* that were intended to be easily accessible, whilst simultaneously educating the reader to think according to the natural system. It was the simplicity of the Linnaean sexual system that made it so difficult to shake from the minds of both professionals and amateurs. Even after professionals had agreed that the natural system was far more suitable, texts were still published using the sexual system. It was not until the death of William Hooker in 1865, and Joseph Hooker took over the editorship of the *Botanical Magazine* that it ceased using the Linnaean system.\(^{75}\)

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\(^{74}\) Burns and Skemp, *VDL Correspondents*, p. 14; George, ‘Background to the Flora of Australia’, p. 16.

\(^{75}\) Endersby, *Imperial Nature*, pp. 173-175.
Following de Candolle, Joseph Hooker, George Bentham and Ferdinand Mueller had the greatest affect upon Australian botanical classification. Hooker’s Botany of the Antarctic Voyage (1855-1860), Hooker and Bentham’s Genera Plantarum (1862-1883), and Bentham’s Flora Australiensis (1863-1878) reinforced the natural system and organised the genera in a manner that became the globally dominant system. This included the introduction of the ‘Kew Rule’, which further strengthened the metropolitan core of botanical classification by controlling the priority of naming species. Bentham argued that commonly used names should stand, regardless of whether they were the first name given. Further, priority was reckoned when a specific epithet was first associated with its ‘true’ generic name, meaning older epithets associated with different genera were ignored. This informal law gave Hooker and Bentham even more power in determining naming rights compared to their colonial collectors. They could claim the ‘common’ name was the one they were accustomed to, and not that used by those who lived alongside the plants; and they were the professionals who could reorganise genera and species, with the ability to publish their new classifications.

The Kew Rule has since been abolished, and the ICBN uses the earliest legitimate name, including the earliest species epithet. One colonist who fought against the Kew Rule was Ferdinand Mueller. Mueller published prolifically from his base in Melbourne, and worked independently of the great Kew classification schema. His own system was abhorred by Hooker who in a private letter to Bentham described Mueller as ‘vomiting forth new genera & species with the lack

of judgement of a steam dredging machine.78 Mueller refused to be controlled by Kew, and all Joseph Hooker could do was smear his name, or ignore him.

In the twentieth century, Australian state floras followed a modified arrangement taken from Mueller, whereas Tasmanian floras continued to follow the Kew model. This included Leonard Rodway’s *The Tasmanian Flora* of 1903 and Winifred Curtis’s *The Student’s Flora of Tasmania* from 1956.79 Curtis arrived in Tasmania in 1939 holding an honours degree in botany from University College, London, and experience working at Kew. In her professional life she strongly identified with the Kew classification system, which she instilled in *The Student’s Flora*. From 1988 the *Flora of Australia* series has been published following A.J. Cronquist’s system, although like all printed floras it was out of date as soon as it was published.80

As the first volumes of the *Flora of Australia* were published, new molecular techniques were developed that dramatically altered plant classification, creating the most significant shifts in plant systematics since the introduction of the natural system. The Angiosperm Phylogeny Group (APG) classification system uses these new groupings to alter plant relationships within families and genera. For example, the genus *Archeria* (named for William Archer) has moved from the Epacridaceae to the Ericaceae. The division between

78 J.D. Hooker to G. Bentham, Aug 1859, as cited in Endersby, *Imperial Nature*, p. 201.
79 *The Student’s Flora* was originally devised to update Rodway’s *Tasmanian Flora* in 1943. Curtis’s work (assisted by fellow botanist Dennis Morris) spanned over forty years and filled five volumes. It remains the foundation text for university students and botanists working on the Tasmanian flora. Unlike the floras that have been published for the other states, *The Student’s Flora* was designed to be affordable and accessible, stemming from Curtis’s strong teaching background and her need for a solid textbook. Today it stands alone as the only flora of an Australian state or territory that a student can afford. G. Kantvilas, ‘Winifred Mary Curtis: A Biographical Sketch’, in *Aspects of Tasmanian Botany: A Tribute to Winifred Curtis*, eds. M.R. Banks, S.J. Smith, A.E. Orchard and G. Kantvilas (Hobart, 1991), pp. 1-6.
80 George, ‘The Background to the Flora of Australia’, p. 3.
Dicotyledons and Monocotyledons has become more complex, with some families moving from one group to the other. Other families – in Tasmania the Hydatellaceae – have been revealed to be a sister relation to Angiosperms. At present no single classificatory system has become dominant, and it is likely that alterations will only become more frequent. At the core of this quest is the desire to find the ‘truest’ or most ‘natural’ system. Despite advances in science, current taxonomists are, like Linnaeus, Jussieu, and Hooker, aspiring to determine the ‘right’ place and order of organisms.

Conclusion

The Australian environment has attracted natural historians since European exploration in the seventeenth century. It was a landscape that presented a paradox to European scientists and colonists – new but ancient, empty but populated, unique but consistent. A continent famed for its botanical novelty, Australian native plants were regularly published as horticultural exotics in European floras of the late-eighteenth and early nineteenth century.

While these works had their failings, resident collectors rapidly built upon the work of Labillardière and Brown, augmenting and reinterpreting it for a colonial audience. The dominance of the metropole over the colonial in every field of natural history was common, and botany was no exception. Collecting

81 M.F. Duretto, ed., Flora of Tasmania Online, ‘Introduction’, accessed 24 Dec 2009, www.tmag.tas.gov.au/floratasmania. This new molecular focus is a cause of some friction amongst botanists, as plants which are different at a molecular level may not show any differences that are physically discernible. If a purely molecular system was utilised, field botany would become almost impossible.

82 Australia’s reputation as a botanically interesting site was sealed after the naming of Botany Bay in 1776 by Captain James Cook.
needed to be performed at the peripheries, but it was at the centre that the analysis, naming and theorising was expected to occur.

Joseph Hooker’s broad overview of the Australian flora in his 1859 essay for the *Flora Tasmaniae* revealed some stunning conclusions. Completing the third part of the *Botany of the Antarctic Voyage*, Hooker’s *Flora Tasmaniae* was a triumph of imperial science. Aside from links to ideas on the origin of species, Hooker forwarded ideas on Australian phytogeography, and realised that when drawing back up the taxonomic scale, Australian plants were not nearly as unique as once thought. 83

There is no question that Hooker’s conclusions were extraordinary in 1859, and they remain essentially true today. But was the *Flora* primarily an achievement of metropolitan science? How significant were others in creating this work? How much has our concentration on Hooker’s conclusions masked the endeavours of collectors on the botanical periphery? By working backwards from Hooker’s published scientific conclusions, we can unpack the underlying layers of contributions to this botanical text.

83 There were new genera and species, but only one dramatically different family, the Tremandraceae. The tensions that arose from this isolated genus in Australia is discussed in detail in chapter 5.
CHAPTER 2: MAKING CONNECTIONS

*Correa backhouseana* Hook.

Figure 4 *Correa backhouseana* in W.J. Hooker *Icones Plantarum* 1 (1837), t. II.
‘It indeed, is not uncommon to find oneself standing on a rock all bareness and sterility and to see around in the distant prospect, that beauty and luxuriance which gladdens the imagination, and which we in vain desire to possess a share of. – How often are our fondest hopes most cruelly denied us!’

Robert Lawrence Journal, 16 Jun 1830, QVMAG.

Introduction

Moving from the larger frame of Australian botany to the specific nature of Van Diemen's Land in the late 1820s and early 1830s, it is possible to see that the *Flora* did not arise from Joseph Hooker, but his father, William. When Joseph was still a young lad, William was publishing short articles on the Australian flora. He could not complete this work alone, being reliant upon colonists to provide a supply of Antipodean specimens. It was during this period that resident colonists began engaging with science, their enthusiasm and capacity for botany in turn ensuring Hooker developed a keen interest in Vandemonian plants.

Through a connection with Hooker, men on the colonial periphery such as Robert Lawrence engaged first with the scientific centre, and later with other colonists like Ronald Gunn. By exploring the relationship between Hooker and Lawrence, and the development of the crucial nexus between Lawrence and Gunn, we can assess their colonial contributions to a burgeoning metropolitan enterprise.

Robert William Lawrence: the first colonial collector

In the five years Robert Lawrence collected between 1829 and 1833, he experienced the changeable nature of the Vandemonian environment. Born in
1807, Robert was the eldest son of William Effingham Lawrence, a wealthy merchant who settled in the colony in 1823. William was highly educated and greatly interested in science and politics, counting Jeremy Bentham amongst his close friends. His business success had allowed him houses in London, Liverpool and New York, but economic and health issues persuaded him to emigrate.¹

In Van Diemen’s Land he quickly began amassing extensive land grants in the north of the island including ‘Formosa’ in the northern midlands, grants south of Launceston, and parts of the North Esk River flats. William lived in a large house in town, allowing a view of all ships arriving and departing the port of Launceston. He built a second house ‘Vermont’ on 310 acres on the North Esk for Robert, and increased his property holdings to include property at George Town and on the West Tamar. Aside from his property interests, William engaged in the local business community, helping to establish the Cornwall Bank in 1828.²

Robert, the eldest of nine, never had to worry about financial security. He arrived in Van Diemen’s Land in 1825 aged eighteen, having completing his education in England.³ He managed ‘Vermont’, with the assistance of two convict servants, running sheep, a vegetable garden, and harvesting bark from the local *Acacia* trees for tanning. Seven years later he moved to ‘Formosa’, the central Lawrence property of 14 000 acres.⁴ Lawrence enjoyed the lifestyle of the young

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² The original group directors floated the bank with a not insubstantial £20,000. L.S. Bethell, *The Story of Port Dalrymple: Life and Work in Northern Tasmania* (Sandy Bay, 1957), p. 68.

³ A family history of W.E. Lawrence and all his descendants can be found in E.F. Lawrence, *1823 – Before and After… A Story of William Effingham Lawrence, Tasmanian Pioneer, and his Family* (Melbourne, 1973).

⁴ ‘Formosa’ had proved a contentious estate. William had originally been granted 2,000 acres in 1823, with the same issued to his brother Edward. Their lands were to adjoin, with the promise of an extra 4,000 acres to be granted by 1828 if they had cultivated the original grant. Lieutenant-
gentleman, socialising in town and staying with friends. While the Launceston social circle was fairly limited in the early 1830s, he particularly enjoyed attending the races and subscription balls.⁵

He did not carry a strong religious drive, only attending church when in town, and even then as an impatient member of the congregation, commenting that one clergyman’s sermon was ‘very affecting’, but ‘its greatest fault was its excessive length’. In early autumn 1830 Lawrence found his pastor Dr Browne ‘amusing’ in his comments on the ‘prejudicial effects’ of the races, a time when Lawrence was in town for the whole week ‘amusing myself’.⁶ Aside from business on the estate, Lawrence was a man of leisure, although he could get into trouble when his temper flared. One rainy August morning Lawrence had a ‘row’ with his friend Sinclair in town after recounting a previous evenings entertainment. Lawrence declared Sinclair had been ‘tipsy’ that night, an accusation the latter flatly denied, calling Lawrence a liar. Whereupon Lawrence ‘hit him on the head’ with his stick before the two wrestled on the ground, rolling about in the street.⁷

Aside from his tussle in the mud, Lawrence had experienced the biting reality of living in a penal colony. Less than a year after arriving in Van Diemen's...
Land he had been at ‘Formosa’. While his father was absent, a party of eight bushrangers led by Matthew Brady descended on the property. They took Lawrence hostage at gunpoint, holding him, his servant Morand and other assigned convicts prisoner in the house. Lawrence was made to cook for the party, before a secret store of rum was found, which the hostages were forced to drink to make them insensible. Thinking Lawrence had made an attempt to shoot at the party, one member began an attempt to cut his ears off and ‘mark him like the rest of our Stock’. Such a gruesome – and most likely fatal – act carried symbolic overtones, although Lawrence was spared this fate.

Before the party left ‘Formosa’ they opened fire upon Lawrence’s overseer, their shot grazing him, before stealing four horses and setting fire to all the outbuildings, ricks of corn and oats, three year’s worth of wool bales, and the homestead itself. One newspaper believed the damage totalled over £3000, the most substantial single loss from bushrangers recorded in the colony. It is impossible to conceive that such a traumatic event did not impact upon Lawrence’s life, although it is not something he mentioned in his diaries, nor was it recalled by any of his friends when they talked of him.

Lawrence’s interest in botany did not stem purely from a love of plants. He had an enquiring mind, and sought some form of intellectual and cultural endeavour. Furthermore, a working knowledge of native plants and their

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associations could be a useful tool when assessing future land purchases, indicating the bedrock, drainage and soil nutrition of a site.

‘That distant and most interesting portion of Australia’¹⁰

Lawrence displayed an independent curiosity toward natural history before he had been introduced to Hooker, recording weather observations and thermometer readings alongside most diary entries. He collected seeds from plants surrounding his property, as well as planting some Australian natives such as *Hibiscus*. By late 1829 he had begun to employ the Linnaean classification system, and clearly enjoyed the challenge of identifying different species, such as in the genus *Anthericum* (now *Bulbine*). In this task Lawrence displayed his grasp upon taxonomy, first examining the leaves before turning to the anthers to determine distinct characters to separate the species.¹¹ His prime reference text in 1831 was an 1806 edition of Turton’s *Linnaeus*, which he found frustrating to use as it lacked most of the genera found in Australia.¹² His later acquisition of Smith’s *Introduction to Botany* would have opened up new areas for research, and Brown’s *Prodromus* even more again.¹³

When it came to expanding his botanical education, Lawrence at first relied solely upon the scientific texts he had brought from England, and

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¹¹ R.W. Lawrence diary, 21-24 Oct, 6 – 8 Dec 1829, QVMAG CHS 53 33/2.

¹² As early as 1822 Loudoun criticised Turton’s *Linnaeus* as being ‘very imperfect’, but agreed it was the best global overview of plants available at the time. J.C. Loudon, *An Encyclopaedia of Gardening…* (London, 1822), p. 484.

¹³ Lawrence received a copy of the *Prodromus* along with the current edition of *Botanical Miscellany* from Hooker in May 1831, immediately engaging with the natural system as used by Brown. R.W. Lawrence to W.J. Hooker, 20 May 1831, Burns and Skemp, *VDL Correspondents*, p. 16.
discussions with his father. There were some attempts to form scientific societies in southern Van Diemen's Land in the late 1820s, but these usually fell apart due to political and social tensions. In Hobart the Van Diemen's Land Mechanics’ Institute enjoyed peaks and troughs in attendance. Although counting few tradesmen amongst its members, it strove to provide a lecture series on practical subjects such as astronomy, chemistry and steam engines.  

At the end of 1829 the recently arrived Dr John Henderson sought to create a more elite cultural group, the Van Diemen's Land Philosophical Society, that could publish on local topics and establish a natural history museum. Despite his relative isolation in the north of the colony, Lawrence was keen to be involved, applying for the appointment of gardener to the society, but was dismayed when he received no reply to his letter. Falling foul of several powerful colonists, Henderson’s expansive plans collapsed, the society limping along for a year before dissipating. As Colin Finney concludes, before the mid-1830s individuals, not groups, undertook the substantial work on natural history in Van Diemen’s Land.

While there was no formal local group for Lawrence to join, there were individuals who shared his fascination for native plants. His father William was a

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15 R.W. Lawrence diary, 27 Dec 1829, 11 Jan 1830, QVMAG CHS 53 33/2. This group was established by the energetic surgeon John Henderson, who attempted to create group of gentlemen to discuss natural history. Amongst other things, he wanted to radically revise botanical nomenclature. Henderson’s scope combined with elitism caused divisiveness and a rapid downturn in interest. Within two months the society was struggling, and Henderson left for New South Wales in March 1830. Matthew Curling Friend injected some enthusiasm in May, but interest had waned and the society had folded by Christmas of that year. Henderson had initially envisioned an experimental garden and a natural history museum, but the garden the Lawrence applied to tend did not eventuate. Further discussion of this society and other similar groups can be found in Finney, *Paradise Revealed*, pp. 35-38.
botanical enthusiast and often accompanied his son on day walks around Launceston. Robert was friendly with other gentlemen in town, dining at their houses and taking field trips with them. Being unmarried in 1830, his most constant companions in the field were his convict servants.

When he did marry in 1832, it was to Anne Emily Wedge, the niece of the government surveyor, a man with a long-standing interest in natural history (it was from Wedge that Lawrence borrowed a microscope in 1829). Anne proved to be an excellent wife for a naturalist, learning how to skin and stuff birds that were sent on to William Hooker’s second son Joseph. Hooker remarked she had done ‘very well indeed’, particularly as she could not have had much experience beforehand. Indeed, he believed her to be ‘a most excellent coadjutor’, and provided hints for even better results, and the offer of any other equipment she may desire to pursue the practice.

On collecting trips Lawrence was almost always accompanied by his servant George Morand. If Morand was unavailable, Lawrence’s other servant Dredge would join him. The benefits of knowing the colonial environment were clear to many settlers. They would commonly examine the stone, soil and minerals on their property, or the content of water in nearby springs. They loaned books and equipment to each other, discussing their findings in the evenings by the fireside. Lawrence recognized the value of sharing knowledge with others,

17 R.W. Lawrence diary, 6 Dec 1829, QVMAG CHS 53 33/2.
18 R.W. Lawrence to W.J. Hooker, 15 May and 16 May 1833, Burns and Skemp, VDL Correspondents, pp. 24-25; W.J. Hooker to R.W. Lawrence, 27 Dec 1833, ML GC 8. Unbeknownst to Hooker, both Robert and Anne were dead at the time he wrote this letter.
19 George Morand was an experienced plant collector before arriving in the colony. His story is further discussed in chapter 3.
20 Aside from the example of Wedge’s microscope, Lawrence examined a ‘chrystalized substance’ from Dr. Westbrook that proved to be silver nitrate along with some amber; he shared and
joining settler Francis Lord in an attempt to establish a ‘hebdomadal meeting for
the purpose of improving ourselves in the science of Chemistry and Botany’. At
their inaugural session they read and discussed Thomas Thomspon’s’s Introduction
to *The Elements of Chemistry*, followed by the introduction to James Smith’s *An
Introduction to Physiological and Systematical Botany*. This seemed a promising
start to a gentleman’s discussion group, but it ended abruptly, as Lawrence was so
unwell that night he had to go early to bed.21 Although the meeting was a success,
the pair did not meet again that year.

Having a wealth of family properties to visit increased Lawrence’s
exposure to different types of colonial landscape. Between 1829 and 1833 he
traversed the north of the island from his base in Launceston, northeast to St.
Paul’s Plains, northwest to Cape Grim, south to Nugent, and southwest to
‘Formosa’ at Cressy (fig. 5). In 1830 he cut through the centre of the island,
walking from his house through the highland lakes and southeast to Richmond
and Sorell.

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discussed books with Mr. Ashburner, at whose house Lawrence and Morand stayed when a field
trip was interrupted for two days by heavy rain, Lawrence later repaying the favour with packets
of native seeds; he also had dinner with a Captain Ashmore who brought with him his sextant and
‘false Harrison’ – a chronometer – with which they observed the latitude and longitude of
Launceston. R.W. Lawrence diary, 14 May, 24-25 Jul, 13 Aug 1830, 6 Feb 1831, QVMAG CHS
53 33/2.

21 R.W. Lawrence diary, 19 Jan 1831, QVMAG CHS 53 33/2.
Figure 5 Map of Robert Lawrence’s collecting localities in Van Diemen’s Land, 1829-1833.
Between Launceston and ‘Formosa’, he passed the magnificent Cataract Gorge to get to Entally, before moving west towards Deloraine, then south along the Liffey River. This was open dry forest, dominated by the twisted grey trunks of *Eucalyptus* and the brown-green pendants of *Allocasuarina*. Hot-dry winds blew through the leaves, dead branches cracked under foot, and dry ribbons of bark hung from trunks, piled in branches and heaped at the bases of the trees. An understorey of tall, rangey *Acacia*, *Hakea* and *Bedfordia* provided loose, contrasting greens, and *Poa* grew in large tussocks amidst the scrub. Climbing up onto the central plateau the air became sharper, with the vegetation adapting to suit. Here the same species became stunted, and were replaced by hardier sorts – *Eucalyptus gunnii* for *E. amygdalina*, *Hakea epiglottis* for *H. lissosperma*. This region was described ten years later for a London audience:

> on reaching the top you become exposed to the full force of the westerly wind, which is at that altitude cold even in the height of summer, as compared to the temperature you had been enjoying in your ascent on the lee side of the range…The shrubs cling close to the surfaces of the rocks, and in sheltered gullies and small valleys alone do the plants venture to erect themselves in their natural position.22

The weather could change suddenly, bringing in rain, freezing temperatures or blinding cloud obscuring all view of surroundings. It was the manner in which these different environments occurred so close to each other that excited both colonial collectors like Lawrence, and London’s scientific elite.

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The centre reaches out to the periphery

As Van Diemen’s Land had acquired a reputation for housing organisms more unusual than those found on the mainland of New Holland, it attracted the attention of natural historians in Britain. By 1823 William Jackson Hooker, Professor of Botany at Glasgow University, had begun actively searching for a Vandemonian correspondent. At first he sent drying papers and instructions out to Launceston merchant Thomas Scott in the hopes of arousing some interest. His need for a reliable, locally based resident in such a remote location was not just a desire to possess a full canon of global collectors; Hooker had already published plants from Van Diemen’s Land, many that had been collected by Robert Brown, but Brown’s collection was finite. If Hooker wished to continue to publish new species, he needed new material.

Having collectors in situ had other benefits too; they were relatively cheap compared to sending out scientists on expeditions, they could provide particular specimens on demand, and they could supply field notes and other details as needed. Working with dried specimens and what notes accompanied them provided ample room for error. This error rate increased as the quality of the specimen decreased. Having a colonial collector at the ready to supply supplementary material as it was required was a distinct advantage for those working in the distant metropolis.

In his 1820 Musci Exotici Hooker included Leskea sciuroides, a moss collected by Robert Brown from the island. Working only from dried specimens, Hooker produced a short description as he claimed it lacked ‘any one particularly

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23 Today Leskea is known as Glyphothecium.
striking feature’. This may have been due to the poor quality of his material, adding it was ‘very much injured’, and that it was ‘by habit alone that I guess at its genus’. Without having a correspondent to call upon to collect fresh material, all Hooker could do was publish his best ‘guess’.

To make matters more confusing, Hooker’s illustration of the moss showed several erect branches reaching into the air, when in life the moss grows draped over rocks (fig. 6). The error would have been easy to make working only from bad specimens, but is puzzling when both the habit and the name are taken into account. Hooker’s description stated that the moss was procumbent in its growth. But the species name ‘sciuroides’ means ‘like a squirrel’, suggesting each leafy stem reached upwards into the air like a squirrel’s tail. If Hooker had had access to a local correspondent, he could have requested further specimens and field notes which would have prevented the error.

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24 W.J. Hooker, Musci Exotici: Containing Figures and Descriptions of New or Little Known Foreign Mosses and other Cryptogamic Subjects 2 (London, 1820), t. CLXXV.
Figure 6 *Leskea sciuroides* (now *Glyphothecium sciuroides*) illustrated by William Hooker, mistakenly showing the procumbent, draping moss as being erect and reaching. W.J. Hooker, *Musci Exotici* 2 (London, 1820), t. CLXXV.

Without a scientific society for Hooker to address his enquiries to, he could only hope to wait for a reply from Scott. 25 Four year later Scott hesitantly responded, apologising that he was ‘no botanist’ and ‘went very awkwardly about it’ when putting together a collection of seeds and plants, involving a lot of false starts. He did not have the time or interest to continue collecting for Hooker, but passed the correspondence over to Robert Lawrence, who was keen to offer his skills as a collector, ‘such as they may be’. 26 Lawrence was the ideal candidate for

25 As Burns and Skemp point out, it is important to note there were two Thomas Scott’s residing in Van Diemen’s Land at this time. This one was Thomas Scott, merchant. He should not be confused with Thomas Scott, surveyor, also residing in Launceston. Both had a brother named James, which only adds to the confusion. Burns and Skemp, *VDL Correspondents*, p. 3.
26 R.W. Lawrence to W.J. Hooker, 1 Jun 1830, Burns and Skemp, *VDL Correspondents*, p. 9.
a colonial correspondent. He was young, fit, intelligent, had an interest that was not connected to the need to ensure his livelihood, and had sufficient income to purchase paper and books, and to construct tin shipping cases.

Being a man of independent means, Lawrence was in an enviable position that many others were not. He was able to overcome his isolation, purchasing books from London that were not available in the colony, there being no local public resources for botany at the time. In her work on artisan botanists in England, Anne Secord discusses how those on lower incomes would meet in their spare time at the pub, pooling financial resources to make a group library. Lawrence had a greater income than an English artisan, but his purchasing power was limited by the great expense in not only purchasing each book, but also then paying for it to be shipped to Launceston.

In his first parcel to Glasgow, compiled during the winter of 1830, Lawrence included two packages of seeds. During the next year he focussed upon procuring seeds of native plants, providing descriptions of the plant upon each seed packet. He explained his inexperience and anxiety to fulfil Hooker’s wishes:

> The principle [sic] obstacles to my becoming scientific, are as you may conceive, the total want of persons with whom to converse on such subjects, and of Books. If therefore you will occasionally furnish me with a little knowledge, I will furnish you with new or at least rare species of plants to examine and describe, with their peculiarities as regards, soil, sizes, habitat &c &c.

It was nearly a year before Hooker’s reply reached Launceston, during which time Lawrence busied himself with all kinds of natural history, including the dissection of a platypus and an echidna, detailing a full description of each in

28 R.W. Lawrence to W.J. Hooker, 1 Jun 1830, Kew DC 72.
his journal. He had amassed a wealth of specimens which at first he deemed too numerous to prepare to accompany his letter of 8 May 1831, but two weeks later Lawrence was energised after receiving Hooker’s reply to his first letter, enclosing a copy of Brown’s *Prodromus* for the aspiring young botanist.

In the space of ten days Lawrence worked tirelessly (missing church) to prepare some specimens ready for the *Czar* before she left port. He purchased all the cartridge paper available in Launceston, and a made-to-order tin case to hold the finished sheets. He showed his efforts to his father before sealing it up and setting it aboard, accompanied by an apologetic letter in which he explained that he had identified so few of the plants, ‘for in England I never even thought of the subject of Botany, and here I am entirely self-taught’. Lawrence may have been inexperienced, but he was willing to devote time, money, and enthusiasm to a concerted effort to ‘become scientific’.

He added a further, longer letter to that of 8 May, promising ‘as rich an *Herbarium* of the plants of this country by degrees as it is possible for me to obtain’, and that he would devote all his spare time to his plants. Aside from his ability to collect plants that Hooker could not otherwise obtain, Lawrence demonstrated how valuable a correspondent he promised to be: he already owned and used a microscope, he was excited at the prospect of branching out into collecting cryptogams, the Lieutenant-Governor had promised to send him a ‘capital delineator’ to capture orchids and other plants, and he displayed a sure

30 R.W. Lawrence to W.J. Hooker, 20 May 1831, Kew DC 72.
footing with the Linnaean system and an openness to learning the newer natural method of classifying plants.31

The artist Lawrence had been promised was William Buelow Gould, a man convicted for theft and transported to Van Diemen's Land in 1827. Gould’s skill as a natural history artist had already been recognised by his master Dr Scott in Hobart Town, who employed him to paint native flowers.32 At home Lawrence had sown a collection of native plants according to the Linnaean system, but he had not arranged his dried specimens in any particular way, suggesting that his collection was still small enough for him to keep track of individuals by their collecting number alone. Although not knowing the natural system, he recognised that it was ‘so universally adopted’ it would be worthwhile learning and applying it to his herbarium.33

In the *Prodromus* Lawrence had access to the most accurate and complete Australian flora then published. It also taught him to think in a taxonomically similar way to Brown, following the natural system developed by Bernard de Jussieu and his nephew Antoine-Laurent de Jussieu, as part of a new era for scientific classification. Hooker’s encouragement of Lawrence ensured a constructive collector/benefactor relationship. Put simply, it was vital that both parties thought along the same taxonomic lines. Conflict in this area could only led to disagreement, argument and friction, as William Swainson and Ferdinand Mueller were later to demonstrate.34

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31 R.W. Lawrence to W.J. Hooker, 20 May 1831, Burns and Skemp, *VDL Correspondents*, p. 16.
32 Gould, Scott and Lawrence are discussed further in chapter 3.
33 R.W. Lawrence to W.J. Hooker, 20 May 1831, Burns and Skemp, *VDL Correspondents*, p. 16.
34 Easily accessible discussion on Linnaeus and Jussieu and their classification systems is examined in numerous places and numerous ways, such as by Burns and Skemp in *VDL*.
Lawrence was typical of self-taught naturalists, working with the few materials he had to hand. Having used almost all the cartridge paper available in Launceston, he ordered more from England, as well as asking Hooker to send some with his next package.\textsuperscript{35} The shortage of paper was an issue that plagued many collectors – with no paper to hand fresh specimens would rot in a tangled mess, or dried specimens would sit in a case, slowly knitting together, later to become inseparable and unidentifiable. Although Lawrence found the \textit{Prodromus} and \textit{Botanical Miscellany} supplied by Hooker to be ‘invaluable’, after close inspection he noticed their limitations – particularly as Brown’s work was only the second volume, and did not include many of the larger families such as Myrtaceae, Asteraceae and Mimosaceae.\textsuperscript{36} Lawrence tried his best to identify everything he collected, but found the lack of a comprehensive reference work a major setback – as he noted to Hooker, those three families along with the Fabaceae, were all major components of the Australian vegetation, and with no guide from Brown, Lawrence had little idea of how to identify or place such plants within the natural system.\textsuperscript{37}

It was common practice for the European expert in this period to use his Australian (or other colonial) correspondents purely as the collecting arm for their broader scientific studies. These men (as they mostly were) would collect and identify, but not evaluate or name new species, sending them back to metropolitan

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Experts for further study. Lawrence was willing to collect all manner of flora and fauna at Hooker’s request, keeping a journal of his field trips. His writing showed his comfortable recognition of species using their Latin binomials, and an eagerness to explore further afield. Hooker would have been delighted to have such a willing student, who was clearly capable, and had plenty of spare time to indulge in natural history.

The first ‘short excursion’ Lawrence noted in his diary was in the summer of 1829, where he revealed his reliance on his convict servant: ‘Moran and myself making preparations for a short excursion in the bush’. They were joined by two other gentlemen, and the four set off towards the Black Hills camping out overnight. Lawrence found ‘several rare plants in flower’, and he practised his botanical Latin by writing a full description of a *Pimelea* he named ‘Monandria Monogynia’. As the men headed home the next day, the heavens opened upon them, soaking them through. With no dramatic discoveries and the unpleasantness of the walk home, Lawrence summed up the trip as ‘unprofitable’.

At this point in his collecting career Lawrence expected to find new treasures on every excursion and expand his own knowledge. As a result, the one new *Pimelea* he found was deemed insufficient reward for the effort expended. His list of the descriptive elements of the plant show his engagement with scientific language, copying the style used by Smith and Linnaeus in their works. Even before he had been introduced to Hooker, he was conforming to an

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38 This was long-standing assumption of the metropolitan botanical elite. Janet Browne discusses this point further in Browne, ‘Biogeography and Empire’, pp. 312-314. Matthew Friend encouraged the same in his speech to the Van Diemen’s Land Society in 1830 in chapter 1. See also Finney, *Paradise Revealed*, pp. 1-3; Endersby, *Imperial Nature*, pp. 208-210.

39 R.W. Lawrence diary, 21-22 Nov 1829, QVMAG CHS 53 33/2.
established style, curbing the inclination to write reams of his own notes. In later years William and Joseph Hooker provided botanical texts to new correspondents for similar reasons. Such books not only furthered knowledge, but also shaped collectors by encouraging them to conform to a preferred style of field notes.

For Lawrence botany was far more than a gentlemanly pastime. The colony was only twenty-six years old and, in European terms, little understood. Botanical knowledge was a useful tool for the pastoralist who needed to know which native grasses could feed sheep and cattle and which caused illness. Plants could indicate poor or boggy ground, or could reveal rich soil suitable for cultivation. For example, Lawrence applied his reading of Linnaeus’ *Species Plantarum* to his examination of a much-discussed native herb on the west coast, *Lotus corniculatus*. Linnaeus said that that in Europe cows, goats and horses ate it, while pigs and sheep avoided it. In Van Diemen's Land Lawrence observed that sheep ate *Lotus* that grew near the coast, opening up a potentially valuable new source of fodder to the Van Diemen's Land Company.40

The Black Line: the ultimate field trip

Aside from his trip to the Black Hills, Lawrence went to Circular Head in the northwest, and enjoyed a nine-day walk from Launceston across the Norfolk Plains to ‘Formosa’ and back again. In 1831 he accompanied Mr Collett up to George Town, his father William to Penquite to collect moss and lichen, and went

40 R.W. Lawrence diary, 5 Dec 1829, QVMAG CHS 53 33/2.
with Mr Kennedy on another collecting trip along the Cataract Gorge.41 These efforts were all dwarfed, however, by his participation in the ‘Black Line’, the colonial government’s expedition intended to end the violent clashes between the colonists and Aborigines.42

Devised by Lieutenant-Governor Arthur in 1830, the Line involved the strategic placement of soldiers, colonists and convicts across the island, to walk in a pincer-like formation to the southeast, sweeping all Aborigines encountered into captivity on the Forestier and Tasman Peninsula. It was a military operation on a scale never before seen in Australia, involving some 2,200 men, and costing some £30,000, or about half of the annual colonial government budget.43

Lawrence was one of dozens of dutiful colonists who volunteered to lead a party as part of a 350-strong detachment of men charged with walking from Norfolk Plains in the north, through the Western Mountains, between the highland

42 Several other attempts to quell the violence had already failed, including the introduction of bounties on Aborigines and the use of roving parties of armed men who scoured the districts to round up the ‘dangerous natives’. N.J.B. Plomley estimated that between 1824 and 1829, 418 separate incidents occurred involving Aborigines and Settlers. In 1829 alone there were 148 incidents. In that year the total adult European population of Van Diemen’s Land was approximately 20,000, and the Aboriginal population approximately 250. Most attacks were aimed at landowners or stockkeepers in isolated huts on the frontier. Due to the small European population, it was likely that every landowner knew at least one person affected by the violence. 1830 saw the highest number of Aboriginal/settler clashes with 222 incidents noted, the August of that year containing 41 incidents – the highest number recorded for any single month between 1824 and 1831. That was approximately six weeks before Arthur announced the beginning of the Black Line. N.J.B. Plomley, The Aboriginal/Settler Clash in Van Diemen’s Land 1803-1831 (Hobart, 1992), pp. 25-27.
Chapter 2: Making Connections

Correa backhouseana Hook.

lakes, and southeast across the settled districts to Richmond.44 Like many other settlers, he supported the idea of the Line, having personally experienced the threat of attack when out collecting. The blind traveller and observer James Holman noted in April 1830 that Lawrence was ‘one of the best botanists in the island. In the course of his rambles through the woods, he has had two or three narrow escapes from being speared by the natives’.45 Lawrence and his men covered some 250 kilometres in forty-two days on foot, suffering physical, mental and emotional exhaustion. During the expedition Lawrence found solace in natural history, escaping the rigors of the trek by focussing on collecting new plant specimens.

Lawrence was considered suitably experienced to lead a party of men, despite only having walked as far as the highland lakes in the past. His earlier trips in the field had prepared him for living in the bush, but a six-week expedition over the central highlands would prove very different to a ten-day trek where Lawrence could shelter at a friend’s house when it rained. He mustered

44 The Black Line was the most significant domestic military operation in Australia until the invasion of Darwin in the Second World War. The desperation of the colonial government was reflected in the ‘volunteer’ process used, whereby all ticket of leave convicts were required to participate, being armed, clothed and fed from the government stores. Despite the enormous resources thrown at the campaign, it was a complete failure, resulting in the shooting of two Aborigines and the capture of two others. See G. Arthur, Van Diemen’s Land: Copies of all Correspondence between Lieutenant-Governor Arthur and His Majesty’s Secretary of State for the Colonies, on the Subject of the Military Operations lately carried on against the Aboriginal Inhabitants of Van Diemen’s Land (Hobart, 1971).

45 Lawrence and his family experienced further animosity between Aborigines and settlers. One of his father’s huts had been plundered in 1829, and in 1831 one of William Lawrence’s stockkeepers was killed with a waddy. Lawrence also described Mr Monagan who was attacked and beaten around the head, and the killing of Captain Thomas and his overseer Parker at Port Sorell in August. J. Holman, Travels in China, New Zealand, New South Wales, Van Diemen’s Land, Cape Horn, etc:etc, 2nd ed. (London, 1840).p. 432. E. Baigent, ‘Holman, James (1786-1857)’, Oxford Dictionary of National Biography, online ed., accessed 11 Aug 2011, http://www.oxforddnb.com/view/article/13579. R.W. Lawrence diary, 29 Mar, 7 Sep 1831, QVMAG CHS 53 33/2; Plomley, Aboriginal/Settler Clash, pp. 81, 97. See also Boyce, Van Diemen’s Land, p. 289.
eight ticket of leave men, a convict constable and two of his assigned servants, including his able botanical assistant Morand for the expedition, setting off on 5 October from Launceston. From the outset his task was not easy, and his party less than willing. Four men ran away before the group had left town, and a fifth conveniently ‘fell behind’ on the walk.

For the next six weeks Lawrence struggled to keep his men mustered together, directing them as best he could. The weather was bad, everything they carried remained cold and wet, the terrain was rough and the company poor. Within ten days the men had started to quarrel so much that they had to be split into separate groups. To make matters worse, the sharp prickles of the vegetation tore their clothes to ribbons and the hard rocks wore holes in their boots. Lawrence complained about the putrid meat in their rations, and lacking proper directions, a compass or a map, the party got lost several times, extending their trip by days at a time.46

When not looking after his men, Lawrence was happily distracted by the changing landscape he encountered on his way into the mountains:

The Stringy Bark gives place here, to a dwarf species of Eucalyptus; and the dwarf alpine shrubs, together with the snow, give to the place, the air of extreme barenness [sic] and bleakness.47

Aside from carrying equipment and provisions, Lawrence’s party, or at least his two servants, would have been weighed down by the extra burden of seeds and specimens, Lawrence adding all the time to his collection. As they went,

46 On top of this came illness and other problems. Ford, a ticket of leave man, suffered from a ‘severe’ attack of scrofula in the leg and was hardly able to walk. Lawrence’s servant Edward Thornberry apparently suffered from ‘a severe attack of laziness’. R.W. Lawrence diary, 9-17 Oct 1830, QVMAG CHS 53 33/2.
47 R.W. Lawrence diary, 8 Oct 1830, QVMAG CHS 53 33/2.
Lawrence took the opportunity to dissect any unusual animals he met with, including snakes and a male echidna. In mid-October he was excited to note a new species of dioecious *Casuarina*, but was frustrated he could not attend fully to his discovery due to the necessity to fulfil his orders.\(^{48}\)

As the trek wore on, Lawrence became increasingly dejected with his task and wrote less in his diary about natural history and more about problems amongst his men, the rations, and the general confusion the Line seemed to be in. There was little opportunity to indulge in observation and note taking when the group was moving each day. When they reached Richmond, a stay of several days provided Lawrence with the time to collect a new orchid, and as they moved into the southeast he was taken with some of the differing vegetation, including ferns and acacias, and impressed with the large trees, both wide and tall.

Lawrence’s diary for 1830 ended abruptly on 17 November when his party reached Sorell in the south. He no longer wanted to lead his group of ‘disgusted, and grumbling’ men, who in turn only followed him in order to receive their allotted payment. Lawrence was tired and dejected, showing little surprise when he heard the Line had been an abject failure, and that at least two parties of Aborigines were known to have slipped through to safety. The physical effort took its toll on Lawrence who reflected one evening in his camp. ‘I was so dreadfully fatigued that I was quite unable to accomplish [the] journey, being like some of the men scarcely able to stand’.\(^{49}\)

The effort of the Black Line drained Lawrence’s physical and emotional health, and it took two months before he felt ready to recommence his diary.

\(^{48}\) R.W. Lawrence diary, 19 Oct 1830, QVMAG CHS 53 33/2.
\(^{49}\) R.W. Lawrence diary, 22 Oct 1830, QVMAG CHS 53 33/2.
putting the blank between entries down to his state of ‘confusion’. Like all well-intentioned diarists, he launched into the New Year determined to make regular entries, recording everything he did on the farm, in the hope that notes of successes and failures could be used to draw ‘scientific conclusions’. If Lawrence needed motivation to recommence his botanising, it came first when he received his reply from Hooker in May 1831, and later in the year when he befriended a recent arrival.

Robert Lawrence meets Ronald Gunn

One year younger than Lawrence, Ronald Gunn probably met Lawrence soon after he moved to Launceston in December 1830. He had arrived in Hobart Town earlier that year with his wife and two children, joining his brother William who was employed there as the Principal Superintendent of Convicts. Ronald was accustomed to life within the military, and slipped easily into government work as his brother had, first as Superintendent of Convicts at the prison barracks in Hobart. Soon afterwards he was transferred to Launceston as Assistant, and later Superintendent of Convicts for the north of the colony. These were positions of great responsibility, but required long hours and a constant association with the bonded class.

It is difficult to pin point the first meeting of Lawrence and Gunn, as little in the way of correspondence between the two men appears to have survived. It has been assumed that once Gunn moved to Launceston in December 1830, the
two men met and became firm friends. The strength and importance of their friendship is not in doubt, but Lawrence’s diary would suggest that the two men did not meet – at least on social terms – until September 1831 at the earliest.

Thereafter, their friendship rapidly developed as they discovered a mutual passion for natural history and other sciences, sharing ideas, equipment, books and the joys of finding new species. They saw each other so frequently that written communication between them was probably unnecessary, or made up of short, inconsequential notes, with only one extant letter remaining from one to the other. The letter from Lawrence to Gunn was tucked inside Antoine Lavoisier’s seminal chemistry text *Elements of Chemistry, in a New Systematic Order, Containing all the Modern Discoveries*. Lawrence’s copy was the fourth edition of the English translation, a two-volume set of which only the first now survives. Lawrence gave it to Gunn, writing in the front end paper: ‘To R.C. Gunn with R.W. Lawrence’s compliments, 18 September 1833’. A short letter with the same date explained that Lawrence thought Lavoisier would ‘please’ Gunn, and could

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50 See W. Baulch, ‘Ronald Campbell Gunn, F.R.S. F.L.S.’, in Burns and Skemp, *VDL Correspondents*, pp.xiii-xix. Baulch’s succinct biographical note has been most frequently used as the source of Gunn’s biographical details. After mentioning Gunn’s northern appointment he writes ‘His [Gunn’s] duties, and the social life of the town, soon brought him in contact with a young man of his own age, Robert William Lawrence’, p. xiv.

51 The closest I can pinpoint for their meeting is late 1831. In Gunn’s first letter to Hooker he mentioned that he had been collecting since the previous December. Lawrence recorded the social calls he made and visitors he received in his diaries between 1829-1831. These events included dining with locals in Launceston, going for walks around the countryside and visiting neighbouring farms. He received the colonial artist John Glover to sketch the town and surrounding countryside and witnessed the execution and dissection of two convicted murderers in July 1830. With so many details included, it would be unusual for Lawrence not to mention Gunn’s name if they had spent time together. That Gunn’s name never appears suggests that they were not well acquainted, although due to Gunn’s position it is likely the two men had met in an official capacity. R.C. Gunn to W.J. Hooker, 18 Aug 1832, Burns and Skemp, *VDL Correspondents*, p. 21. For Glover’s visit see R.W. Lawrence diary, 2 Mar 1831; for the execution and dissection see 2 Jul 1830, QVMAG CHS 53 33/2.

52 This lack of written communication when both sides of the correspondence are in frequent physical contact is later seen when Joseph Hooker is in Hobart Town with Gunn in 1840. See chapter 5.
he please have his copy of Thomas Hodgskin’s *Travels in the North of Germany* back?°

The Lavoisier volume was not a passive gift, as Lawrence had inserted annotated notes on small squares of paper between the pages for certain elements, pointing out subjects he found especially interesting and wished to share with Gunn. His careful notes, particularly regarding places where he found Lavoisier to be incorrect, showed Lawrence’s close reading of the book, the work likely to have been a staple in his library.

Of most interest amongst Lawrence’s annotations was the note about Camphor: ‘Mr. Backhouse told me that he had seen an [sic] Eucalyptus which bore a true Camphor. Do you know anything about it –? If there be such it might eventually turn out useful’. Lawrence was referring to the cider gum, *Eucalyptus gunnii*, which he had mentioned in his 1833 journey to the mountains. It exudes a potable sap that was consumed by Aborigines and white settlers in the spring, and was a subject of later study by Gunn.

53 Until this thesis was written I do not believe any correspondence was known to exist between the two men. This note was chanced upon when browsing a friend’s library. The book and letter remain together in a private collection. A transcription of the note and the annotations from the book can be found at the end of this thesis as an appendix. Thomas Hodgskin was an economist, radical political theorist, and journalist. His *Travels in the North of Germany…* (1820), forwarded his idea of a minimalist government, allowing freedom and liberty for the individual. Whether Gunn approved of the text or not is unknown. D. Eastwood, ‘Hodgskin, Thomas (1787–1869)’, *Oxford Dictionary of National Biography*, online ed., accessed 13 Jul 2011, http://www.oxforddnb.com/view/article/37556.

54 It is unclear if Lawrence’s annotations were written for his personal use, or were intended particularly for Gunn. That the notes were left in place for Gunn to peruse suggests that either way Lawrence wished to share his thoughts on the work with his friend. No doubt it was Lavoisier who Lawrence turned to when examining the chemical make-up of Mr Talbot’s mineral water. R.W. Lawrence diary, 9 and 24 Apr and 3 Jul 1831, QVMAG CHS 53 33/2.

Lawrence’s letter and gift provides evidence of the exchange of political and scientific thought in the colony, independent of the metropole. He may have been encouraged by and taken advice from Hooker, but writing to Glasgow was not Lawrence’s only outlet for the exchange of scientific ideas. It demonstrates that even in this early period, colonists were engaging intellectually with natural history amongst themselves on their own account. This is important because it reveals that collectors like Lawrence were not merely fulfilling the wishes of the scientific elite in Britain. Unfortunately, the copy of Lavoisier is the only known example of this sort of exchange between Lawrence and Gunn, but the extent of the annotations suggests that it was not an isolated occurrence. Gunn kept the book, listing it as part of his extensive library catalogue in 1848. 57

The friendship between Lawrence and Gunn was strengthened when Lawrence introduced him by letter to William Hooker as, ‘a gentleman who has lately acquired a passionate taste for the science of Botany, and who has become an enthusiastic collector’. 58 In effect, Lawrence acted as a colonial agent for Hooker, helping to extend his collecting network. With a common purpose, the two friends busily collected from the summer of 1831 to mid winter 1832, Gunn sending his first package for Hooker in August that year along with letters of introduction from Thomas Scott (Gunn was ‘indefatigable in his exertion’ toward botany), and Lawrence (‘a zealous collector’). 59 For the next year they shared in

58 R.W. Lawrence to W.J. Hooker, 2 Apr 1832 Burns and Skemp, VDL Correspondents, p. 18.
59 Lawrence and Scott’s introductions were dated May 1832, but it was not until mid-August that Gunn had the opportunity to forward them on with his own letter. R.W. Lawrence to W.J. Hooker
their interest, although impromptu get-togethers were no longer a possibility after Lawrence moved out to ‘Formosa’.  

The first London audience

If Lawrence had measured his effectiveness as a correspondent in publications, he would have been pleased with how rapidly Vandemonian plants went into print by Hooker’s hand. Hooker published a series of botanical journals filled with articles describing new plants and places around the globe, essential reading for any aspiring botanist. It was in these serials that Hooker began publishing his descriptions of new species sent to him by Lawrence and other local collectors including Gunn, Backhouse and Scott. Between 1834 and 1836 Hooker published 111 of their plants, forty-four of them new to science. Lawrence had provided fifty-seven specimens alone for Hooker’s 1834 *Journal of Botany*. In the same issue Ronald Gunn, described by Hooker as a ‘zealous’ collector, contributed a further sixty-eight.

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29 Jun 1832; T. Scott to W.J. Hooker, 12 May 1832; R.C. Gunn to W.J. Hooker 18 Aug 1832; Burns and Skemp, *VDL Correspondents*, pp. 19-20.

60 When Gunn explained to Hooker that he had no reference books of his own he was quick to add that he had used Lawrence’s library at ‘Vermont’, but the works were considered too valuable for Gunn to borrow, and after moving 28 miles out of town to ‘Formosa’, a visit to read a book was more difficult to accommodate. R.C. Gunn to W.J. Hooker, 18 Aug 1832, Burns and Skemp, *VDL Correspondents*, p. 22.

61 William Hooker’s botanical serials are confusing to work with due to the similarity of names he used in his titles. This list included the *Botanical Miscellany* (1830-1833); *Curtis’s Botanical Magazine* (1833-); *The Journal of Botany: Being a Second Series of the Botanical Miscellany* (1834-1842); *Companion to the Botanical Magazine* (1835-1837); *The London Journal of Botany* (1842-1848) and *Hooker’s Journal of Botany and Kew Garden Miscellany* (1849-1857).

62 Eleven specimens from Scott and one from Backhouse were also cited in the article, where one published description could cite several separate plant specimens. W. J. Hooker, ‘Contributions Towards a Flora of Van Diemen's Land; from Collections sent by R.W. Lawrence, and Ronald Gunn, Esqrs., and by Dr. Scott’, *The Journal of Botany: Being a Second Series of the Botanical Miscellany* 1 (London, 1834), pp. 241-258.
This was the first London-based publication of Vandemonian plant specimens collected by residents at the colonial periphery. In recognition of the crucial role in the endeavour played by Gunn and Lawrence, Hooker named a new species for each of them: *Correa lawrenceana* was ‘worthy of bearing the name of a gentleman who has employed himself so zealously in making known the Natural History productions of Van Diemen's Land.’

*Ranunculus gunnianus* was ‘assuredly among the most remarkable and beautiful species of the Genus’, and although lacking any further personal accolades for Gunn as a naturalist, Hooker dedicated a plate to the ‘alpine buttercup’ (fig. 7).

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The number of publications including Vandemonian plants increased each year, although this did not completely remove the possibility of publishing errors based on misinterpreted material as Hooker had done with *Leskea sciuroides*. One of the more obvious errors was Hooker’s illustration of *Correa backhouseana* in 1837, which included a stunning line drawing of the plant with tubular flowers trumpeting towards the skies (fig. 4 at chapter heading). Hooker noted that the flowers could be erect or pendulous, but in life the dusky green flowers of *C. backhouseana* hang downwards. Hooker’s error arose from his dried specimens,
which he said had been ‘rubbed upwards in drying by the Gentn. who sent them to me’, but did not mention which gentleman it was. In this instance Gunn was not prepared to accept responsibility, but did acknowledge he would ‘endeavour to dry my specimens as much as possible like nature.’ Even with a steady supply of plants and a reliable collector, the distance between an author and their botanical subject could still cause some problems.

Hooker encouraged Lawrence and Gunn to keep journals of their ‘botanical excursions’. In particular he requested descriptions of the island and its vegetation with a view to publishing them, as such information was of great interest to his metropolitan audience. Lawrence was happy to oblige, but wished his writing to be for Hooker’s private perusal as, ‘I am as yet so deficient in scientific knowledge that I cannot give you information fit for publication – In time, perhaps, when I shall be a little older, and shall have acquired more knowledge, I may have the satisfaction of being a more useful correspondent.’ A year later he included a long manuscript, ‘Notes on an excursion up the Western Mountains’ that Hooker published – with some minor editing – in the pages preceding the ‘Contributions Towards a Flora of Van Diemen’s Land’. This was an eight-day field trip Lawrence undertook with one other gentleman, Mr. Curson, and three servants. The five men climbed to the central plateau and then

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64 In his description Hooker cited specimens from Allan Cunningham, James Backhouse and Ronald Gunn. W.J. Hooker, Icones Plantarum 1 (London, 1837), t. II.
65 The problematic illustration of Correa backhouseana and other similar issues has been further discussed by Jim Endersby, ‘A Gunn and Two Hookers’, in In the Wake of the Beagle: Science in the Southern Oceans from the Age of Darwin, eds. I. McCalman and N. Erskine (Sydney, 2009), pp. 74-87. R.C. Gunn to W.J. Hooker, 31 Mar 1837, Burns and Skemp, VDL Correspondents, p. 62.
66 W.J. Hooker to R.C. Gunn, 23 Feb 1833, ML GC 8. A journal by Gunn fulfilling this request went unpublished, but is discussed in chapter 3.
67 R.W. Lawrence to W.J. Hooker, 29 Jun 1832, Burns and Skemp, VDL Correspondents, p. 20.
proceeded to Arthur’s Lakes, Lawrence fulfilling Hooker’s desire for a description of the landscape:

The country here presents a rugged and romantic appearance, consisting of small wet flats of plains, over which are scattered projecting columns of basalt, and hemispherical masses of a kind of moss, resembling beautiful green velvet cushions, interspersed with fragments of rock, that bring to mind the appearance of ruined castles.68

Aside from the countryside, Lawrence provided a sketch of how a typical field trip unfolded, their disorganisation and reliance upon luck for food sharing similarities with his experience on the Black Line. For example, after walking six miles on their first morning, the men realised they had forgotten their shot, waiting for three hours while one of the party went back to fetch it. With a tent ‘of the most portable description’ and rations of flour, tea and sugar they set off accompanied by hunting dogs that would catch meat during the trip.69 Over subsequent days the ground they covered was so rocky and unforgiving that the dogs were rendered useless as a result of their feet being injured. Four days later in a state of hunger, the men came across a herd of wild cattle, quickly shooting one for their supper, before realising the animal was branded and part of a highland stock run.70

Despite their privations, Lawrence and his companions collected a wealth of specimens, taking time during the trip to arrange and press them as they went. Hooker published several plants that Lawrence had collected in the Journal of

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69 The ‘tent’ was a single sheet of canvass that could be slung over a bush or branch and weighed down with rocks in the corners.
70 The men found the stockkeeper and apologised the following day. Lawrence, ‘Notes on an Excursion’, p. 239.
Botany, but the publication was not exhaustive. A notable exclusion was what Hooker published as the ‘Cedar tree (Eucalyptus sp.)’. In Lawrence’s original journal he called it ‘Cyder tree’, unmistakably Eucalyptus gunnii, a plant not described for a further ten years. Lawrence’s interest was obviously aroused by it, as it was this ‘cyder’ that he drew Gunn’s attention to in Lavoisier’s Elements of Chemistry later that year. It had been an object of discussion between Lawrence, Backhouse and Gunn, but as Lawrence only sent seeds and not specimens to Hooker, it was impossible for Hooker to complete a description of the tree.\(^71\)

The 1834 Journal of Botany was a triumph for Antipodean botany and the colonial collector, but only one of the two championed collectors was able to enjoy the glory. To Hooker and Gunn’s dismay, Lawrence died suddenly in October 1833.

‘the loss occasioned by the death of [my] lamented friend’

No one felt the death deeper than Ronald Gunn, whose task it was to report the news to William Hooker. In what sounds like the height of Victorian romantic melancholia, Lawrence was found in his bed, ‘carried off in a fit of apoplexy’ on his twenty-sixth birthday. It was the day of his first wedding anniversary, which he had seen in alone, as his young wife Anne had died one month earlier following childbirth. To a modern reader it appears likely to have been suicide, although the death was not officially registered as such.\(^72\)

\(^71\) Lawrence, ‘Notes on an Excursion’, p. 240; R.W. Lawrence diary, 20 Jan 1833, QVMAG CHS 53 33/2.

\(^72\) Despite much searching no coronial or other records pertaining to Lawrence’s death have been found.
comforted Lawrence during his grief after his wife’s death, and the two men had arranged future field trips, discussing the latest letter from Hooker and other botanical matters. Indeed, it was in the last month before he died that Lawrence gave Gunn the annotated chemistry book.\(^{73}\)

Gunn excused his dwelling on the subject, but needed to express his sense of loss to Hooker: ‘I was I may almost say his only friend on earth, and we were brothers to each other, – Our pursuits and feelings alike, and it will be long ere I shall be able to fill the blank his death has made.’\(^{74}\) Pat Jalland has discussed the shock resulting from a sudden death, and the increased trauma if it occurred during the younger years. Even if we discount the question of suicide, it is not surprising that Gunn felt strong emotions of guilt, anger and deep sadness.\(^{75}\) As Endersby has pointed out, Gunn’s prolonged grief for Lawrence is noticeable in his letters to William Hooker.\(^{76}\)

Hooker publicly commented on the death when publishing Lawrence and Gunn’s collections of plants in 1835, being ‘suddenly removed from all sublunary enjoyments’, and that Gunn had ‘exerted himself to fill up the loss occasioned by the death of his lamented friend’.\(^{77}\) That the unexpectedness of Lawrence’s death extended Gunn’s grief seems clear, but Gunn’s emotional response may also have been affected by the deaths of subsequent young friends and acquaintances. At other times of grief, such as when Gunn’s collecting assistant Charlotte Smith

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\(^{73}\) The orphaned daughter of Robert Lawrence was adopted by her maternal family who moved soon afterwards to Victoria. Burns and Skemp, *VDL Correspondents*, p. 31.

\(^{74}\) Burns and Skemp, *VDL Correspondents*, 15 Nov 1833, p. 31.


\(^{77}\) W.J. Hooker, ‘Contributions Towards a Flora of Van Diemen’s Land’ *Companion to the Botanical Magazine* 1 (1835), pp. 272-277.
died at Circular Head, he lamented not only the loss of Charlotte, but also the resurfacing of his grief relating to Lawrence.78

Gunn indulged his desire to reminisce about his friend in his letters to William Hooker. Within the first two years Gunn admitted to Hooker that Lawrence’s death had ‘thrown me back more than I could have conceived as I have now no one with whom to talk over Botanical matters or to excite me to exertion.’79 In 1835 he ‘sadly felt the want of some botanically inclined person to exchange thoughts with’ claiming that there was no one in Launceston or ‘within many miles’ with any interest in any kind of natural history.80 He expressed the same feelings of loneliness and lack of suitable communicants a few months after this, calling Lawrence’s loss ‘irreparable’.81 Five years after Lawrence’s death in 1838, Gunn included a map that corresponded with his collecting sites, in case his career was ‘suddenly cut off’, and others could locate the sites of any rare specimens.82 A few months after this he admitted ‘the vacancy caused by his [Lawrence’s] death still remains open.’ He later promised all the time he could spare to Hooker, as ‘my whole heart & soul is with you’.83

Gunn’s inclusion of such thoughts to Hooker is understandable, because Lawrence had been the connecting link between the two men. This may account

78 Charlotte’s contributions to Gunn’s botanising are discussed further in chapter 3. R.C. Gunn to W.J. Hooker, 30 Nov 1838, Burns and Skemp, *VDL Correspondents*, p. 82.
79 R.C. Gunn to W.J. Hooker, 14 Sep 1834, Burns and Skemp, *VDL Correspondents*, p. 38.
80 R.C. Gunn to W.J. Hooker, 30 Mar 1835, Burns and Skemp, *VDL Correspondents*, p. 41.
81 R.C. Gunn to W.J. Hooker, 6 May 1835, Burns and Skemp, *VDL Correspondents*, p. 45.
82 This was a copy of an 1833 map, ‘North West Quarter of Van Diemen’s Land: Including the Grants of Land Belonging to the Van Diemen’s Land Company’, by J. Cross and M. Chitty. The map remains with Gunn’s letter, but unfortunately he did not make any annotations to the map at all, instead leaving it to Hooker to go by the printed names and locations provided. R.C. Gunn to W.J. Hooker, 21 Apr 1838, Kew DC 76.
83 R.C. Gunn to W.J. Hooker, 30 Nov 1838 and 30 Sep 1844, Burns and Skemp, *VDL Correspondents*, pp. 82, 101.
for the recurring motif of loss and isolation that occurs in Gunn’s letters to
William after late 1833, a mood that does not pervade Gunn’s letters to others,
such as Joseph Hooker. When Hooker expressed concern about the future of
Lawrence’s specimens and books, Gunn explained that Robert’s father William
intended to keep them, allowing Gunn access to materials as he needed them.
William had an interest in botany, Gunn adding that William Lawrence remained
‘my only conversable friend’ in his neighbourhood.84

Conclusion

Over the course of his five years of correspondence with William Hooker,
Robert Lawrence made the botany of Van Diemen’s Land accessible to a London
audience. He was the first resident plant collector in the colony to send material to
the British Isles, and an integral part of the first attempts to develop a
comprehensive flora of the island. He appears not to have been driven by an
aspiration to be published, but rather a desire to engage with the wider world,
share opinions and ideas, and contribute to the expansion of scientific knowledge.
He had demonstrated an independent interest in natural history before being
introduced to Hooker, and with a little encouragement and direction from the
metropole was set to become an invaluable part of a larger botanical collecting
and corresponding network.

84 The emphasis is Gunn’s. R.C. Gunn to W.J. Hooker, 15 Nov 1833, Kew DC 72. See also Burns
and Skemp, VDL Correspondents, pp. 32-33. William later gave Gunn Robert’s herbarium and a
complete series of Curtis’s Botanical Magazine totalling some eighty volumes. This set of Curtis’s
Botanical Magazine is now held by the Allport Library and Museum of Fine Art, with a letter
from W.E. Lawrence to R.C. Gunn, 4 Oct 1837, which accompanied the gift. Gunn told Hooker of
receiving the herbarium 31 Jul 1838, Burns and Skemp, VDL Correspondents, p. 79.
The introduction of Ronald Gunn made that promising partnership a productive triad, and for two years Lawrence and Gunn built upon it, engaging not only with Hooker, but also with each other, rigorously assessing the scientific texts to hand and applying them to their colonial environment. Without Lawrence and Gunn’s contributions, Hooker could not have published such an extensive flora in 1834.

The extent to which William Hooker relied on the assistance of Lawrence and Gunn to produce his scientific descriptions leads to further questions. Did these two colonists work alone? If this was the case, how did Gunn continue fulfilling the work of two men after Lawrence’s death?
Chapter 3: Vandemonian Realities

*Blandfordia punicea* (Labill.) Sweet

*Figure 8* *Blandfordia punicea*, ‘Christmas bells’, by William Buelow Gould, Macquarie Harbour, November 1833. QVMAG WBG 13.
'Sir you mentioned I am to walk to Hobart Town…I shall have to purchase a new pair of shoes to walk with will you please to let me know next Post day…the genrall [sic] Route or places to stop at every night as I do not know the country my bedding will be too much with other things to carry pehaps [sic] you will let me know how I am to get it down I have now got a poltice [sic] on one of my fingers which I Poisoned the other day was I too shoot any bird on the Road I could not manage to skin them and I have neither powder nor shot.'

James Lee to Ronald Gunn, 28 Nov 1838, NLA MS 2036.

Introduction

As Gunn lamented the ‘irreparable’ loss of Lawrence, his letters to Hooker highlighted the isolation he felt as a botanical collector on the colonial periphery. One of the first realities faced by arrivals to the far-flung colony of Van Diemen's Land was the sense of distance, and how distant ‘Home’ had become.¹

Just as the botanical offerings from the colony were viewed as unique, so too was its social climate. Tensions existed between Aborigines and European colonists, convict and free, free and emancipist (the latter being the term applied to former convicts). Feelings of isolation and separation jostled next to recognition of the colony’s stark reputation as an island gaol. Whilst the penal reality of Van Diemen's Land may have been associated with a sense of shame, it nevertheless provided opportunities for free and bonded classes alike.

It was in this environment that Ronald Gunn operated, not as a lone botanist communicating with Hooker, but as an integral part of a complex, layered

¹ This sentiment of distance from home was captured by the colonial surveyor-general George Frankland: ‘We all remember…that melancholy day, when attending upon the poop of the good ship, that danced beneath our feet, we strained our eyes to catch a last glimpse of our native land; and not less so the succeeding hours, which were occupied in looking over the bulwarks, and recollecting the many joys, from which we were quickly sailing away.’ Hobart Town Courier, 23 Jan 1830.
colonial scientific community. Through an examination of Gunn, his natural history community and his botanical practices, it is possible to see how colonial realities both hampered and assisted the pursuit of science.

Ronald Gunn: the classifier

In Van Diemen's Land, convicted men and women were themselves catalogued, described and ordered. Just as a plant was examined to ascertain its place within the natural order of things, convicts were physically described – so that one could be told from another. Their misdeeds and subsequent behaviour were recorded in order to place them appropriately within the seven-tiered convict system. Even after death the process of classification continued, as an executed prisoner was a prime candidate for dissection, his or her body being cut open in the same way a naturalist might use a razor to examine the various sections of a flower or fruit capsule.²

In the nineteenth century it was commonplace for both administrators and the scientifically minded alike to draw parallels between the classification of living things (creating order out of chaos and slotting all flora and fauna within the ‘great chain of being’), and with the ordering of social hierarchy. Born at Cape Town in 1808, Ronald Gunn was a man whose life was steeped in classification and order. His first job as a young boy was to arrange the library of Sir John Hope in Edinburgh, an ex-army officer from Gunn’s father’s regiment. This first

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² Robert Lawrence made a special trip into town to witness the execution and dissection of two murderers, Edward Sweeny and John Thomas. He disliked watching the execution, and was concerned that the two men should not be in pain. R.W. Lawrence diary, 2 Jul 1830, QVMAG CHS 53 33/2; The Hobart Town Courier, 10 Jul 1830.
experience in creating order within a fixed, finite environment may have appealed to the young boy – decades later Gunn was to repeat this experience by cataloguing his own extensive library.³ His first secure job was as a clerk with the Royal Engineers in Barbados, again giving Gunn training in appreciating and applying order and the arrangement of objects. During this period he also gained the invaluable skill of accurate spelling and a neat, legible hand, along with the ability to write in several styles including copperplate, a standard cursive, and italics.

When Gunn and his small family migrated from the West Indies to Van Diemen's Land in 1830, his life experience allowed a smooth transition into government service. He had grown up in a military family, had already learnt how to operate efficiently within a colonial department, and had come to accept living and working amongst unfree labourers. Gunn had spent most of his first twenty-two years living in similar social environments, whether with slaves and indentured Khoi at the Cape, or slaves in Barbados. The adjustment to working within the convict department in Van Diemen's Land would not have been foreign to him, and the benefits clear: in Barbados he and his wife Eliza had enjoyed having a servant, but Gunn bemoaned the hiring expenses.⁴ The cheaper prospect of an assigned servant was far more agreeable.

³ Robert Gunn to W. Gunn 1824; R.C. Gunn library catalogue, 1848; both items in Wilson private collection. ⁴ Eliza Ireland was the daughter of another officer at Barbados. She was young, disinterested and inexperienced in housekeeping, depending upon her servant to maintain the family home. In the three months that Ronald, Eliza and their son Ronald James stayed with Ronald’s brother and sister-in-law in Edinburgh, their hosts complained that Eliza would not help in daily household chores. As Robert Gunn (Ronald’s elder brother) put it, ‘She is too vain of herself, either to love or respect her husband, or to make him happy; and too inordinately lazy and indolent ever to make him or his home comfortable’. R. Gunn to W. Gunn, 28 Aug 1829, Wilson private collection. For
As Gunn commenced work as the superintendent of convicts he was again employed to manage a system of classification. The security and surety that came with maintaining a bureaucratic system of surveillance was a comfort to Gunn and many others who worked in the convict department. Furthermore, Gunn was good at classifying, was particular with detail and prided himself on closely observing rules and regulations.\(^5\) His job was to create order out of disorder. As a magistrate he was called upon to curb incorrigibles by placing them in situations where their behaviour could be appropriately checked. As a superintendent he had to record the details of every convict, their behavioural patterns, native place, scars, tattoos, and physical peculiarities. The idea was that this information could be used in the same way as a naturalist would note the place, habit, colour and spiral shape of a shell. Within the context of the penal system, this recording process dehumanised convicts, reducing individuals to objects that could be sorted into categories with the stroke of a pen.

Gunn’s brother William was responsible for sentencing prisoners in the south, and along with Ronald in the north, the two men oversaw the process of summarising every court appearance and entering these on to the convict record. After his transfer to Launceston, it was Ronald’s job to oversee the promotion or demotion of prisoners in that part of the colony. If an assigned servant misbehaved or requested an indulgence, it was Ronald Gunn who retrieved and

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\(^5\) For example, Gunn did not refer to Van Diemen's Land as Tasmania until after the colony was officially renamed in November 1855, despite the name Tasmania being in common use from the 1820s. William Archer was one colonist who referred to the island as Tasmania before the official change.
reviewed their file. The fate of thousands depended upon the classificatory system of the registers that he maintained.

A prisoner who performed beyond expectation, perhaps by capturing an escapee, a bushranger – or even better an Aborigine – could be rewarded by reclassification. Gunn could recommend the elevation of an assigned servant to a Ticket of Leave holder no longer bound to a master, or for a certificate of freedom, he could recommend a reduction in a prisoner’s sentence, or in extraordinary cases award a free pardon. These decisions were constant – Gunn explained the unceasing nature of his employment in Launceston, sometimes presiding over as many as ninety cases per week.6 Every time a convict came before him in his role as police magistrate, he exercised power over them, and reinforced this power with detailed recordkeeping. He could cause an individual to be described using words that would affect the opinions of others in the future, influencing decisions over who could marry or have access to other indulgences. In effect, he assigned his human charges to the pages of the colonial record as securely as he fixed his plant specimens to the sheets he mailed to Hooker.

Gunn’s uptake of botany and other sorts of natural history collecting was of course not driven by his desire to embrace classification in every branch of his life, but we can understand how he could quickly accept and embrace the knowledge systems used in botany. He maintained a reference herbarium, and an extensive system of note taking in order to aid subsequent classification. Later in this chapter we will examine his specimen numbering system that illustrates how talented he was in creating ordering mechanisms. Perhaps unwittingly, Gunn’s

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6 R.C. Gunn to W.J. Hooker, Burns and Skemp, VDL Correspondents, p. 41.
life was enwrapped in classification systems that drove both his work and leisure activities. Did he find comfort in these bureaucratic tasks? It is possible that the endless ordering gave him a sense of purpose – a kind of goal to achieve. In later years Gunn occasionally commented on a sense of having collected nearly everything from the Vandemonian flora, as if, like organising Sir John Hope’s library, to collect and catalogue the colonial flora was a task that could be seen through to the end.

A colonial scientific community

When it came to engaging in scientific discourse, Vandemonian enthusiasts faced many of the same obstacles as gentlemen in other colonies and towns distant from the scientific centre. They were isolated from the metropolis, lacked formal training, and did not have access to a substantial library of reference works. To overcome this sense of distance required the formation of some sort of likeminded community. As Savithri Preetha Nair has demonstrated in her analysis of Raja Serfoji II of Tanjore, if someone had the power and enthusiasm, they could draw around them the network they needed, becoming a centre in their own right. In Serfoji’s case, he acted as a Latourian ‘centre of calculation’, becoming a scientific centre on the euro-centric periphery.7

Gunn was in no position to ape Serfoji’s solution to the ‘tyranny of distance’, being in a geographically isolated location, with a small, sparsely-spread population, and limited finances; but he still strove to create some kind of  

connection with other colonists (fig. 9). Without organised meetings in northern Van Diemen's Land, a more informal and flexible colonial network emerged, fed by the exchange of correspondence and specimens by post. Anne Secord reinforced the importance of written correspondence for facilitating the development of such relationships. Participating in written correspondence (whether as part of a large network or even if just between two people), was one of the main ways men formed a sense of community.8 The correspondence and circulation of specimens became a form of communal learning, with letters passed from hand to hand. In early nineteenth century Van Diemen's Land the importance of such a correspondence network was even more vital, as there was no other mechanism to support an interest in natural history.

Maintaining a healthy corresponding network had other advantages beyond tying together individuals across distances. It permitted flexibility of participation, enabling collecting activities to be fitted in around work or other commitments. Gunn commented to William Hooker upon his heavy workload in Launceston. He was not only a magistrate, but carried the assignment duties and immense paperwork required as Superintendent. Despite this he still managed to squeeze around these responsibilities for collecting trips, once travelling seventy-six miles to the Deloraine district and back in twenty-eight hours.9

9 R.C. Gunn to W.J. Hooker, 30 Mar 1835, Burns and Skemp, VDL Correspondents, p. 41; Buchanan, Collecting Localities, p. 41.
Figure 9 Map of Ronald Gunn’s collecting expeditions in Van Diemen’s Land, 1830-1850.
Participants in the corresponding network also had the freedom to move about the colony without compromising their ability to participate in discussion. When Robert Lawrence moved from ‘Vermont’ to ‘Formosa’, Gunn lamented he could no longer easily access Lawrence’s herbarium and library, although the move did not cut Lawrence’s ability to communicate and share material.\(^\text{10}\) In turn, when Gunn moved from Launceston to Circular Head in the northwest, he made up for his isolation by striking up vigorous and highly detailed correspondence with his friends in Launceston. Correspondence shared with his close friend surgeon and fellow Scot James Grant (c.1813-65) formed a series they called the *Circular Head Scientific Journal*. With its grandiose, semi-humorous title, the journal was a private correspondence between Grant and Gunn dedicated purely to the scientific description and discussion of native birds.\(^\text{11}\)

The ‘traditional’ idea of a letter as a communication between two people could be expanded through the simple act of sharing correspondence between friends. Gunn, Grant and others took this idea further, circulating a series of humorous, hand-written ‘newspapers’ between themselves.\(^\text{12}\) These papers were a mix of local gossip, poetry, newspaper clippings, illustrations and personal in-jokes. Written under pseudonyms and largely in a cryptic style, deciphering these

\(^\text{10}\) R.C. Gunn to W.J. Hooker, 18 Aug 1832, Burns and Skemp, *VDL Correspondents*, p. 22.

\(^\text{11}\) The *Journal* was hand-written by Gunn and Grant, each responding to the other, drawing up the pages in a journal style, with columns, volume and edition numbers, and (from Grant), even a motto ‘Flammam Alère’, to feed the flame. Grant’s motto was accompanied by a small sketch of a hand pouring oil into a flaming lamp, the lamp sitting next to an open book featuring a picture of a kangaroo and an emu. Ted Davis has recently published an edited transcription of this ornithological correspondence, being the first substantial scientific work on native birds produced by Australian residents. In total they discussed between sixty and seventy bird species, today nearly 200 are recognised in the island. Davis, *Early Tasmanian Ornithology*, pp. 4, 16, 32-3.

\(^\text{12}\) The titles of these ‘newspapers’ changed over time and only single copies were created. Some of the titles they used included the *Horton Herald*, the *North West Literary Chronicle*, the *Western Luminary* and later simply *2nd Series*. The whereabouts of all but the last of these papers is unknown, the bulk being listed as ‘missing’ by the Tasmanian Archives in 1989. The six-page *2nd Series* is in the Wilson private collection.
today can be difficult, although it is clear that all hands in the newspapers had a sharp sense of humour, as well as a love of puns and other word-play. The time and wit injected into this group correspondence can be appreciated when examining a caricature produced by ‘Longnose & Co.’ (James Grant, possibly Joseph Milligan and others) of ‘Caleb Comical’ (Ronald Gunn). The image is of a portly, older Gunn sitting at home in front of a fire, sipping claret, smoking cigar, and resting a gouty toe (fig. 10).13

Figure 10 ‘Otium cum dignitate –!’ or dignified leisure or ease. A caricature of an older, corpulent Gunn with gout, claret, a cigar and a good fire. Note the inclusion of paintings of Falstaff and Dan Lambert in the background, Falstaff being a fictional overweight knight from Shakespeare’s *Henry IV* (both parts) and *Henry V*. Daniel Lambert (1770-1809) was famous as England’s most rotund resident, both images suggesting that Gunn in his dotage had something to aspire to. Wilson private collection.

Of course not all natural history communication in the 1830s was by letter. When the opportunity arose, the men would meet together for an afternoon, evening discussion, or in special circumstances, for a field trip, just as Robert Lawrence had met Francis Lord in order to ‘improve themselves’ in chemistry and botany. Others went to some lengths to enjoy the company of like-minded friends. The Silesian Adolphus Schayer (1793-?) was employed by the Van Diemen's Land Company to maintain livestock on the northwest coast, living in

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14 R.W. Lawrence diary, 19 Jan 1832, QVMAG CHS 53 33/2.
total isolation on Woolnorth Point, where he enjoyed the opportunity to pursue his interests in entomology and botany. He would regularly take passage on VDL company supply vessels on their return to Launceston, to socialise with Gunn and Grant.\footnote{I. McFarlane, ‘Adolphus Schayer: Van Diemen\'s Land and the Berlin Papers’, \textit{Tasmanian Historical Research Association Papers and Proceedings} 57 (Hobart, 2010), pp. 105-118. Schayer published several papers on Van Diemen\'s Land in Germany, describing an Aboriginal corroboree and later the Tasmanian Society. The endemic grasshopper \textit{Schayera baiulus} bears his name and is currently on the Tasmanian Government\’s threatened fauna list. The Tasmanian Herbarium holds nine specimens collected by Schayer at Woolnorth, each bearing a different collecting number that suggests the existence of much large botanical collection, most likely held in Germany.} His publications on Van Diemen\’s Land and collections from the island remain largely unknown, as his Germanic background caused him to correspond to a different metropolitan centre.\footnote{A similar observation has been made of the enormous scientific contributions on the mainland of Australia by Ludwig Leichhardt. See Barker and Barker, \textit{Botanical Contributions Overlooked}, p. 60.} His later reports on the scientific community in Van Diemen's Land to the Berlin Geographical Society demonstrated the importance of local connections:

Like in all young states material interests occupy all classes of the inhabitants: the club members are mainly squatters, public servants & businessmen who, out of love for learning strive to maintain from Europe an imported sense for higher noble pursuits in this far flung part of the world.\footnote{A. Schayer providing an \textquoteleft overview of the general state of affairs\textquoteright in Van Diemen\'s Land, printed in the monthly reports of the Berlin Geographical Society (1845), cited in McFarlane, \textquoteleft Adolphus Schayer\textquoteright, p. 115.}

Another member of this small corresponding network was Joseph Milligan (1807-1884) who was, like Grant, a surgeon and a Scotsman. It is not surprising that he gravitated towards other Scots like Gunn and Grant, further cementing their corresponding network. Milligan, like Schayer, worked for the Van Diemen\’s Land Company, but in a less isolated position at the Hampshire Hills.
He was especially interested in geology, but also enjoyed botany, collecting and exchanging specimens with Gunn that were later forwarded to William Hooker.

His botanical coups included joining Sir John and Lady Franklin on the overland expedition to Macquarie Harbour in 1842, during which time he wrote several letters to Gunn in his hurried, messy hand, displaying a man who bounded with enthusiasm perhaps at the expense of thoroughness – ‘I have seen the Grasstrees (Richea or whatever it is) you told me I might have seen it at St. Clair’. The botanical content of his letters battled for space with a general description of the expedition, Lady Franklin’s interjections, geological notes and musings on his fondness for the fair Miss Lawrence, ‘my especial favourite’. He married Miss Eliza Lawrence, sister of Robert and the second daughter of William Lawrence the following year.

Milligan later became the secretary of the Royal Society of Tasmania, despite his reputation for being highly disorganised. William Archer later described Milligan to Joseph Hooker as ‘a good collector, but quite destitute of the organ of order’. Despite this, Milligan contributed greatly to the colony’s scientific societies and proved a good friend and companion in the field.

18 J. Milligan to R.C. Gunn, 15 Apr 1842, ML A316.
19 J. Milligan to R.C. Gunn 15 Apr, 16 May 1842, ML A316.
21 W. Archer to J.D. Hooker, 20 Jul 1860, Kew DC 218.
22 Milligan was made FLS in 1850 and has been commemorated in the lily genus Milligania, the dwarf leatherwood Eucryphia milliganii (collected during the Macquarie Harbour expedition), as well as several other showy daisies, epacrids and proteas. His other notable work was in amassing a word list of tribal dialects of the Tasmanian Aborigines on Flinders Island where Milligan was posted as the medical officer. J. Milligan ‘Vocabulary of Dialects of the Aboriginal Tribes of Tasmania’ and ‘On the Dialects and Language of the Aboriginal Tribes of Tasmania, and their Manners and Customs’, Papers and Proceedings of the Royal Society of Tasmania, 3 (Hobart, 1855), pp. 239-274, 275-282. These articles included lists of single words, some simple phrases, Aboriginal place names and names of men and women. Amongst the hundreds of words, Milligan
His location at the Hampshire Hills brought him into contact with another visiting naturalist and contributor to Vandemonian botany, James Backhouse, a Quaker missionary and nurseryman from York, who with his companion George Washington Walker spent six years travelling the Australian colonies to examine the welfare of convicts. Backhouse was particularly interested in ‘useful’ plants that could be cultivated for edible or ornamental applications, and during his time in the colony published two articles on these topics in the Hobart Town Almanack.23

Backhouse spent time in the Hampshire Hills during December and January of 1832 and 1833 where Milligan hosted him, and they went on several excursions together. Backhouse’s commercial horticultural training would have given Milligan a rare chance to work alongside a ‘professional’, although the broad use of this term in the nineteenth century is not without contention.24 Similarly, Ronald Gunn took advantage of Backhouse’s time in the north of the colony, meeting Backhouse and Walker at the Meander River as they made their way to Launceston. Backhouse noted that Gunn was ‘the most industrious botanist in Van Diemen's Land’, but the Quakers turned down Gunn’s invitation recorded six plant names for Blandfordia nobilis, (today B. punicea), the gum tree (Eucalyptus), blackwood (today Acacia melanoxylon), waratah (Telopea truncata) and a coastal wattle Acacia maritime (today A. terminalis). For a fuller discussion of Milligan’s lists as well as putting them into context with similar collections see N.J.B. Plomley, A Word-List of the Tasmanian Aboriginal Languages, Launceston, 1976).  

23 Backhouse, ‘Esculent Plants’ (1834), and ‘Index Plantarum’ (1835). These are further discussed in chapter 1. Backhouse is remembered in Correa backhouseana, named for him by William Hooker in 1834.  

24 Endersby discusses the use and meanings of terms like ‘professional’, ‘amateur’, ‘philosophical’ and ‘scientific’ in the first half of the nineteenth century, when Hooker and his contemporaries were not attempting to ‘professionalise’ science, because these men attached negative connotations to the word ‘professional’. It was acceptable to be ‘professed’, that is to have a vocation for botany, where disinterested study was desired to rather than fulfilling any commercial role. Endersby, Imperial Nature, pp. 21-26.
to form a botanical party, as the two travellers had other appointments in the settled districts.25

Friendship and economy: T.K. Short

This loose correspondence network proved no substitute for the loss of Lawrence. Gunn longed for someone with whom to share the entire collecting experience: from the trips; to the joys of new discoveries; to poring over books in the evenings and discussing the nuances of naming and classification. His enthusiasm for natural history made Gunn the hub of his network of like-minded friends, making it difficult to reconcile his busy lifestyle with the claims of isolation and disconnectedness he expressed to Hooker. When not writing about the lack of people to exchange ideas with, he went on collecting trips – some weeks long – with Grant, Milligan, Backhouse, and their servants.26

Despite his growing circle of friends, Gunn struggled with his personal life. In late 1835 he was ‘compelled’ to send his wife Eliza home to Dublin in an effort to control her excessive drinking. Eliza felt isolated in Van Diemen’s Land, and her lack of empathy for the needs of those around her hardened her distaste for her new home. It is distinctly possible that her sense of loneliness was exacerbated by her husband’s passion for collecting, as Gunn devoted so much of

26 There is a small collection of loose pencils sketches attributed to Grant in the Allport collection, including a sketch of Mount Olympus from their trip there in 1847. Of great interest is the addition of a small ink caricature that could possibly be Gunn. Grant, J., Pencil on Paper Sketches, Allport Print Room, C5 DR11.
his spare time to field trips rather than socialising with her.\textsuperscript{27} The small number of women of good standing in the north of the island and the distance between properties presented even greater challenges than they did for men. A visit to another property could be the social highlight of the year. Fellow Launceston resident George Hobler noted on a trip to visit his neighbour that it had been two years since his wife had been out of sight of the house.\textsuperscript{28}

In this circumstance it is perhaps less surprising that Eliza turned to alcohol for comfort, to the detriment of her family and her marriage. As Gunn put it she ‘became so fondly attached to the bottle that all other considerations were forgot’. She died nine months after her departure from the colony in June 1836.\textsuperscript{29} Gunn’s reaction to Eliza’s death compared to Lawrence’s is striking. Both were reported to Hooker, but where Lawrence left an unfilled ‘blank’, Eliza was a ‘victim’, who had been ‘completely overpowered’ by her addiction. Where Gunn remembered Lawrence at frequent opportunities, Eliza’s death was only mentioned once, and then it was many months (and five letters) after it had occurred. Gunn may have felt more comfortable discussing Lawrence rather than Eliza with Hooker, as they shared knowledge of the botanist rather than the wife. Nevertheless, it appears that Gunn’s grieving for his wife was much less than for his friend, as when writing to Hooker he was more consumed with being left a widower at twenty-eight with five children to support.\textsuperscript{30}

\textsuperscript{27} Of course Gunn’s penchant for going collecting away from home may have been in turn a response to his unhappy home life.
\textsuperscript{29} R.C. Gunn to W.J. Hooker, 25 Sep 1835 and 31 Mar 1837, Burns and Skemp, \textit{VDL Correspondents} pp. 50, 63.
\textsuperscript{30} R.C. Gunn to W.J. Hooker, 31 Mar 1837, Burns and Skemp, \textit{VDL Correspondents} p. 63.
Gunn was in a fragile emotional state following Lawrence’s death, and made worse by his struggles at home with Eliza. He worked hard, looked after his family, and although not poor, did not enjoy the same financial security that someone like Lawrence had. Gunn’s economic outlook was only to worsen, as was his sense of isolation and loneliness, following his experiences with another member of Gunn’s correspondence network, Englishman Thomas Kier Short.

The welcoming of an unknown person like Short into a corresponding network necessitated caution, as some gentlemen (like John Lhotsky) were known to abuse gentlemanly hospitality.\(^{31}\) Secord has described the disappointment and anger associated with an unsatisfactory exchange if the response to a letter or gift was not deemed fitting.\(^{32}\) As Short was introduced to Gunn via William Hooker, this wariness of the unknown was removed. Short was apparently ‘a gentleman much attached to Horticulture’ who desired to meet a naturalist in Van Diemen’s Land, and had intentions to settle in the colony with his cousin.\(^{33}\) It is notable that Hooker had written to Gunn especially and not to Lawrence (Hooker would not have known of Lawrence’s death in the preceding months). The recentness of the death of Gunn’s friend increased his keenness in meeting a new botanical companion.

The letter of introduction arrived well before Short, along with a box of sundries Short had forwarded on himself. This tantalising taste of a potential new

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31 Gunn had said of Lhotsky he ‘professed to know everything, but was really quite ignorant, & assisted by others in his compilations’. R.C. Gunn to W.J Hooker, 30 Mar 1835, Burns and Skemp, *VDL Correspondents*, p. 43.

32 For example bookseller Roberts Leyland’s disappointment when in return for valuable shell specimens he did not receive any further information from a conchologist. Secord, ‘Corresponding Interests’, pp. 388-92.

33 W.J. Hooker to R.C. Gunn, 3 Mar 1834, ML GC 8.
gentleman naturalist whetted Gunn’s appetite, and he waited with great
anticipation for the arrival of a new collaborator and potential friend. Gunn’s
excitement flowed into a letter to Short in England in September 1834, promising
to send seeds, specimens and orchids. Short appeared to be an excellent prospect,
with further letters to William Hooker anticipating his departure in early to mid-
1835, promising all variety of natural history specimens to send home from
Australia and New Zealand, and that he would take books, letters and seeds to
Gunn.\textsuperscript{34} Hooker wrote again to Gunn of Short’s intended trip, plus his promises of
seeds, books and bulbs, and Short further assured Hooker, prior to his departure
that he would ‘turn my sole attention to sheep, & the improvement of natural
history’.\textsuperscript{35}

Within six months, Short had arrived and reported to Hooker that Gunn
was ‘a most delightful companion…we go out together on every spare hour that
we have to collect’. Unfortunately Short’s changeable nature also began to reveal
itself. He soon expressed his desire to go to Port Phillip or Sydney, as Van
Diemen’s Land ‘w[ould] not answer my purpose it is too late in the day for this
place’.\textsuperscript{36} Soon after this his plans changed again, with intentions to return to
England, depending on his success in applying for Head of the Botanic Gardens in
Sydney, following the death of the incumbent, Richard Cunningham.\textsuperscript{37}

\textsuperscript{34} T.K. Short to W.J. Hooker, 17 Feb 1835, 17 Mar 1835, 11 Apr 1835, Burns and Skemp, \textit{VDL Correspondents}, pp. 47-48.
\textsuperscript{35} T.K. Short to W.J. Hooker, 11 Apr 1835, Burns and Skemp, \textit{VDL Correspondents}, p. 48; W.J. Hooker to R.C. Gunn, 20 Mar 1835, ML GC 8.
\textsuperscript{36} Short was referring to the fact that opportunities to acquire land in the colony after 1834 were
lacking, particularly as the large free land grants handed out by the colonial government into the
1820s were no longer available.
\textsuperscript{37} T.K. Short to W.J. Hooker, 10 Oct 1835, Burns and Skemp, \textit{VDL Correspondents}, pp. 48-49.
Short was clearly not afraid to aim high, although his self-confidence was not reflected by his superiors, as the position in Sydney went to Richard’s far better qualified brother, Allan. As things worked out, Short’s over estimation of his talents echoed those of the maligned Lhotsky. In his letters to Hooker, Short pledged an endless supply of Australian natural history specimens, but rarely did he make good on these promises.38

Gunn’s first report of Short to Hooker revealed his determination to make the friendship work. Gunn admitted that Short could not offer any useful information on Botany ‘or any other science’, and his highly talked of books and seeds were poorly selected and revealed Short’s ignorance.39 Nevertheless, he insisted Short quit his high-rent lodgings and live in the Gunn household, enjoying the company of ‘a companion suited to join in my Natural History pursuits’. A later letter from Short to Hooker illustrated his lack of knowledge in the field, with few specimens, all unnamed. He added that he had ‘let’ Gunn send his specimens in the same package, no doubt hoping that Gunn’s work would be mistaken for his own. In reality, Gunn’s efforts must have shown Short’s inexperience and lack of adherence to the discipline.40

By this time Hooker was increasingly wary of the interloper, and was quick to back-pedal on his introduction to Gunn, writing ‘How far Mr. Short may be useful as a collector…I have no idea. I did not say much about this to you…because I know but little of him’.41 He stressed that Short was to take seeds and plants to Gunn first, before Gunn helped him, and that Short was perhaps

38 W.J. Hooker to R.C. Gunn, 12 Oct 1835, ML GC 8.
39 R.C. Gunn to W.J. Hooker 16 Jan 1836, Burns and Skemp, *VDL Correspondents*, pp. 51-52.
40 T.K. Short to W.J. Hooker, 1836, Burns and Skemp, *VDL Correspondents*, pp. 53-54.
41 W.J. Hooker to R.C. Gunn, 24 Jun 1836, ML GC 8.
good-hearted but ‘lamentably ignorant not only in Nat. Histy, but in every thing else’.\textsuperscript{42} Hooker explained he had only met Short once and assumed that due to his family connections he could yield some useful addition to natural history. Hooker’s letter clearly showed his growing distrust of the man, and exposed Gunn’s naivety in welcoming Short so generously based solely upon two letters of introduction. When Short had arrived in Launceston Gunn’s vulnerability and loneliness made him the perfect target for someone willing to abuse their position, especially someone equipped with endorsements from the scientific elite.\textsuperscript{43}

Gunn had written again to Hooker in 1836, before receiving Hooker’s further warnings about Short, during which time he had realised his friend’s ignorance and idleness. He reported that Short would ‘beg or purchase’ items rather than collecting them himself. Despite this, Gunn still found some merit in Short’s personality, although it is a struggle to understand why: ‘He [Short] is really supremely ignorant, vain & conceited and although we agree very well together, I must say that I have seldom met with a young man who has seen so much of the world and benefited so little by his experiences. He has been extravagant out here and I am now obliged to procure him the funds (about £150) to go to England’\textsuperscript{44}

While Gunn admitted Short had made few ‘true friends’ in the colony, he believed he had been able to ‘sift out some of his better qualities’ and could

\begin{itemize}
\item \textsuperscript{42} W.J. Hooker to R.C. Gunn, 24 Jun 1836, ML GC 8.
\item \textsuperscript{43} Kirsten McKenzie has found that the Australian colonies were often used as a place for social reinvention. In *A Swindler’s Progress* she retells the complex story surrounding Viscount Edward Lascelles and the convict John Dow who lived off Lascelle’s high-status name in Australia. K. McKenzie, *A Swindler’s Progress: Nobles and Convicts in the Age of Liberty* (Cambridge MA, 2010), pp. 291-5.
\item \textsuperscript{44} R.C. Gunn to W.J. Hooker, 2 Sep 1836, Burns and Skemp, *VDL Correspondents*, p. 55.
\end{itemize}
thereby ‘manage him well’.45 Demonstrating Gunn’s deep desire for companionship and apparently endless reserves of faith, Short persuaded Gunn to borrow some £200, to assist his journey to England. Surprisingly, whilst Gunn acknowledged that Short had little application for anything beyond a desired for instantaneous gratification, he still believed that Short would honour the loan.

After such an encounter, it would be easy to assume that Gunn was ever afterwards mistrustful of offers of friendship, even those supported by testimonials from people he knew. Not only did Short swindle Gunn financially, he used his house and equipment freely, and had used Gunn’s desire for a collecting friend, leeching off his knowledge and pretending it was his own. In essence, Short had used Gunn intellectually, emotionally and financially. When Hooker heard of Gunn’s financial generosity, he reminded his colonial correspondent that he had never suggested that such a degree of hospitality be extended to Short. Hooker clearly wanted to distance himself from the whole sorry affair. He also mentioned that Short was still in contact with him, asking to be introduced to the London scientific elite, and a nomination to join the Linnaean Society. In response to the forty plant specimens from New Zealand that Short showed Hooker as proof of his scientific prowess, Hooker replied he could have collected twice as many in one morning ‘before breakfast’.46

For his part, Gunn revealed that while Short had been in the colony he had never ascended a mountain, slept one night outside, and most remarkably of all could not stoop to the ground to collect specimens due to his ‘plethoric & full habit’. Gunn was horrified that a twenty-two year old could be in such poor

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45 R.C. Gunn to W.J. Hooker, 2 Sep 1836, Burns and Skemp, VDL Correspondents, p. 55.
46 Emphasis Hooker’s own. W.J. Hooker to R.C. Gunn, 5 May 1837, ML GC 8.
physical shape. The bad news, however, did not stop there. Although he had physically departed, it transpired that Short had left several unpleasant surprises behind. He had left several accounts, some in Gunn’s name, which went unpaid and thereby destroyed Gunn’s credit in the colony. Gunn believed he was out of pocket nearly £200, which as a single parent with five small children put a great strain on his accounts. When all the accounts came in, the total unpaid debt amounted to £240, and Gunn implored Hooker to chase Short on his behalf, reminding him that it was Hooker’s introduction that had initiated the whole saga. Gunn also revealed the extent of his hospitality. Not only had he shared his house with Short, but he had introduced him into society, and let him have use of his convict servant, James Lee. Gunn described Short as a ‘swindler’, even short-changing the washerwoman, leaving him deeply in debt, and not once contributing for board, food, or wine.

Gunn continued to press for some financial reimbursement, but the money was never repaid. He had never been a wealthy man, and clearly felt grossly abused. From this point Gunn became more concerned with money and the expenses relating to collecting specimens than ever before. It also appears that he did not form any new close friendships with other gentleman in the colony, no doubt soured from the experience. Gunn continued to mention his debts to the Hookers for several years, as they were not inconsiderable, adding glumly at the end of a letter in 1840 ‘I have never heard from Short’.

47 R.C. Gunn to W.J. Hooker, 16 Nov 1836, Burns and Skemp, *VDL Correspondents*, p. 60.
48 R.C. Gunn to W.J. Hooker, 20 Nov 1836, Burns and Skemp, *VDL Correspondents*, p. 61.
49 R.C. Gunn to W.J. Hooker, 31 Mar 1837, Burns and Skemp, *VDL Correspondents*, pp. 64-5.
50 R.C. Gunn to W.J. Hooker, 18 Feb 1840, Burns and Skemp, *VDL Correspondents*, p. 85.
As late as 1843 Gunn owed £300 to various people on Short’s account.\textsuperscript{51} This increasing sum is not easily explained. Presumably several unpaid bills came in following Short’s departure, interest accrued, and over time Gunn’s anger at the situation inflated the total sum. It is clear that it took Gunn over a decade to repay the debts in full, never receiving any remuneration from Short. The only time Gunn talked of his wealth in a positive tone after the incident was when reflecting on the financial depression of the mid-1840s, ‘I have reason to bless my stars that my poverty has prevented my losing anything. I therefore remain as I was – richer now than many of my neighbours who formerly boasted of their thousands\textsuperscript{52} Gunn’s financial concerns continued for the rest of his life, and explain why someone with such a high profile in the colony worked for so long in less than high profile positions.\textsuperscript{53}

Thanks to Thomas Short, Gunn experienced the same sense of anger and disappointment felt by Anne Secord’s gentlemen naturalists when they were short-changed by the corresponding network. Aside from the effect Short had on

\textsuperscript{51} R.C. Gunn to W.J. Hooker, 6 Dec 1843, Burns and Skemp, \textit{VDL Correspondents}, p. 96.
\textsuperscript{52} R.C. Gunn to W.J. Hooker, 9 May 1844, Burns and Skemp, \textit{VDL Correspondents}, p. 99.
\textsuperscript{53} Gunn’s record of employment reflects a lifetime of hard work as a public servant. Despite this, he never held a position at the head of a colonial government department. After his appointment as Police Magistrate at Circular Head in 1835, Gunn became third member of the Assignment Board and second assistant Police Magistrate, Hobart in 1838; private secretary to Lieutenant-Governor John Franklin and clerk of the Legislative and Executive Councils in 1840; estate manager for W.E. Lawrence in Launceston in 1841; and Sir John Franklin’s estate manager in 1843. He was an elected member of the Legislative Council for Launceston from 1855, and following self-government resigned his seat on the Council, being elected to the seat of Selby in the new House of Assembly. Between his retirement from parliament in 1860 and his retirement from all other employment in 1876, Gunn’s official positions outside of community groups included: deputy commissioner for crown lands for northern Tasmania (and for the whole island from 1867); agent for the real property act; deputy registrar of the Court of Requests; deputy registrar of births, deaths and marriages; clerk of the peace in Launceston; deputy recorder of titles; chairman of the northern sub-board of works; chairman and treasurer of the North Esk road trust; a commissioner to report on the site of Government for New Zealand; and collector of the western railway rate. Baulch, ‘Biographical Sketch’, pp. xvi-xvii. See also R.C. Gunn retirement certificate, Aug 1876, Wilson private collection.
Gunn’s emotional health, his behaviour impacted upon the advancement of botany in the colony. With a debt over his head, Gunn was unable to invest financially in his collecting, and his subsequent caution to embrace future botanical friendships hampered the exchange of scientific ideas within the colony. Those highly productive years when Gunn and Lawrence had worked with Hooker and with each other were never to be repeated. In this sense Short not only dented Gunn’s pride and emptied his wallet: he ruined any possibility of Gunn ever becoming a fully-fledged participant in colonial science.

‘I suppose you have Jacks of all Trades visiting your Island’

Despite the small scientific community and the chances of being used by an ungentlemanly leech, Van Diemen’s Land offered plenty of opportunities for men such as Gunn, Grant and Milligan to further their natural history endeavours. As Schayer described it to his audience in Berlin:

One should think that there is no lack of worthwhile material to report about, where the preoccupation of the new settler gives him plenty of opportunity to find out novel matters. This is certainly founded, and nowhere else can one find such rich collections of artefacts of natural science in private hands than in this colony.54

These vast collections of specimens were the pride of men such as Gunn, but the accumulation of such items was largely due to another intersecting strand of the colonial scientific network. When Gunn and his friends recorded notes from a

field trip they mentioned their assigned convict servants accompanying them, albeit usually unnamed.

Collecting trips required forward planning and great reserves of strength to make the most out of every opportunity. In April 1834 Gunn went to Ben Lomond in the northeast, riding ninety miles in four days, including the ascent and descent of the mountain with two days on the summit. In March he had ascended Ben Nevis to the east, where his party went eight hours before finding water. Neither trip delivered much of interest, excepting a new species of *Gaultheria*.\(^5\) Using assigned servants to carry heavy equipment and specimens in the field would have been immensely useful. On overnight trips, it was the servants who collected firewood, prepared food and drink, and prepared camp. Meanwhile the leaders of the party could indulge in some collecting, or rest after a hard day’s walk.\(^6\)

Aside from this unskilled labour, some convicts possessed important talents. As early as 1831 Lawrence mentioned a convict artist in the colony, and his attempt to engage him as a botanical illustrator. Unbeknownst to Lawrence, Governor Arthur had also ‘promised’ the artist to Dr James Scott (the colonial surgeon).\(^7\) The man in question, William Buelow Gould, produced startlingly accurate paintings of natural history specimens.\(^8\) Gould had arrived in the colony in late 1827, having previously worked in England for the German lithographer, inventor and bookseller Rudolph Ackermann and William Mulready RA. On his

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\(^6\) Barker and Barker ‘Botanical Contributions Overlooked’ include several examples of the companions on expeditions assisting in this manner, although not all of these companions were convicts.

\(^7\) R.W. Lawrence to W.J. Hooker, 20 May 1831 and 29 Jun 1832, Burns and Skemp, *VDL Correspondents*, pp. 17, 19.

transport to Van Diemen’s Land Gould had been known to paint and sketch the soldiers for favours, the bartering of his art for goods and services being a trait that he would later be well known for. Assigned to Scott due to the colonial surgeon’s interest in natural history, he produced nearly 400 watercolours of native plants for his master between late 1830 and early 1832.59

Scott used these illustrations to further his own reputation as a naturalist on at least one occasion, when two full-page colour prints of Van Diemen’s Land native plants were published in Curtis’s Botanical Magazine of 1832. This richly illustrated serial featured plant descriptions by William Hooker, including Australian material Hooker had received from Allan Cunningham that was then verified by Robert Brown. Being a popular floral work, it was not essential that Hooker possess specimens of all the material he included, making the Botanical Magazine different from the other publications he produced. 60 The two plant illustrations attributed to Scott, were Polygonum adpressum (today Muehlenbeckia australis), also known as the Macquarie Harbour Grape, and a small terrestrial orchid, Calochilus campestris. In the same volume were another

59 Today the whereabouts of 169 of his botanical paintings are known, although (when studied and put into sequence) there is evidence that Gould produced at least 383. In addition to these he produced another 77 botanical paintings at Macquarie Harbour in late 1832. Gould is also known for painting other natural history subjects including most famously, fish also at Macquarie Harbour. There is further evidence of him painting nearly 100 birds, shells and more fish at Port Arthur. The majority of his known botanical watercolours are in QVMAG, with some held by the Allport Library and Museum of Fine Art. The Allport also hold Gould’s book of fish. Over 100 Gould watercolours remain today in private hands. These paintings are entirely separate and different from Gould’s still life oil paintings that he completed in his later years, and for which he is better known in the art world. In April 2011 The Allport collection of Gould’s fish was placed on the UNESCO Australia’s memory of the world register. For more information on Gould see I. Mead, ‘William Buelow Gould - Convict Artist in Van Diemen’s Land’, Royal Society of Tasmania Papers and Proceedings 96 (1958), pp. 81-89; and G. Darby, William Buelow Gould (Burnie TAS, 1980).

60 Hooker noted that his description of Polygonum adpressum was copied from Labillardière ‘in the absence of good specimens’. W.J. Hooker, ‘Polygonum adpressum’, Curtis’s Botanical Magazine... 6 (London, 1832), t. 3145.
half dozen Australian plants including an *Epacris*, a *Baeckea* and a *Leucopogon*.

There were also illustrations and descriptions for black pepper *Piper nigrum*, and the betel nut *Piper betle*, a natural stimulant from Southeast Asia.  

Scott’s illustrations were accompanied by descriptions by Hooker. Neither plant was new to science, the orchid being originally described in Brown’s *Prodromus*, and *P. adpressum* by Labillardière. *P. adpressum* was a plant that greatly interested European settlers, as its fruit was recognized as a mild astringent, and was sometimes eaten by convicts at Macquarie Harbour to combat scurvy. In Hobart Town the plant had been readily adopted as a fast-growing ornamental climber, and as Hooker reported in his description, was used in tarts. Its ornamental quality was captured in the illustration, with dark green arrow-shaped leaves, contrasting yellow stipules, small white starry flowers and pendants of round white fruit with a blush of pink. In the bottom left corner the words ‘Dr. J. Scott delr.’ are printed attributing the illustration to him. Hooker’s text reinforced the point: ‘Dr. Wilson has lately been kind enough to present us with some beautiful drawings, made by Dr. J. Scott in Van Diemen's Land.’

Within the orchid description Hooker added a lament that there were few Australian terrestrial orchids in England. The orchid had been found in New South Wales, Port Jackson and Van Diemen's Land where ‘Our drawing was made from the living plant…by Dr. John Scott, [sic] who detected it in low,
shaded grounds’. The illustration features five open flowers with a purple throat turning through a dark orange to yellow at the outer lips. On the same stem are three buds. There is a separate detailed image of another bud, and another of the tuberous root system. Again Scott is named as the delineator (fig. 11).

Figure 11 Left: Polygonum adpressum Labill. (now Muehlenbeckia adpressa (Labill.) Meisn.), or ‘Macquarie Harbour grape’. Right: Calochilus campestris R.Br. These illustrations were attributed to ‘Dr. J. Scott’, but they were actually by his convict servant William Buelow Gould. *Curtis’s Botanical Magazine* 6 (1832), t. 3145 and 3187.

It is likely that one, if not both of these illustrations were by William Gould, submitted under Scott’s name (although no doubt Scott was annoyed at being mistaken for ‘John’). This occurrence did not escape other naturalists in the colony, Gunn noting in the 1840s on one of his collecting strips for *Calochilus*

65 W.J. Hooker, ‘Calochilus campestris’, *Curtis’s Botanical Magazine* 6, t. 3187.
campestris that the illustration was good, and it was ‘done by a Convict named Gould & not by Dr. Scott – who could not draw’. It is likely that if the orchid was by Gould, that the Macquarie Harbour Grape was also his.

That Gunn felt it necessary to include this detail on his own specimen suggested a need to settle a score. Perhaps it was simply because Gould was not recognised, or because Gunn did not believe Scott deserved the credit. There may also have been jealousy that Gunn did not have his name mentioned in the Magazine. Gunn’s drawing skills are difficult to judge due to limited source material, but he did carry sketchbooks and completed pencil and ink illustrations of interesting specimen details that were then attached to specimen sheets sent to Kew. He lacked Gould’s talent, but could manage enough to get by.

Scott’s lack of artistic ability was no doubt a source of frustration, but one that he found he could overcome thanks to having a ready labour market from which he could use his government position to draw appropriately qualified convicts to work for him. Gould’s repeated convictions for drunkenness eventually led to his transfer to Macquarie Harbour penal station, where he was assigned to Dr William de Little, the settlement surgeon, for whom he continued to draw. Meanwhile in Hobart, Scott commissioned the engraver (and forger) Thomas Bock to draw the heads of at least two convict runaways – the bushranger James McCabe, and the infamous cannibal Alexander Pearce.

That Gould produced these two illustrations whilst assigned to Scott made them Scott’s property, and the master could claim they were his work. Regardless

66 R.C. Gunn collecting strips, 919 Calochilus campestris, ML A316.
67 Example of his pencil sketches can be found in chapters 6 and 7.
of the question of ownership, that a convicted felon could have two of his plant illustrations published in a London journal while still under sentence is remarkable. This episode illustrates the opportunities available to those on the periphery with peculiar skills. Although a highly unusual circumstance, Gould was not the first convict artist to be published in a London botanical work. In the 1790s when James Edward Smith was working on his *Specimen of the Botany of New Holland* in London, his engraver James Sowerby was working from drawings and specimens prepared by the convict artist and forger Thomas Watling in New South Wales. Watling was assigned to the surgeon and naturalist John White, who (like Scott) used Watling’s talent to further his own interest in botany and zoology. As with Gould, Watling’s name was not associated with the material sent to Sowerby by White, but careful comparison between the published engravings and the original watercolours shows Watling to be the original artist. 69 That the masters Scott and White got the credit for the work when published reveals how the availability of cheap indentured labour allowed for botanical progress different to that in other settler societies.

In New Zealand, William Colenso occasionally used a Maori servant or companion to carry specimens in his vasculum, or to obtain specimens from otherwise inaccessible places. For special consignments, Colenso would pay an

69 The majority of Watling’s natural history artworks are held in the Natural History Museum, London. There is a further interesting parallel between Watling and Gould, as both men produced oil paintings (such as landscapes and still-lives), but their oils were not considered to be of the same standard as their watercolours. H. Hewson, *Australia: 300 Years of Botanical Illustration* (Collingwood VIC, 1999), pp. 34-38; R. Rienits, ‘Watling, Thomas (1762–?)’, in *Australian Dictionary of Biography*, online ed., accessed 12 Aug 2011, http://adb.anu.edu.au/biography/watling-thomas-2776/text3947.
‘intelligent Native’ for choice material.\(^{70}\) In the Swan River colony in Western Australia during the early 1840s, Georgiana Molloy would go collecting accompanied by an Aborigine named Calgood whose assistance she valued similarly for collecting plants she otherwise could not access. She also preferred Calgood’s manner, ‘The natives are much greater auxiliaries than white people…They ask no impertinent questions, do not give a sneer at what they do not comprehend and above all are implicitly obedient.\(^{71}\)

That convict servants acted as plant collectors in early colonial Australia has been recognised; but their contribution to natural history has been undervalued. Similarly Aboriginal plant collectors have been overlooked in historical narratives, figures Philip Clarke calls ‘silent partners’ in plant collecting.\(^{72}\) As Barker and Barker discussed, companions on field trips often deserved as much credit for a collection as the leading naturalist, and can impact on future nomenclatural and taxonomic decisions.\(^{73}\) Contemporary published and private accounts of botanical expeditions often portrayed the explorers and plant collectors, with an occasional nod to a homogeneous group of servants who accompanied the men of status. Like Aboriginal collectors, convict plant

\(^{70}\) Allan Cunningham had sent the vasculum to Colenso especially, having it made to be extra durable, ‘to meet the rough usage of the N. Zealander’. A. Cunningham to W. Colenso, 4-11 Dec 1838, cited in Endersby, *Imperial Nature*, pp. 64-5. For Colenso paying for specimens, W. Colenso, May 1844, as cited in I. St George, *Colenso’s collections: Including the Unpublished work of the Late Bruce Hamlin on William Colenso’s New Zealand Plants Held at Te Papa* (Wellington, 2009), p. 477.


\(^{72}\) Clarke, *Aboriginal Plant Collectors*, pp. 6-7.

\(^{73}\) Barker and Barker, ‘Botanical Contributions Overlooked’, pp. 67-68.
collectors are also ‘silent’, although artists Thomas Watling and William Buelow Gould have been recognised to some extent.\textsuperscript{74}

In Van Diemen's Land convict masters did not utilise the indigenous inhabitants as Colenso and Molloy did, but they did have access to extremely talented men who could offer more than just an ability to carry heavy loads through the bush. Gould’s circumstances were extraordinary, but he was not the only convict who enjoyed an atypical convict experience due to his talent for natural history.

Convict servants: ‘the Collectors’

Convict botanists could prove a useful commodity, being well educated, bound to their master, and dependent upon favourable testimonials to improve their situation. George Morand spent nearly ten years between 1822 and 1831 in the employ of William Lawrence, Robert’s father. During that time he participated in several field trips and accompanied Robert on the Black Line.\textsuperscript{75} Morand was twenty-two years old when he arrived in Van Diemen's Land. A Scot from Dundee, he had been sentenced to fourteen years for breaking into a house. What made him desirable to Lawrence and other collectors was his former training. When Morand was asked his trade on disembarkation in Hobart, he

\textsuperscript{74} Desmond, \textit{Dictionary of British and Irish Botanists}, pp. 261-2, 519, 643. Alex Buchanan identified three more ‘silent partners’ during his research on Gunn’s herbarium held in Hobart. He found specimens attributed to a William Watkins, a R.K.N. and a J.C.U. Attempts at identifying these three people has so far been unsuccessful. Buchanan, \textit{Collecting Localities}, p. 44.

\textsuperscript{75} George Morand conduct record, AOT CON 31/1/29. Note the years Morand was officially with W.E. Lawrence are approximate and taken from Morand’s conduct record. His first offence was recorded in 1822 with no note of his location. By 1825 he was assigned to Lawrence as he was charged in October of that year. It is possible that Morand was working for Lawrence before 1825, but did not have any charges brought against him until that year.
declared himself to be a ‘gardener and botanist’. Morand’s initials on specimens and mention of him in letters and journals indicates that he was a highly competent collector, and possibly encouraged Robert’s initial forays into the field.

He accompanied Lawrence on collecting trips, and worked alongside him on the family property and in the garden. Not all of his time was consumed with science, Morand spent weeks on end stripping bark from native Acacias to use in tanning, and dug and cultivated potatoes – both common employments for assigned labourers. He assisted Lawrence in collecting native seeds from the garden to be sent to Hooker. Evidentially, the garden at ‘Vermont’ featured native plants as well as ornamentals and vegetables.

In 1833 while he was assigned to Launceston’s port officer William Moriarty, Morand joined a collecting party led by Gunn. Gunn would have known Morand from his previous employer, and may even have joined him and Lawrence on collecting trips. In this instance Gunn valued Morand’s botanical skill rather than his government classification as an assigned servant. That Gunn had met Morand before is indicated in his familiarity with him during his collecting trip to the Meander Falls in January 1833. Gunn was happy to trust Morand as his ‘pilot for the Mersey’ and followed his guidance in collecting. In his journal Gunn named all the free settlers in the expedition individually, as well as ‘George Moran the Collector’. It is significant that Morand was mentioned by name. In contrast at the beginning of the trip Gunn mentioned he had ‘got my

76 Morand’s description at muster, AOT CSO1/1/403. Although Morand may be visible today through the accounts of others, his Scottish accent remains. His government documents spell his surname Morand, but he pronounced it with a soft ‘d’, which we see when other colonists write about him. Lawrence, Gunn, Stuart and Archer all spelled his name ‘Moran’.

77 R.W. Lawrence diary, Oct-Dec 1829, QVMAG CHS 53 33/2.
servant equipped’ and set out ‘I on my poney and he on foot but at the same time keeping company’. This nameless convict remained an absent presence for the remainder of the trip.78 Not only was Morand identified, he was listed amongst the free men, suggesting that in Gunn’s mind he shared an equal status with the other party members. Giving him the title of ‘Collector’, lent an air of authority and shows Gunn’s recognition of his skills.

Gunn’s high opinion of Morand is all the more interesting as the man’s behavioural record in the colony was not what Gunn would have described in his Governmental role as favourable. In bureaucratic terms Morand was far from a model servant, being charged with numerous offences for being drunk or away from his master. Six of his nine offences following his arrival in Van Diemen's Land involved absence without permission, and he had previously attempted to escape from gaol in Aberdeen. After several reprimands and one month working in leg irons, Morand’s drinking and difficult attitude had him leave Lawrence’s employ for a twelve-month sentence to hard labour in 1831. Following his release, he was assigned to Moriarty.79

Morand’s stay in the Deloraine district was cut short after he absconded again, this time taking a letter intended for Miss Moriarty from the Police Magistrate – Ronald Gunn. He had also taken the liberty of inserting an ‘infamous falsehood’ into the letter, regarding Moriarty’s nephew and fellow traveller to the falls in 1833, Henry Douglas. This resulted in a further twelve months hard labour in the Bridgewater chain gang, and later assignment to the Bothwell police magistrate Charles Schaw. Schaw desired Morand’s green thumbs for his estate at

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78 R.C. Gunn journal, Jan 1833, ML A316.
79 George Morand conduct record, AOT CON 31/1/29.
'Schawfield’, a thirty-seven-room house sitting on ten acres of land. Schaw was an extremely difficult man, and several colonists complained that his magisterial decisions were clouded by an offender’s previous form. He abused his position of power, charging Morand with entering ‘Schawfield’ with ‘felonious and burglarious Intent’ in October 1834. Seeing no conflict in presiding over the misdemeanour himself, he had Morand committed for trial. Morand was acquitted in April the following year, and no further charges were entered against his name.80

Morand was not the only convict botanist. Thomas Watling was transported to New South Wales for forgery and produced approximately 512 drawings of flora and fauna between 1792 and 1801. John Richardson, a trained nurseryman, was transported for larceny and arrived in Sydney in 1817. He was pardoned in 1821 and accompanied a plant collection to Britain, only to be retransported to Van Diemen’s Land for housebreaking in 1822. The New South Wales Botanist Charles Fraser applied for Richardson’s transfer to the Sydney government garden, and Richardson possibly joined John Oxley’s expeditions as plant collector in northern New South Wales. His contributions to botany were recognised by Lindley who in 1825 named *Hibiscus richardsonii* Lindl. for him.81 Few convict collectors were as visible as Morand and Richardson. Most remained

80 Morand’s misdemeanours taken from his conduct record AOT CON 31/1/29; information on Schaw from J.C. Smith, ‘Schaw, Charles (1785 - 1874)’, *Australian Dictionary of Biography*, online ed., accessed 3 Feb 2011, http://www.adb.online.anu.edu.au/biogs/A020378b.htm. It was illegal for Schaw to sentence his own convict servant. Magistrates were required by law to send their servants to another magistrate for a fair trial.
shadowy figures like Gunn’s unnamed servant, or barely rated a mention in the journals and notes of the colonial gentlemen they served in the field.

The bushranger John Fisher could be argued to have taken this involvement in botany one step further by physically becoming part of a botanical specimen. In the Tasmanian Herbarium there is a tiny specimen of the dung moss *Tayloria octoblepharum*, collected from the ‘bones and decayed clothing of a bushranger’ in 1845 by William Valentine. Valentine was a doctor from Campbell Town with an interest in bryophytes who was friends with Gunn and Archer. In this case he was able to identify not just the moss, but the skeleton upon which it had grown, on account of the distinctive ‘double barrelled Guns & Pistols’ lying close by.82

As George Morand demonstrated, skilled convict servants were readily shared amongst Vandemonian settlers. Because of the number of transported convicts, it could be expected that some uniquely skilled individuals would enter the system, and Gunn was situated to take advantage of this. As the Superintendent of Convicts and Police Magistrate in Launceston, Gunn was in control of the movements of all convicts in the north of the colony. Since his elder brother William held the same post in Hobart, between them the two men controlled the distribution of all the convicts in the colony. This allowed Ronald Gunn the pick of the incoming convict population, and he could favour other colonists with a similar fortune, at his discretion. Essentially any opportunistic naturalist in the colony could gain skilled convict labour for the price of his

82 It was the dimensions of the skeleton that confirmed Fisher’s identity – at five foot nine inches, he was an unusually tall man for the time. M. Baker, C. Mordaunt, S., Cuthbert and Tasmanian Museum and Art Gallery eds., *Collection: Tasmanian Museum and Art Gallery* (Hobart, 2007), p. 169.
rations and slops. The cost of hiring a free man with the same experience in London would have been considerable. William Hooker recognised this favourable environment, making the glib aside ‘I suppose you have Jacks of all trades visiting your island’.  

Gunn had previously mentioned to Hooker that he had ‘applied’ for a convict skilled in taxidermy. He had been seeking a bird skinner for some months, encouraged by William Hooker who requested specimens to share with his sons. Skilled taxidermists were rare, but a vital commodity in ornithology. Charles Sturt had employed gunsmith Daniel Brock in 1844 to stuff birds and keep the guns during his expedition into the Australian interior in search of an inland sea. Brock had no previous experience and struggled at the outset to work out the mechanics of the task. Eighteen years earlier Charles Darwin had paid one guinea for a term’s education in bird-stuffing from the ex-slave ‘John’ from Guyana.

Prior to this Hooker had received birds stuffed by Robert Lawrence’s wife Anne, but following her death, Gunn became Hooker’s sole provider of all natural history curiosities. Gunn’s first wife had not filled Mrs. Lawrence’s shoes as a bird stuffer, and so Gunn looked to the largest employment pool available: the convict body. Gunn had admitted to William Hooker in early 1835 that he lacked skill when preserving zoological specimens: ‘I have tried in vain to acquire skill

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83 'Slops’ was the term used for clothing. W.J. Hooker to R.C. Gunn, 8 Jan 1836, ML GC 8.
84 William Hooker’s eldest son William was a budding ornithologist, and his younger son Joseph an entomologist. Both also possessed an excellent knowledge of botany, and William senior took full advantage of his global correspondence network to feed the interests of his children. That Gunn was procuring specimens for an eighteen-year-old Joseph served to strengthen the bond between the two men when they finally met in 1840.
86 ‘John’ and Darwin are discussed further in Desmond and Moore, Darwin’s Sacred Cause, pp. 18-20.
in skinning [birds] and have failed, and have been equally unsuccessful in my search for a man capable of doing so – I do not however despair of procuring one of the first Bird skinners who arrives in any prison ship from England, as I have applied for a man…to be assigned to my service, on purpose to fulfil my promise to you’.

In the winter of 1835 Gunn reported that he had ‘fallen in’ with a man named James Lee. Lee was twenty-two, a ‘Gents Servant & Bird Stuffer’ who had been transported on the ‘Waterloo,’ following a sentence of fourteen years for theft. In his first month of assignment to Gunn, Lee had shot and prepared twenty-four different species of small bird for Hooker, as well as a few other items. This was the beginning of a particularly productive period for Gunn, who dispatched many natural history specimens to several institutions and individuals in Britain. As George Morand was an example of how readily colonists shared some assigned servants between them, Lee shows just how much personal freedom a convict could have, as Gunn often sent Lee out alone – armed with gun and shot – to collect birds. Clearly the experience of a transported convict could vary greatly depending on the skill of the convict and the desires of their master.

James Lee’s freedom extended beyond short hunting trips. In the spring of 1838 Gunn sent Lee to walk from Launceston to Hobart, collecting birds along the way. Lee complained that he did not have the money to purchase powder or shot, he needed new shoes, and was unable to skin any birds properly due to

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87 Gunn to W.J. Hooker, 30 Mar 1835, Burns and Skemp, *VDL Correspondents*, p. 42.
88 Lee’s occupation and physical description AOT CON18/1/21; Conduct Record CON 31/1/28. See also his appropriation list AOT CSO/1/788 and AOT MM33/6; and the alphabetical register of convicts AOT CON23/1/2.
89 Gunn To W.J. Hooker, 29 June 1835, Burns and Skemp, *VDL Correspondents*, p. 46.
having an infected blister on his finger. In the meantime, Lee had been loaned to William Lawrence to complete a large arrangement of birds. Lee proudly told Gunn how he had studied each bird’s habits and had fixed them onto one single tree, the tree being ‘a splendid [sic] ornament by itself yet i have combined nature with ornament to set the whole off with Eclat’. He went on to list sixty-eight birds by their common names including wattlebirds, robins, magpies and an owl that looked ‘very well in the middle fork of the tree’, along with a tiger cat and a lizard. Gunn’s plan was to meet Lee in Hobart, where the two men would board a vessel to Port Davey, accompanying Lady Franklin and British ornithologist John Gould for a two-week expedition. Gunn would have wanted fresh specimens to offer to Gould, and no doubt Lee would have been of assistance to both men during the journey.

The few letters from Lee to Gunn that survive in various archives reveal his increasing literacy. Over the next five years Lee was particularly busy preparing skins for his master, who in turn sent them on to an increasing number of patrons in England, including John Gray of the British Museum and John Gould. Lee’s interest in botany is more difficult to ascertain as none of his correspondence relates to plants. At least two specimens collected by Lee remain

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90 J. Lee to R.C. Gunn, 28 Nov 1838, NLA MS 2036. The Queen Victoria Museum and Art Gallery in Launceston houses a large number of nineteenth century bird specimens donated by the Lawrence family that are likely to be from this original case, although they have long since been separated from each other and from any original collecting or catalogue notes. Unlike many nineteenth century specimens, these have been preserved in a strikingly natural manner – so much so that many of these Lee-attributed specimens are part of the QVMAG’s latest exhibition of the Museum’s permanent collection, ‘Tasmanian Connections’ (Dec 2010–). That the work of a nineteenth century taxidermist can still be considered good enough to be part of a twenty-first century museum display reflects the quality of the work. H.H. Scott (curator 1898-1938), claimed there were forty birds at QVMAG that were the work of a convict, see Burns and Skemp, VDL Correspondents, p. 47.

91 This trip (and the failure of the voyages to get any further than Recherche Bay due to bad weather) is discussed more fully in chapter 4.
in Gunn’s private herbarium: a *Tetrahedra* from October 1838, and a *Eucalyptus* from January 1841. Only the eucalypt label is written in James’ hand (fig. 12), the *Tetrahedra* (a genus that Gunn paid especial attention to), bearing the initials ‘J.L’.\(^92\) It is possible that Lee collected more than these two specimens, but that they were assumed by accident or on purpose into Gunn’s collection. Gunn never mentioned Lee by name in his letters to Hooker, although he mentioned an assistant on field trips who was most likely to have been Lee.\(^93\)

**Figure 12** James Lee’s spiky handwritten label on *Eucalyptus viminalis*. HO509676.

Gunn loaned Lee to other visiting naturalists, although grew annoyed when Thomas Short kept his servant ‘incessantly attending on him’.\(^94\) When Joseph Hooker visited Hobart in 1840 he enjoyed a similar privilege when Gunn could not collect alongside him. As Hooker recognised in the *Flora Tasmaniae* Gunn, ‘directed one of his servants, who was an experienced guide and plant-

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\(^92\) *Tetrahedra pilosa*, collected by J. Lee 1 Oct 1838, HO310122; *Eucalyptus viminalis*, collected by J. Lee 28 Jan 1841, HO509676.

\(^93\) R.C. Gunn to W.J. Hooker, 31 Mar 1837, Kew DC 76.

\(^94\) R.C. Gunn to W.J. Hooker, 31 Mar 1837, Burns and Skemp, *VDL Correspondents*, p. 64.
collector, to accompany me and take charge of my specimens’.  

Lee’s reputation for preparing natural history specimens led to his being offered a position in charge of Lady Franklin’s museum Ancanthe on the outskirts of Hobart. Wanting to avoid any ‘slur’ surrounding his appointment, Lee asked for Gunn’s support by granting his conditional pardon two months early. In doing so, he reminded his old master of the ‘special service’ he had performed under sentence including saving Gunn’s daughters from a bedroom fire, being made a ‘special constable’ at Circular Head, and Gunn’s promise at the time to get his sentence reduced after Lee had helped prevent smuggling at that port.  

Despite the request, Gunn did not waive the two months, Lee having to wait until late May 1843 to receive his freedom.

Lee remained in Hobart after receiving his pardon, presumably continuing to practice his taxidermy. He wrote to Gunn in October the same year of a ‘Platyabus’ dissection he had undertaken on request from a Mr MacConnell. MacConnell had especially sent for Lee to perform the dissection in front of three witnesses, suggesting that Lee’s skills were well known and well regarded. Lee explained to Gunn that on opening up the female platypus he discovered it to be ‘oviparous and not viviparous has [sic] a great many supposed it to be’. The men then preserved the eggs and embryos in a bottle of clear gin so that others could inspect it, and Lee intended to mount the skin and skeleton to ‘clear up all doubts’.

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95 Hooker, ‘introductory essay’, p. cxxv.  
96 J. Lee to R.C. Gunn, 28 Feb 1843, ML GC 1.  
97 J. Lee to R.C. Gunn, 28 Oct 1843, ML GC 1.  
98 Lee to R.C. Gunn, 28 Oct 1843, ML GC 1.
Lee was fully aware of the importance of his discovery, but looked to another to write the results into a paper. After finding Joseph Milligan out of town, he appealed to Gunn: ‘Sir, I am not aware of this important question being decided before as a fact by sufficient proof. Either in this Colony or anywhere else. But you are better informed whether it has or not than me [sic]. Should this information be of any service to you it is at your service to use as you may think proper’.99 That he deferred to Gunn shows Lee’s understanding of the obligations between social classes. As an emancipist, Lee did not have the same skills as Gunn when it came to composing a scientific paper, thus the responsibility of authorship was passed on to someone of a higher class who could. This did not mean that Lee wished to pass away all association with the dissection, but rather that he expected Gunn to play his part in the interaction. If Gunn had claimed all the credit, it is likely Lee would not have approached him with any new information in the future.100

The mystery of the platypus (Ornithorhynchus) had been at the heart of zoological scientific debate from the 1820s until 1884 when William Caldwell from Cambridge officially announced that Monotremes were oviparous. In 1833 colonial naturalist Dr George Bennett had written to the palaeobiologist Sir Richard Owen of these same findings, but it took another fifty years for a British

99 J. Lee to Gunn, 28 Oct 1843, ML GC 1.
100 Anne Secord has discussed this tension between artisans and gentlemen in ‘Corresponding Interests’. It is interesting to see it appear between an emancipist and a gentleman. This deferential relationship only persisted when both parties shared the same understanding of the rules of the transaction. Secord, ‘Corresponding Interests’, pp. 400-401. For a different application of the deferential relationships between social classes see also P. Joyce, Work, Society and Politics: The Culture of the Factory in Later Victorian England (Brighton, 1980).
biologist to officially confirm this fact.\textsuperscript{101} In the meantime Richard Owen did not mind putting pressure on his colonial correspondents for his desiderata, writing to Gunn in 1837 that ‘I do not despair yet of receiving from you an impregnated \textit{Platypus} or \textit{Echidna’}, as well as instructions on how to obtain them.\textsuperscript{102} Gunn was happy to oblige. Aside from Lee’s dissection, Gunn collected specimens when he could, paying handsomely for good material. On one occasion in mid-1843 he paid £14.10/ to one of the Lawrence family shepherds for eighteen ‘platterpurses’ he had collected.\textsuperscript{103}

Female ‘Botanical friendships’

Although Gunn’s first wife Eliza did not embrace natural history collecting, Gunn was not entirely without female assistance in the field. In contrast to ‘silent’ convict servants, Mrs Charlotte Smith joined Gunn and Lee at Circular Head collecting orchids and marine algae, and Miss Mary Ballantyne collected vascular plants around New Norfolk in the Macquarie Plains in the early 1840s. Gunn mentioned both women in his letters, Mrs Smith being particularly close to him as she cared for his youngest son following the death of Mrs Gunn. Mr and Mrs Grant Smith had moved to Circular Head for ‘pure air’ to improve Charlotte’s health. Her involvement in physical activities such as collecting would have been seen as equally healthful, and she helped change the drying papers of

\begin{footnotes}
\item R. Owen to R.C. Gunn Jan 1837, ML GC 6.
\item Isaac Hayes to R.C. Gunn 12 Jun 1843, ML GC 1.
\end{footnotes}
Gunn’s specimens who noted ‘without her my collection would have been far less, & a great proportion of those collected would have been spoiled.’\textsuperscript{104}

A sample of Charlotte’s work remains in a small bound book of terrestrial orchids annotated by Gunn entitled ‘The Orchideae of V.D. Land’. Containing seventy-nine sheets of specimens, each sheet includes up to six duplicates. The book was prepared and used by Gunn as part of his reference herbarium, its small size and bound pages making it easier to refer to rather than needing to pull out more cumbersome individual sheets. Gunn named every orchid in the book at least to a generic level, with special or well-known examples (such as \textit{Gunnia australis}, named for Gunn by John Lindley four years earlier in 1834), receiving a species epithet. As well as a name, each orchid in the book was given a collecting number to correspond with the larger specimen sheets he housed in his herbarium and sent off to Kew.

Charlotte collected over seventy per cent of the orchids in the reference book, and assisted with pressing, mounting and changing pressing papers. Her skill is evident, with many of the plants pressed and arranged so well that they have retained their colour and the finer floristic detail. In addition to the fifty-seven plants Charlotte collected, Gunn added eleven. The contributor of a further eleven was not specified.\textsuperscript{105}

Gunn sent at least three collections of seaweeds collected dried and by Smith to William Hooker, and added that three quarters of his shell collection from 1837 was collected by her. Gunn lamented when she and her husband

\textsuperscript{104} R.C. Gunn to W.J. Hooker 31 Mar 1837, Burns and Skemp, \textit{VDL Correspondents}, p. 63.  
\textsuperscript{105} ‘Orchideae of V.D. Land’ attributed to Charlotte Smith by Gunn, dated 4 April 1838, QVMAG Orchideae.
moved away in mid-1838, ‘I am again alone’.\(^{106}\) He was further aggrieved when six months later she died following the death of her newborn child, linking the suddenness and similarity of her death to that of Lawrence and his wife five years earlier, claiming ‘I am most unfortunate in my Botanical friendships’.\(^{107}\)

Gunn probably met Mary Ballantyne the following year when he was courting his second wife Margaret Jamieson. Jamieson’s family lived in the same district as Ballantyne, at Glen Leith near New Norfolk. On this occasion Gunn happily mixed botany and romance, as Buchanan noted that a heavy percentage of Gunn’s 1839-1840 collections were from Glen Leith itself or the surrounding area, collected on trips to see his sweetheart.

Ballantyne was not as closely involved in preparing Gunn’s collections as Charlotte Smith had been, but joined Gunn on collecting trips to the Macquarie Plains and at her family home Kenmore. She collected the type specimen of what is today a genus named in her honour Ballantinia antipoda (F.Muell.) E.A. Shaw. The plant was first described by Joseph Hooker in the Flora Tasmaniae as Hutchinsia australis Hook.f., noted as collected on the ‘Macquarie Plains’ by Miss Ballantyne, Gunn number 644. Hooker’s name was revised by Ferdinand Mueller to Capsella antipoda F.Muell. in 1855, to Capsella australis (Hook.f.) Benth. by George Bentham in 1863, changed to Cuphonotus australis (Hook.f.) O.E. Shultz by Otto Shultz in 1933, and was further revised to its current name in

\(^{106}\) R.C. Gunn to W.J. Hooker 21 Apr 1838, Burns and Skemp, VDL Correspondents, p. 75.
\(^{107}\) Gunn added to this, ‘Poor Robert Lawrence’s loss has never been made up – the vacancy caused by his death still remains open’. R.C. Gunn to W.J. Hooker, 30 Nov 1838, Burns and Skemp, VDL Correspondents, p. 82
1974 by E.A. Shaw.\textsuperscript{108} In a list of duplicate plants Gunn sent to Joseph Hooker in 1846, eighteen were Ballantyne specimens, her specimens labelled in Gunn’s hand with the initial ‘M.B.’ next to each.

Gunn’s relationship with these two women was entirely based upon a joint interest in botany. Londa Schiebinger has discussed how little is currently known about gender in colonial science, and by looking at the relationships Gunn had with Smith and Ballantyne, we can begin to understand how difficult this task proves to be.\textsuperscript{109} We know little of Ballantyne and Gunn’s relationship, but in Smith we see a woman who fulfilled a nurturing role, both for Gunn’s plants and for his children. That Ballantyne and Smith are so visible reflects how highly Gunn considered their talents, particularly in comparison to Gunn’s two wives who were rarely mentioned in his correspondence to the Hookers, except in passing.

A field trip to Meander Falls, 1833

Gunn’s excursion to the Meander Falls in the summer of 1833 was his first major field trip, during which he kept a rough journal as William Hooker had recommended for his \textit{Botanical Miscellany}. This was Gunn’s first opportunity to show his skill as a naturalist. His busy work schedule in Launceston necessitated much planning prior to setting out. His journal reveals his naivety and tentative beginnings as a collector, knowing only a selection of more common plants. He


could describe the Eucalypt vegetation dominating the landscape around Deloraine, but could not name the various species of the tree, nor the Acacia or Banksia species that made up the understorey.\textsuperscript{110} His list of plants collected was large as ‘the number of new Plants that now met my sight were very great’, including Waratah, Boronia, Leptospermum, Leucopogon and Pomaderris.\textsuperscript{111} Despite these finds, he discovered that he had to cease collecting once it began to rain, as the water would ruin his specimen book and he had no vasculum with him.\textsuperscript{112}

A vasculum was a lidded metal box with a leather or rope strap used to carry fresh specimens, allowing a collector to work quickly in any weather as there was no need to set up papers and a press each time a plant was taken.\textsuperscript{113} In Australia the generally woody and spiky nature of much of the vegetation would have made the vasculum a popular choice to avoid ripping through precious paper, or prickling the collector if carried in a bundle. Endersby discussed the popularity of the vasculum amongst British collectors, and being cheap to produce in Britain they made an excellent gift for collectors in Australia, where they remained a specialist item. Allan Cunningham gave the New Zealand collector William Colenso a small and later a large vasculum in 1837, to be carried by a Maori servant. Joseph Hooker also gave Colenso a vasculum when he visited New Zealand on the \textit{Erebus}.\textsuperscript{114} Whether Gunn received similar gifts is unknown. His

\begin{itemize}
\item \textsuperscript{110} R.C. Gunn journal, Jan 1833, ML A316. Gunn mentions the ‘green trees being the Banksia No? and the Wattle (No_)’; and later mentions ‘a large kind of acacia called \textit{Silver Wattle}’.
\item \textsuperscript{111} R.C. Gunn journal, Jan 1833, ML A316.
\item \textsuperscript{112} R.C. Gunn journal, Jan 1833, ML A316.
\item \textsuperscript{113} A fuller description of vascula can be found in A. Larsen, ‘Equipment for the field’, in \textit{Cultures of Natural History}, eds. N. Jardine \textit{et al.} (Cambridge, 1996), pp. 358-377.
\item \textsuperscript{114} Endersby, \textit{Imperial Nature}, pp. 63-65.
\end{itemize}
lack of such equipment was at first sorely felt. As he wrote, ‘I regret that my want of a Box to hold the specimens until I could put them into my Specimen Book was the cause of my loosing [sic] many of my best - & indeed as you may have perceived all were very imperfect.’

Beside the Meander River he was taken by the dramatic flowers of Blandfordia (the Christmas Bell), with a tall spike of flaming orange and yellow trumpets, up to forty-seven flowers per spike: ‘I almost felt annoyed at the men pulling them & throwing them about as valueless’ he wrote conspiratorially.

Blandfordia was one of the few genera he identified to species level in his journal as B. nobilis Sm., matching the one he had seen illustrated in James Edward Smith’s 1804 Exotic Botany (fig. 13).

Blandfordia is a genus endemic to eastern Australia, but Gunn’s specific identification reinforced his lack of experience with the Vandemonian flora and his dependence on the few reference books at his command. Although Gunn’s memory of the striking colour illustration by James Sowerby showed his capacity to absorb species names, B. nobilis is only found in New South Wales. What Gunn had collected was Blandfordia punicea (Labill) Sweet, first described by Labillardière in 1805 as Aletris punicea, and revised into the genus Blandfordia by Robert Sweet in 1830. In the meantime, Robert Brown had published a new member of the genus B. grandiflora in his Prodromus. In Gunn’s specimen book that day two specimens of the plant were given the collection number 241.

115 R.C. Gunn journal, Jan 1833, ML A316.
116 Gunn called this Blandfordia nobilis in his journal, Jan 1833, ML A316. B. nobilis is a New South Wales plant described and illustrated by James Edward Smith in 1804. Exotic Botany 1, t.4. Gunn would have recognised the orange and yellow bell flowers, identifying the Mersey specimen as the same.
Indicative of his inexperience, his notes lacked details of date and place collected on their labels. This was to become a common feature of his notes in subsequent years.

Figure 13 _Blandfordia nobilis_ from Smith’s _Exotic Botany_, 1804.

The _Blandfordia_ specimens taken on this trip make an excellent case study for an examination of Gunn’s early labelling technique and his specimen numbering system, which were both important elements to Gunn’s future success as an accurate botanical correspondent. Gunn maintained a system where every species was given a unique number, with separate numerical series existing for
vascular plants, ferns, mosses and lichens. To distinguish between collecting expeditions, Gunn would add dating and location details to supplement the number. In this case, *Blandfordia punicea* was always catalogued under number 241, and every specimen collected over the years would be housed under it. This continuity enabled easy tracking of a genus or species collected by Gunn, and today we can see changes in his collecting practice over time. We can also see any differences in labelling and annotation depending on the institution or individual that received and housed the specimen. Gunn’s numbering system, however, was fallible. In his early years his notation was scanty and inconsistent. In later years the collecting number was frequently written above the year, such as ‘214/1838’. This indicates the year a specimen was shipped to England, and not the collecting year as might be expected.\(^\text{118}\)

The Tasmanian Herbarium holds three specimens under Gunn’s number 241, one dated December 1836 collected by Gunn at Rocky Cape in the northwest, one with an attempt at a name, and one bearing only the initials ‘G.M.’ (fig. 14). It appears the two undated sheets were specimens from the 1833 trip, one sporting a corrected species name in Gunn’s hand, the other with initials that matched one of Gunn’s companions at Meander, George Morand. It was with Morand that Gunn saw his first leatherwood, *Eucryphia lucida*, Morand proving useful not only in plant identification, but in negotiating the inhospitable mountains. As the trip continued, Morand had been one of the more active of the

\(^{118}\) Gunn briefly explained his system to Lindley, 11 Dec 1843, Kew Letters to Lindley A-K. Alex Buchanan has discussed Gunn’s labelling system with some photographs, *Collecting Localities*, p. 11.
party, being involved in attempts to catch fish, leading the party along perilous cliffs and into valleys.\textsuperscript{119}

![Image of Gunn's label for Blandfordia punicea](image)

\textbf{Figure 14} Gunn’s plant labels attached to two \textit{Blandfordia punicea} specimens. Both show his collecting number 241, the upper label with Gunn’s naming correction from \textit{B. nobilis} to \textit{B. grandiflora}, and the lower with the initials ‘G.M.’ for George Morand. HO513517 and HO513516.

Gunn’s 1833 label for the \textit{Blandfordia} shows how he returned to his collecting slips to make corrections, as it was first recorded as \textit{B. nobilis} to match his journal at the time. Subsequently Gunn revised the species epithet to \textit{B.}

\textsuperscript{119} Gunn referred to the leatherwood according to its contemporary name \textit{Carpodontos lucida}, as described by Labillardière in his \textit{Relation du Voyage a la Recherche de la Perouse} 2 (1800), t 18. It was revised in 1868 to the genus \textit{Eucryphia} by H.E. Baillon, APNI, ‘\textit{Eucryphia lucida}’, accessed 10 Jan 2010, http://www.cpbr.gov.au/cgi-bin/apni. Morand’s exploits as part of the journey were captured in Gunn’s journal, Jan 1833, ML A316.
grandiflora, in keeping with Robert Brown’s description in the *Prodromus*. Being such a visually stunning plant, it is easy to believe that Gunn remembered the species from Smith’s illustrated work. On returning to his reference library Gunn could re-examine the specimens at his leisure, and realising his previous error, correct it.120

It is still possible to access the type specimen 241 that Gunn sent to Hooker with the corrected *B. grandiflora Br.* written upon it.121 The handwriting on the slip at Kew is not Gunn’s and could be an annotation added by one of Hooker’s assistants. It is also possible that Morand wrote this slip, as Gunn did not usually identify himself purely by his first initial, and the angular nature of the ‘G’ (on the two labels) is similar (figs. 14 and 15). Further comparison can be made using the specimen of *Blandfordia* that Gunn later sent to John Lindley, again number 241, although it has been confusingly labelled as if Lindley collected it himself. Lindley never travelled to Australia, and the year of ‘collecting’ on the slip – 1838 – was one year after Gunn had sent Lindley an expansive set of plant specimens and collecting slips. There is no evidence that Gunn ever used pre-printed labels himself, rather they were affixed to specimens by naturalists sorting the large batches of material upon their arrival in London. The inclusion of Lindley’s name on the label was probably added later on, not intended to suggest he collected the item, but to differentiate the specimen’s origin when his herbarium was assimilated into the collection at Kew.122

120 At this point Gunn did not know that *B. grandiflora* was also only found in New South Wales.
121 See *Blandfordia punicea* K000099914.
122 For the erroneously labelled ‘Lindley-collected’ specimen of 241 see K000099913. For Gunn’s more detailed collecting slip, including a neat ink sketch of the basic habit of the flowering spike see ‘241 *Blandfordia nobilis?’* RHS RCG.
Figure 15 Two of Gunn’s collecting slips at Kew for *Blandfordia punicea*. Top: From his 1833 collection, the identification ‘Bland. grandiflora Br.’ not in Gunn’s hand, the remainder possibly written by Morand. Bottom: An example of a pre-printed Gunn slip from his shipment to Lindley in 1837. K000099914 and K000099913.

By examining this single number, we can see how Gunn adapted his labelling technique as he worked. The simplicity of his core numbering system not only made accessing and cataloguing his herbarium easier, it also ensured that each time he added a specimen sheet, he could compare it to every other item under the same number. Keeping a strict observance over the distribution of his
numbers, including updating his notes as new names were published, was essential to the integrity of the system. Gunn was careful to note when numbers were collapsed together or new ones were required. He maintained a consistent series. This reduced misunderstandings or errors with his correspondents whilst facilitating discussion and exchange between the recipients of Gunn’s botanical packages. His standardisation allowed for Brown, Lindley and the Hookers to share knowledge or specimens easily. Over time, new species received new numbers. Gunn’s numerical ordering would superficially have appeared chaotic, with several species from one genus sitting completely separate from each other within that sequence. His method, however, allows us to reflect on how he added different species to his catalogue early in his collecting career. Gunn’s collecting numbers rapidly spiralled into the four hundreds, and by 1838 into the thousands. *Blandfordia* sits at number 241, showing it was a relatively early acquisition.123

Conclusion

The reality of living in a remote penal colony offered both opportunities and barriers to the pursuit of science. The geographical isolation of Van Diemen's Land made it difficult to communicate closely with the scientific elite in Britain, but it was this very remoteness that made its natural history objects so desirable to those in the metropolis. Gunn was the primary provider of such goods to William Hooker, but he did not operate entirely alone, participating in an informal

123For interest’s sake, it appears Gunn’s first plant, number 1, was *Lomatia tinctoria*, or ‘guitar plant’. Gunn’s numbering is not perfect, but it is fairly good. For example the Tasmanian Herbarium catalogue of Gunn specimens aligns well with the collecting list Gunn sent to Lindley in 1838.
corresponding network with like-minded men from the surrounding districts. They rarely all met together, but maintained a connection through the exchange of specimens, books and letters, discussing and debating points of interest.

The colonial scientific community was a layered network comprising gentlemen, women and convicts under sentence. The assignment system provided the opportunity for Gunn and his friends to collect more specimens across a broader area than if they had operated alone, placing highly qualified and affordable labour at their disposal. There were some benefits for convicts as well through publication, or an appreciation of their value recognised through indulgences and certain freedoms. For those with a talent for natural history, collecting could provide a space in which normal colonial class and gender divides were less strictly observed.

Involvement in the botanical community at this time only required a demonstrated interest in natural history, although this did allow for individuals to abuse the community’s trust. Gunn was financially and emotionally scarred by his experiences with Thomas Short, impacting upon his ability to further his pursuit of botany in the colony. Nevertheless, along with other residents of the scientific community, Gunn continued to botanise, maintaining his correspondence with Hooker. Gunn’s abilities, however, were becoming more widely known in Britain. Working in Van Diemen's Land presented barriers and benefits to those practicing natural history in the colony. With this in mind, it is time to more closely examine exactly how the periphery engaged with the metropolis. Were Gunn and his friends merely fulfilling Hooker’s desiderata like a botanical shopping list?
**Figure 16** This piece of *Olearia pinifolia* was collected by Joseph Milligan when he accompanied Gunn to the Vale of Belvoir in the summer or 1837. When James Lee left Gunn’s parcel of plants behind, Milligan donated this fragment from his pocket. HO14300.
‘Natural History is very pleasant but most uncommonly unprofitable.’

Ronald Gunn to William Hooker, 16 Jun 1847, Burns and Skemp, *VDL Correspondents*, p. 117.

Introduction

Gunn once described his role to William Hooker as a ‘mere culler of weeds & wild flowers’, but this simplistic image masks a much more complex relationship between the two men.¹ An exploration of his engagement with metropolitan scientific networks reveals the way in which gentlemanly correspondence helped to mould Gunn as a collector, but also allowed Gunn to influence collecting practices. As his network expanded, Gunn had to make choices – there was a limit to the number of people he could sustain a constructive working relationship with. In this he exercised some power. In effect, he could shape the colony/metropole relationship because he straddled local and global scientific communities. As his reputation grew, so did his ability to act as something of a gate-keeper.

‘Send me Plants & I will send you Books.’²

Gunn’s success as a colonial collector and letter writer stemmed from his emulation of the behaviour of his botanical superiors. William Hooker was a dedicated correspondent who recognised the value of nurturing a relationship with men like Lawrence and Gunn, and was generous with his time, advice and money.

¹ R.C. Gunn to W.J. Hooker, 17 Mar 1849, Burns and Skemp, *VDL Correspondents*, p. 119.
² Emphasis Hooker’s own. W.J. Hooker to R.C. Gunn, 16 May 1843, ML GC 8.
The ongoing success of a corresponding relationship depended upon both sides fulfilling their role. A lengthy correspondence developed where both sender and recipient felt that they were investing and receiving an equal quantity of specimens, ideas or information.

Hooker was regarded as a good correspondent who recognised the advantage of investing in collectors by encouraging them to develop their practical skills rather than overwhelming them with lists of instructions.3 For example, Hooker’s first letter to Gunn included broad encouragement to ‘send me as many species of the different genera as possible’, ensuring there was fruit and flowers on the material and more than one specimen of each for comparison. He put thought into sending the most useful books in return, such as Robert Brown’s *Prodromus*. At the time it was ‘not to be had for love or money’, and Hooker split his personal edition of Brown’s complete works so that Gunn could have it as quickly as possible.4 The *Prodromus* was an ideal first gift (or repayment), as it reflected Hooker’s appreciation of Gunn’s efforts and demonstrated how important Hooker viewed Gunn to be by breaking up his personal library. Simultaneously it provided the best published example of the natural system for Gunn to absorb, and as a result ensured that Gunn’s subsequent collections were new to science.

In his second letter to Gunn, Hooker sent paper and suggestions for its most judicious use: that each specimen could be mounted on a half sheet rather than a whole. Hooker provided plenty of praise, saying of Gunn’s specimens

3 Anne Secord noted Hooker’s reputation as a good correspondent in contrast to Robert Brown who was known for his late responses. Secord, ‘Corresponding Interests’, pp. 388-9.
4 W.J. Hooker to R.C. Gunn, 23 Feb 1833, ML GC 8.
‘nothing can be better prepared than your specimens, nor can they have come better,’ but with paper at a premium, all economy needed to be considered. The provision of paper to collectors on the peripheries continued to be an issue throughout the nineteenth century due to its expense and scarcity in the colonies. Lawrence was ‘ashamed’ to ask Hooker for paper in 1831 after purchasing nearly all that was available in Launceston. Ideally, three grades of paper were needed to prepare a good specimen: a coarse, absorbent blotter for the initial press, a finer brown paper for drying, and a fine cartridge for mounting. The Tasmanian Herbarium houses an example of later drying practices with muslin squares used in addition to the blotting paper to maximise the reusability of materials. By examining the papers it is possible to see the indentations and stains from multiple presses of plants between the layers of paper and cloth.

Insufficient supplies of paper could lead to the production of poor specimens. James Drummond suffered from this issue as he sent Joseph Hooker small, cramped plants in various stages of disarray. Gunn was well aware of the paper shortage in Launceston. He requested that quality ledgers be supplied to the convict department, as all that was available to him were crude books made of

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5 W.J. Hooker to R.C. Gunn, 27 Dec 1833, ML GC 8. The necessary economy with paper can often be seen in the letters of thrifty correspondents, where once the pages were filled, the author returned to the first page, turned it ninety degrees and continued to write. This crossed writing style was quite common. Plant specimens could not be layered in a similar fashion, their placement requiring great care and thought to make the most judicious use of paper. One common method was to mount several different specimens on the one sheet demarcated with lines. Not only saving paper, this could be used to display similarities or differences between species or varieties. This practice had led to modern-day storage problems, as today’s herbaria house each species separately, resulting in these mixed sheets being cut up and separated. This has the potential of losing any potential information the collector wished to express in their mounting arrangement.

6 Endersby, Imperial Nature, p. 76.

7 J. Backhouse-Walker, unmounted plant collection, HO.

writing paper stitched together as needed.\(^9\) Interestingly, Gunn did have at least one decent ledger in his collection in 1830, as he had brought it out with him from Barbados. It was a large, empty leather-bound book from his old position in the quartermaster’s store, pre-printed with columns to record items issued from the store to soldiers. Once in Van Diemen’s Land he saw no value in donating it to the convict department, and instead used it to house his seaweed collection.\(^10\)

Aside from the paper, Hooker sent Gunn eleven books, including a six-volume set of Sprengel’s *Systemia Vegetabilium*, a microscope, the most recent edition of Curtis’ *Botanical Magazine* with an index to the previous series, and finally the first part of his *Journal of Botany*, the publication in which Hooker intended to publish Lawrence and Gunn’s plant notes.\(^11\) Such generous gifts spurred Lawrence and Gunn on to venture further afield to find new curiosities, and validated their previous efforts. As with the *Prodromus*, the microscope came with a personal history, Hooker noting it to be ‘my own favourite one, that has been my daily companion for 14 years: & the best kind of one I ever had.’\(^12\)

\(^9\) R.C. Gunn request for ledgers, 6 Sep 1830, AOT CSO1/1/475. Seven years later Gunn was still suffering a paper shortage, asking Hooker to return the Cartridge paper he had sent around his last shipment of specimens for reuse. He explained the price of paper in the colony was ‘most exorbitant’, and added that he could also use ‘a little good thick grey paper to dry specimens in’. R.C. Gunn to W.J. Hooker, 21 Mar 1837, Burns and Skemp, *VDL Correspondents*, p. 64.

\(^10\) How he purloined the book is unknown. What he intended to use it for is also a puzzle – there is no evidence that he displayed any interest in natural history until after he met Lawrence. Gunn’s algal album is part of the collection of the National Herbarium of Victoria, in Melbourne. Only some of the algae are annotated, but he was still using the book in the 1840s and probably showed it to W.H. Harvey in 1855. It is currently at risk of being dismantled in order to shelve each algal specimen individually as part of the greater MEL collection. This exercise would make each specimen more useful and accessible for botanical science, but in the process would destroy evidence of colonial natural history practices and the thrifty use of scarce resources. R.C. Gunn, ‘Pressed Algae by Ronald Campbell Gunn of Tasmania,’ MEL shelf 235a. For more on paper and plant preservation see Endersby, *Imperial Nature*, pp. 67-72; D.E. Allen, *The Naturalist in Britain: A Social History* (Middlesex, 1978), pp. 108, 155.

\(^11\) W.J. Hooker to R.C. Gunn, 27 Dec 1833, ML GC 8.

\(^12\) W.J. Hooker to R.C. Gunn, 27 Dec 1833, ML GC 8.
power inherent in such a gift was not lost on Gunn who later echoed Hooker’s generosity in obtaining a microscope for another colonial collector.\textsuperscript{13}

In order to secure a steady stream of specimens from Gunn, Hooker had to balance his distribution of criticism and praise, books and equipment. Gunn was often overwhelmed with Hooker’s generosity, and as a result felt compelled to do more to show he deserved such gifts.\textsuperscript{14} But it is essential to bear in mind that the giving and receiving of objects had to be seen by both parties to be roughly commensurate for the relationship to continue. When sending his boxes of specimens in 1835, Gunn cautioned Hooker not to overcompensate with gifts, concerned that Hooker was working outside of his means, ‘any extraordinary remuneration is uncalled for…I conceive you have amply done all that I could expect from you’.\textsuperscript{15} He was displaying genuine concern that Hooker was spending too much, and therefore placing Gunn in a position of debt that he feared he would be unable to repay. Gunn was also anxious to retain the equality of their gentlemanly correspondence, rather than entering a relationship based on bartering.

His comments were not intended to stop Hooker sending items out, as earlier in the letter Gunn had included his ‘list of wants’ which included eleven specific requests for books, some of multiple volumes. He also added a general request for any other scientific books of interest, and a reference collection of

\textsuperscript{13} Gunn offered a microscope in 1842 to Charles Stuart, a gardener and fellow plant collector in the north of the colony. Stuart is discussed further in chapter 5. C. Stuart to R.C. Gunn, 24 Aug 1842, ML GC 5.

\textsuperscript{14} For example early on Gunn wrote ‘your generosity has thrown me completely aback - £30 worth of Books alone has so completely dumbfounded me (to use a Scotch phrase) that for some days I looked for the Invoice’. R.C. Gunn to W.J. Hooker, 14 Sep 1834, Burns and Skemp, \textit{VDL Correspondents}, pp. 39-40. The trust necessary between correspondents is also discussed in Secord, ‘Corresponding Interests’, p. 394.

\textsuperscript{15} R.C. Gunn to W.J. Hooker, 30 Mar 1835, Burns and Skemp, \textit{VDL Correspondents}, p. 43.
minerals. Gunn did not expect Hooker to fulfil the entire list, but was indicating suitable items that would make welcome additions to his library.\(^{16}\) While Hooker provided equipment, books, information, patronage and friendship, Gunn offered an honest, sturdy and diligent correspondent, a student willing to be moulded to suit Hooker’s needs, a colonial agent who could provide specific materials upon request, and most importantly, a diverse range of well-prepared plant specimens that to Hooker were priceless.

As Endersby has discussed, one of the most valuable gifts Hooker offered to Gunn was friendship.\(^{17}\) Gunn found great solace in his continuing correspondence, and William involved him in the global botanical community, inviting him to England, and discussing fellow members of his global botanical network. He talked of John Lindley, Allan Cunningham and nurseryman Stewart Murray and lamented the deaths of Thomas Drummond and David Douglas. He also acted as to increase the connections across his network, telling Gunn that Richard Cunningham, Allan’s brother, was keen to meet him as soon as was possible.\(^{18}\) It was through personal contacts and introductions like this that correspondence networks developed, although we have already seen the devastating consequences if members like Thomas Short did not respect the gentlemanly understanding underpinning such networks.\(^{19}\)

\(^{16}\) R.C. Gunn to W.J. Hooker, 30 Mar 1835, Burns and Skemp, *VDL Correspondents*, p. 42
\(^{17}\) This desire was heightened following Lawrence’s death. Endersby emphasises the importance of friendship in *Imperial Nature*, pp. 100-111.
\(^{19}\) Secord, ‘Corresponding Interests’, p. 389.
Hooker’s letters fuelled Gunn’s enthusiasm. In 1835 for example, he sent two boxes to Glasgow, containing over 550 flowering plants, grasses, orchids, ferns, mosses and other plants, 190 of them considered by Gunn to be new.20 Hooker greeted the whole collection with thanks and assurances that he would publish the new names quickly. Along with his thanks, Hooker sent more reference material: his own four-volume set of de Candolle’s *Prodromus*, nine other books, and new volumes of various serials. Hooker rebuffed the offer by Gunn to pay for such lavish gifts, ‘I cannot & will not take one sous [sic] from you. You most kindly & liberally supply my Nat. History wants & wishes & I will most cheerfully do all I can to supply your literary desiderata’, reinforcing the gentlemanly nature of their relationship. As Secord discusses, the exchange of money was not regarded as ‘proper practice’ in natural history, with trust being forged when both parties participated for reasons other than turning a profit.21

Hooker’s replies often reinforced a sense of gentlemanly friendship. In one eighteen-page letter he complimented Gunn: ‘this mode of intercourse is really to me very delightful; & your letters I prize very highly; so that I trust to hear from you very often, & whether or not you have specimens to send me.’22 To receive such praise from someone so much admired sealed Gunn’s eternal allegiance to Hooker, but it is enlightening to note what was not included in his letters. William strove to create a sense of loyalty in order to secure his supply of Antipodean plants. Despite the length of his letters, Hooker did not disclose to Gunn how he dealt with the material once it reached Glasgow, except for his ongoing intentions

20 Burns and Skemp transcribed the lists from the first two boxes, *VDL Correspondents*, pp. 128-40. For the original see R.C. Gunn to W.J. Hooker, 30 Mar 1835, Kew DC 76.
22 W.J. Hooker to R.C. Gunn, 8 Jan 1836, ML GC 8.
to publish it in his serials. There was little discussion about botanical Latin or
describing plants, as that was not what Hooker needed Gunn for. Hooker wanted a
collector familiar with what had already been published, someone attuned to
finding what was new.23

Hooker’s gentle shaping of Gunn’s skills continued over the next decade,
including the suggestion that Gunn broaden his own botanical community. By
involving other interested colonists in these pursuits, Gunn could have them send
their specimens to him, to then forward to Kew. It was in this manner that the
collections of Joseph Milligan, Richard Davies, Charles Fraser and William
Valentine first made their way to the scientific centre.24 To engage one person as
the core of a botanical community meant Hooker could maximise his chances of
receiving new plants from remote places. Concentrating on the central figure –
Gunn – provided him with an expert filter to sort the specimens to be sent,
completing what was the most laborious task Hooker faced each time he
processed a package of plants. This was not merely a one-way relationship, as
Gunn in turn felt an increased sense of importance. As a result of the exchange he
had considerably enlarged both his library and his local natural history
community, not to mention his standing in British corresponding networks.
Receiving the collections of others gave him power to do with the specimens as

23 Joseph Hooker continued this trend of his father’s, reserving the more technical botanical
discussion for his correspondents with other metropolitan experts such as George Bentham and
Alphonse de Candolle. Stevens, Biological Systematics, p. 249.
24 Davies was an Anglican minister in the north of the island who had a broad interest in natural
history. Valentine was a doctor based in Campbell Town who was particularly interested in
microscopy and mosses. Valentine was friends with both Archer and Gunn, and stabled Gunn’s
‘botanical’ horse Ball. Charles Fraser was a gardener also in the north of the colony; he is
discussed further in chapter 5.
he saw fit: not only did Hooker have the opportunity to see a greater number of plants, but Gunn did too.

To maximise the usefulness of the specimens Gunn selected for postage, Hooker added other tips, such as to write accompanying notes on the specimen paper itself so they were not lost; and that any seeds should be sent quickly after harvesting, sealed in paper packets. After each case arrived in Scotland, Hooker showed his appreciation: ‘Your Box has just arrived & I need not say I lost no time in opening it & examining its highly interesting content. You were surely born for a Naturalist’. Their relationship developed steadily, and later was strengthened through Gunn’s friendship with Joseph Hooker.

William Hooker had been keen to produce a flora of Van Diemen's Land from the outset. In his first letters to Gunn he discussed how little had been published, and his intentions to publish in sequential journals. Within two years of making contact with Gunn, this had expanded into a ‘Contributions on the Flora of Van Diemen’s Land’. With the work shared between Lawrence and Gunn, this had seemed a plausible, neatly defined project. As Joseph was to experience later, William had trouble making his ‘Contributions’ concept a profitable exercise, creating the serial Companion to the Botanical Magazine to carry his scientific descriptions. Although an important vehicle for the publication of new

25 W.J. Hooker to R.C. Gunn, 8 Jan 1836; 7 Apr 1845, ML GC 8.
26 W.J. Hooker to R.C. Gunn, 24 Jun 1836, ML GC 8. Gunn echoed this with sentiments such as this opening line to a letter from Joseph Hooker: ‘Your communications and your fathers so far stimulated my zeal that I have been gathering as fast as an excessive amount of business at this busy wool season will allow.’ R.C. Gunn to J.D. Hooker, 2 Dec 1844, Kew DC 218.
27 W.J. Hooker to R.C. Gunn, 23 Feb 1833; 3 Jan 1835, ML GC 8.
genera and species from all over the globe, the *Companion* did not cover its own expenses.\(^2\)

William eventually passed the responsibility of a southern ocean flora on to his son, and whilst Gunn received all the sordid details about the struggle to print from Joseph, William was pleased that Gunn’s contributions would be more properly acknowledged: ‘my son takes even a warmer interest in the plants of Tasmania than I do… I am delighted to think the world is soon likely to know how much science is indebted to you for your untiring exertions.’\(^2\)

Gunn had been enthusiastic from the beginning in assisting with a *Flora*: ‘Your idea of Publishing the Plants of V.D. Land, New Zealand & the Antarctic Island delights me beyond measure.’\(^3\) One reason for Gunn’s pleasure was the opportunity to focus upon a larger project, and see his native plants published *en masse* rather than their fragmented appearance across Hooker’s botanical journals. Gunn readily committed himself to the task with seemingly boundless energy, ‘you will have better materials for a Flora of V.D.L. than anybody else who ever lived’.\(^4\) By the 1840s Gunn was well equipped to help with such a task, as he had a decade’s worth of specimens and had traversed much of the island. When Joseph Hooker visited Van Diemen's Land in 1840, this expertise was called upon, as Gunn became companion and teacher. Hooker later acknowledged in his introductory essay: ‘I had the pleasure of making Mr. Gunn’s acquaintance…and

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28 William Hooker explained to Gunn why botanical publications were not a profitable venture: ‘I trust the “Companion to the Magazine” will have a longer existence: - but it is really lamentable to think how little such works are patronized, if they make any pretensions to Science. Nothing can keep such a thing alive by my giving all the materials to the Publisher *gratis* & I must make a pecuniary sacrifice besides.’ W.J. Hooker to R.C. Gunn, 8 Jan 1836, ML GC 8.

29 W.J. Hooker to R.C. Gunn, 7 Apr 1845, ML GC 8. The obstacles facing Joseph’s publication are discussed further in chapter 5.

30 R.C. Gunn to W.J. Hooker, 6 Dec 1843, Burns and Skemp, *VDL Correspondents*, p. 95.

31 R.C. Gunn to W.J. Hooker, 16 Jun 1847, Burns and Skemp, *VDL Correspondents*, p. 118.
am indebted to him for nearly all I know of the vegetation of the districts I then visited’.32

The importance of Gunn’s relationship with William Hooker deserves emphasis, as it was Gunn’s first introduction into the greater botanical world. Endersby has previously discussed Gunn’s role in a gift-exchange relationship with Joseph Hooker, but it is clear that Joseph’s father had already moulded Gunn as a correspondent. Recognising this inter-generational engagement with one correspondent enriches our understanding of the complexities of scientific correspondence, which could become a long-term project.33

It is important to appreciate that Gunn was equally interested in pursuing a long-term relationship as he explained to Hooker, ‘I am most anxious that the Natural History of the Island should become known.’ If Hooker could not utilise all the specimens Gunn sent, they should be forwarded to another scientist or, ‘any other person who will really use them & publish the results’.34

Gunn’s British correspondents

Outside of Australia, Gunn did not communicate solely with William Hooker. Through him Gunn was introduced to a wide range of British correspondents. Stewart Murray, a Glasgow-based nurseryman and friend of Hooker was keen to enlist Gunn’s help in stocking his nursery, and was particularly interested in Vandemonian orchids. In return for orchid tubers Murray

34 Emphasis Gunn’s own. Here Gunn was referring to a wide range of natural history specimens he had packed and sent to Hooker. R.C. Gunn to W.J. Hooker, 23 Sep 1844, Kew DC 218.
sent seeds from Thomas Drummond’s excursions in South America and other exotics, particularly climbers. Murray also offered detailed advice about shipping tubers, bulbs, seeds and live plants to ensure their survival over the long ocean voyage. These methods could be trial and error — his live plant shipment in sphagnum moss did not travel well – but this was later refined to packing tubers in boxes of dry sand. Like Hooker, Murray offered friendship and the sense of being part of a larger network, discussing other colonial collectors such as Drummond, and Richard and Allan Cunningham. As a businessman, he was less interested in gentlemanly science, and more in the novel, the curious and the economically profitable garden species. Murray was a practical correspondent for Gunn, and Gunn appreciated his generosity, but his commercial rather than scientific focus resulted in their relationship weakening.

Murray was not the only Briton interested in native orchids. Another friend of Hooker, Joseph Cooper, approached Gunn via a letter of introduction. Cooper was the head gardener at Wentworth House in Yorkshire, and was looking to procure orchids, trees and ferns in return for exotic seeds and plants. Like Murray, Cooper especially sought orchids as they were among the most desirable plants in Victorian England. Murray had described the passion for cultivating them as ‘beyond every thing’ in Britain. Although it was orchids that were most sought after, Murray and Cooper were both aware that anything from New Holland had the capacity to sell, and Murray was keen to add: ‘it is hardly necessary for me to particularize as I may say every one of your plants is either

interesting elegant or beautifull [sic] & I can assure you that a Miscellaneous collection of seeds such as you have sent us is always an acceptable present'.

Another way Gunn’s corresponding circle was increased was via publications in Hooker’s London-based botanical journals. Anne Secord has discussed how entry into a corresponding network was commonly by written introduction from a common third party, or accompanied by a gift of specimens. In Gunn’s case he began to receive letters direct from naturalists who had read Hooker’s journals and were interested in commencing a specimen exchange.

Henry Borron Fielding, a Lancaster-based naturalist with the means to invest money and time into botany, was a friend of William Hooker. His delicate health meant that he focused upon amassing the herbaria of others rather than going out collecting himself. His first major purchase was in 1836. Desiring to possess plants from all over the globe, he introduced himself to Gunn. Fielding’s collection was later to be regarded as one of the richest private herbaria in Europe, including collections from South America and Russia. Fielding was an active corresponding member of the London botanical societies and received all the botanical periodicals available at the time, but his shyness and ill health prevented his more active involvement in metropolitan science.

Aside from a desire to possess Australian plants, Fielding was compelled to write to Gunn to help overcome his own self-imposed isolation. In a bid for friendship, Fielding wrote how reading Gunn’s letter about the death of Lawrence Gunn spoke ‘so forcibly of the pleasures afforded by the pursuit that I am

36 S. Murray to R.C. Gunn, 28 Dec 1833, ML GC 6; J. Cooper to R.C. Gunn, 13 May 1834, ML GC 6.
37 Secord, ‘Corresponding Interests’, p. 393.
persuaded to hope you may not feel disinclined to impart a portion of that
enjoyment to a fellow enthusiast, altho’ a stranger, and self introduced.’38 Fielding
relied upon friendly letters from collectors like Gunn to fill his herbarium and to
maintain his involvement in the botanical world. Due to his retiring nature,
however, Fielding was on the edges of scientific society rather than in the middle
of it, and was less attractive as a prospective correspondent for Gunn.

Thanks to his relationship with Hooker, Gunn was never to want for
correspondents, and very quickly had to make decisions about on whom he should
expend the most time and energy. As Fielding and Cooper could only promise an
exotic plant exchange without offering an increased scientific profile, he did not
pursue their friendship. Murray was similarly dropped from Gunn’s
correspondence, although without a formal indication of this passing between
them. Murray had wanted the relationship to continue, writing in a letter, ‘It is
now a long time since I have had the pleasure of hearing from you but I hope my
two last letters have reached you,’ indicating Gunn’s lack of reply.39

That Gunn turned Fielding down as a correspondent reveals the power a
colonial collector could have. Gunn could only devote time to those who would
deliver the best returns for his plant specimens, and he valued species
identifications, publication, books, equipment and access to the scientific elite.
Fielding was a gentleman, enthusiastic, friendly and with the time and money to
fully invest in botany, but he could not offer the things Gunn really required.

Fielding and Gunn’s relationship showed the importance of providing an adequate

38 William Hooker had published an excerpt from Gunn’s letter reporting Lawrence’s death in the
See also H.B. Fielding to R.C. Gunn, 31 Dec 1838, ML GC 6.
39 S. Murray to R.C. Gunn, 1 Jun 1838, ML GC 6.
return for goods received. In this case, Gunn was looking for more than a gentleman enthusiast willing to share his duplicate specimens.

Due to the restraints of time and money, Gunn’s selections of worthy corresponding associates was carefully made. After William and Joseph Hooker, Gunn wrote to John Lindley, professor of botany at the University of London, and Robert Brown of the British Museum. One notable omission from Gunn’s letterbooks was George Bentham, who was to become a great collaborator with Joseph Hooker on the *Genera Plantarum* and author of *Flora Australiensis*. Bentham’s absence can not be put down to a lack of interest, as he obtained an introduction to Gunn from Lindley. In fact, Bentham applied to Gunn, sending copies of his publications in the hopes of receiving specimens for his herbarium.40

As Lindley told Gunn, ‘Mr Bentham begs your acceptance of a copy of his Labiatae; he is idle, has a fine herbarium, & will be thankful for additions to it.’41 This is an interesting reversal of the initiation mechanism discussed by Anne Secord, where the lower status individual approached the elite with a gift and letter of introduction.42 Despite Bentham’s approach, Gunn turned down his ‘very valuable correspondence’, as he could not afford the time that another major correspondent would require.43

40 J. Lindley to R.C. Gunn, 8 Apr 1834, ML GC 6.
42 Secord, ‘Corresponding Interests’, p. 393.
43 H.B. Fielding to R.C. Gunn, 31 Dec 1838, ML GC 6, R.C. Gunn to H.B. Fielding, 21 Apr 1838, Burns and Skemp, *VDL Correspondents*, p. 73.
It was unusual for the colonial periphery to have the power to shape correspondence networks in this manner. Gunn’s polite but firm rejection of Bentham is all the more interesting given Bentham’s scientific standing. Endersby has engaged with this aspect of correspondence, describing local knowledge as the best asset a colonist had in negotiating a relationship of exchange. He identified three facets of knowledge: topographic, endemic and indigenous. As Bentham knew, local knowledge could only be gained by firsthand experience, and Gunn was the best candidate for dispensing Van Diemen's Land specimens. The metropolitan elite such as the Hookers or Bentham matched Gunn and other colonials for collecting skill and bettered them in botanical education, these two factors usually being sufficient to maintain superiority in relationships conducted via correspondence. In this instance, however, Gunn maintained control, and he was able to do so as he was at the collecting centre, while Bentham sat on the receiving periphery.

Lindley and Brown were the epitome of gentleman scientists, but neither was as good a correspondent as William or Joseph Hooker. Brown was powerful, and abused his status as an Australian specialist, only writing to Gunn when he wanted particular specimens. Even then his letters were little more than notes. Lindley was charming and personable, but a constant source of angst for Gunn as he needed several prompts before replying to his letters. His letters were short, so

44 Endersby describes topographic knowledge as the understanding of the intimate geography and environment of a place; endemic knowledge as understanding a place’s unique flora (or fauna); and indigenous knowledge relating to understanding the native people’s relationship with place. In his example Endersby discussed William Colenso who closely engaged with the Maori population, defending the use of Maori names and terms in letters to Joseph Hooker. Gunn – and most of his fellow colonists – did not make contact with the indigenous population of Tasmania in the interests of science. Endersby, “From having no Herbarium…”, pp. 350-52; Endersby, Imperial Nature, pp. 88-9.
45 For example see R. Brown to R.C. Gunn, 12 Apr 1843, ML GC 5.
hurriedly written as to be nearly illegible, and were filled more with apologies than useful botanical discussion. He was grateful for the specimens Gunn sent and would repay him in books, but was not so generous, as he had little disposable income. Furthermore, Gunn who waited anxiously for replies to his letters was not impressed when it took Lindley seven months to put pen to paper. Lindley was acutely aware of this, opening one letter to his Vandemonian correspondent, ‘it almost invariably happens to me that my letters to correspondents commence with apologies for not attending to them sooner’.46 Gunn complained bitterly to William Hooker that Lindley did not send adequate replies, an issue exacerbated when Lindley discovered a letter and package of books intended for Gunn still sitting in the Colonial Office eighteen months after he had dispatched it.47 Lindley did offer opportunities for Gunn to be published in his various gardening periodicals, as well as social connections, books and plant exchange.48 This combined with his publications made him a worthwhile correspondent despite his shortcomings.

Although William Hooker and Lindley got on well, Lindley and Joseph Hooker seemed to have shared a difficult relationship and caused much additional work for Gunn. In the 1840s Gunn sent vast amounts of specimens in triplicate for Hooker, Lindley and Brown. Having to collect, sort, and label each specimen three times over, it is little wonder that Gunn felt he could not add a further significant correspondent such as Bentham to his books. Gunn relied on Joseph Hooker to receive the cases, and then forward on the plants accordingly. As

46 J. Lindley to R.C. Gunn, 8 Apr 1834, ML GC 6.
47 J. Lindley to R.C. Gunn, 15 Dec 1835, ML GC 6. See also Finney, Paradise Revealed, p. 41.
Hooker was the point of contact, it appears (much to Gunn’s frustration), that Brown and Lindley were happy to accept the plants, leaving the responsibility and cost of replying to Hooker. As Gunn candidly put it: ‘I send nearly equal quantities to Brown & Lindley – & they might fork out for some of the books’.49

Despite Gunn’s frustrations with Lindley, he had sent him duplicates of several large collections throughout the 1830s. The most substantial was his 1837 shipment of over four hundred plant specimens. It was Gunn’s biggest shipment to date, taking some nine months to prepare.50 Each plant was numbered, dated and often accompanied by several sentences describing habitat and other notes. In fact, Gunn’s diligent notation was so valued by Lindley that he had them bound in a stand-alone volume, ‘Mss. Notes on the Flora of Van Diemen's Island’, nearly one thousand pages thick.51 This impressive tome included an incomplete series of Gunn’s collecting numbers from 1 to 1017, most with generic names and many with species epithets as well.

It is interesting that Lindley chose to have Gunn’s notes bound separately to the specimens. At Kew the slips were placed with or pinned to the larger specimen sheet, keeping all the information together. When seen together in a single volume, it is apparent how much effort Gunn put in to preparing each shipment of plants. That the specimens he sent to Lindley and to Kew in most

49 R.C. Gunn to J.D. Hooker, 8 Dec 1843, Kew DC 218.
50 Gunn prepared duplicate collections, sending one to Hooker, one to Lindley, and keeping one himself. For Gunn’s descriptions of the 1837 haul, see R.C. Gunn to W.J. Hooker, 21 Apr 1838 (two letters), in Burns and Skemp, VDL Correspondents, pp. 74-77.
51 R.C. Gunn, ‘Mss. Notes on the Flora of Van Diemen’s Island’ is held by the Royal Horticultural Society, London. RHS RCG.
cases had matching amounts of notation on them reinforces this, Gunn going beyond creating one ‘master’ collection and several other reference sets.\textsuperscript{52}

Not every notation was identical across correspondents. Gunn put more effort into providing extra detail for the Hookers compared to Lindley. In some instances Gunn provided one or more further sheets of pencil sketches, detailing flowering and fruiting dissections he had made.\textsuperscript{53} There are instances where Gunn was more verbose in his description to Hooker than Lindley, including reasons he did not collect more of one species, or pondering on the effects of exposure on the habit of a plant.\textsuperscript{54} The presence of these cases suggest that Gunn penned his slips to Hooker first, and on repeating the key information for Lindley, edited his original notes to be more concise and save time.

There were only two cases out of the fifty examined where notes Gunn sent to Kew were not replicated for Lindley.\textsuperscript{55} The first was \textit{Tetratheca} number 309, sent particularly to Kew as part of an ongoing discussion with the Hookers about that genus.\textsuperscript{56} The other was a long note accompanying several tiny flowering pieces of an \textit{Anemone}, Gunn’s number 775. Due to a collecting mishap,

\textsuperscript{52} For example of similar notation between Lindley and Kew, see \textit{Rhytidosporum procumbens} K000591862 and \textit{Centella asiatica} K000686108; which match Gunn’s 617 ‘Pittosporum nanum’, and the unnamed 879 of Lindley’s slips, RHS RCG. Comparisons were made using fifty Kew digitised Gunn specimen from 1837, matching the Kew specimens to the Lindley slips using Gunn’s collecting numbers. Only some of Gunn’s slips appear to have been pinned to the Kew sheets. Others presumably were lost, and many others have been separated following remounting. More on the practice of writing notations on separate slips or on the sheet itself, see note 57.

\textsuperscript{53} For example see \textit{Haloragis brownii} K000704401, \textit{Hypoxis giabella} K000644248, or \textit{Coprosma perpusilla} K000349219; compared to slips for the same plants in Lindley’s collection (listed in the same order as above), the unnamed 883, Gunn’s 761 ‘Hypoxis’, and the unnamed 304, RHS RCG.

\textsuperscript{54} \textit{Trachymene humilis} K000686252; see Gunn’s 245, ‘Didiscus’ RHS RCG.

\textsuperscript{55} \textit{Tetratheca pilosa} K000591918 (Gunn’s 309 at Kew only), and \textit{Anemone crassifolia} K000692150 (Gunn’s 775 at Kew only).

\textsuperscript{56} Gunn and \textit{Tetratheca} are discussed in a case study in chapter 6.
Gunn had a limited supply of the herb, and so sent it only to Hooker. Both of these examples reinforce that it was Hooker than Gunn collected for first, and Lindley second.

Despite Lindley receiving slightly lesser attention from Gunn, the quality of the 1837 notations were far superior to the collecting list Gunn had sent William Hooker in June 1833. This earlier attempt lacked the surety of plant identification Gunn showed four years later. The 1833 numbering system continued from his first series and included 317 new species as well as fifty duplicates from the 1832 shipment. The plants appeared in a simple list, almost every generic name followed by a question mark, with few species epithets and even fewer field notes. As Gunn added at the top of the list to Hooker, ‘I annex on this & following sheets any Remarks I have to make on the various plants, but not having yet had the pleasure of hearing from you I am ignorant of what information you desire relative to each plant’. Comparing one list to the other, it is possible to see Gunn’s improvement in collecting practice and plant identification. In just four years Gunn had developed from an enthusiastic amateur to a botanical specialist, largely due to Hooker’s return of verified plant names, publications, and advice about technique and note-taking. As a result, it is not

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57 The reason why Gunn was left (as he put it in his note) ‘without a single specimen’ from this particular collecting trip was due to his servant (likely to have been James Lee) forgetting to collect a bundle of plants left for him by Gunn. This incident is discussed fully later in this chapter.

58 This letter must have been loaned by Hooker to Lindley, as it is bound at the front of Lindley’s set of plant notes from 1837 at the Royal Horticultural Society rather than with the Director’s Correspondence at Kew. R.C. Gunn to W.J. Hooker, 21 Jun 1833, RHS RCG. William Hooker later requested Gunn to write his notes on separate sheets or beside the specimens, one for each species, as he did for Lindley in 1837. Hooker had had to employ his assistant in transferring the notes across to the sheets, but he preferred it if the notes were in the handwriting of the collector. This was a noble reason for the request, but Hooker probably also wanted to cut down the time it took to process Gunn’s specimens. If Gunn’s notes were written directly onto the specimen sheets, it would also reduce the amount of paper bulk in the herbarium. W.J. Hooker to R.C. Gunn, 8 Jan 1836, ML GC 8.
surprising how keenly Gunn anticipated Hooker’s lists of new names, getting frustrated if the returns did not come quickly enough.\textsuperscript{59}

For a while Gunn continued to send fully labelled specimens to Lindley, Brown and the Hookers, ‘I had intended to have divided them…but I really could not spare time to number, ticket, and carefully subdivide so very many specimens. Those that you do not want you can distribute to these or other parties, but do not let them \textit{go to waste} – as faith I have fagged hard to gather them all’.\textsuperscript{60} When Joseph Hooker was still aboard the \textit{Erebus} in 1840, Gunn sent his cases to Lindley to divide up. This may have occurred only once, however, as Lindley revelled in his opportunity to keep the choice items in the collection. He told Gunn that the best of the collection had been thrown overboard in a storm, and of the remainder: ‘2. Second best to R. Brown; 3. Next best to the Hort. Soc. in the hopes that it [would] grow; 4. The worst to Hooker’.\textsuperscript{61} By this time Gunn had personally met Joseph Hooker, and the two men had become fast friends. This no doubt influenced Gunn’s decision not to use Lindley as the first recipient of bulk packages in the future.

Gunn sent further specimens in 1843, stipulating that any duplicates should be sent to George Bentham, ‘who I would gladly send a Collection; but the more people I…send to, the more meagre must your assortment be’.\textsuperscript{62} The effort

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\textsuperscript{59} Gunn was always hungry for new names: ‘I am now becoming anxious to know the new or undescribed from the well known plants – It would enable me to discriminate in Collecting, and of many I am even still ignorant of the Genera.’ R.C. Gunn to W.J. Hooker, 21 Apr 1838, Burns and Skemp, \textit{VDL Correspondents}, p. 75. He continued his pleas with Joseph, ‘give me the names of…the others in my Collection. I am working in the dark without the names & have not time to examine & hunt them all up even provided I was sure of finding them in the Books I have got.’ R.C. Gunn to J.D. Hooker, 8 Dec 1843, Kew DC 218.
\textsuperscript{60} R.C. Gunn to J..D. Hooker, 6 Oct 1844; 21 Dec 1846 Kew DC 218.
\textsuperscript{61} J. Lindley to R.C. Gunn, 22 Oct 1840, ML GC 6.
\textsuperscript{62} R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley.
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in creating so many sets of notes and labels cannot be underestimated. A list of
duplicates sent to Hooker in 1846 contained 517 separate items and filled twenty-
four pages. Each item was numbered, dated, and included basic information
regarding location, generic and species epithet and collector. Gunn may have
created only one master sheet like this, but every specimen would have borne the
same details, and often meticulous notes. This meant that in some shipments
Gunn would have produced over 2000 plant labels – three for each of his
correspondents, and one for his own herbarium. This list stood apart from
collections of monocotyledons, algae, ferns or bryophytes, which were noted on
separate lists. Gunn despaired to Lindley about the effort expended in preparing
a collection:

If you good Botanists at Home would only trust One another, I could
rather send all to one person, & divide as you liked, as it would save me a
vast deal of time & labour which I can ill spare & yo [sic] would receive
your specimens much oftener than you do now. I wish you would see
Hooker about this. I look upon him as having the first claim & you the
next – & let all the rest come in for the residue.

Gunn continued to send packages to Hooker to be divided amongst Brown
and Lindley, but returns could be spasmodic. Although Hooker had found Brown
difficult to work with, Gunn was in no position to complain of Brown’s short or
non-existent replies. In Gunn’s eyes he was ‘the Father of Australian Botany’. Any
correspondence with Brown was a source of great excitement to him, and he

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63 R.C. Gunn plant list, ‘Duplicates sent to Hooker 1846’, ML A316.
64 R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley.
65 R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley.
seemed anxious to fulfil any requests for fossilized specimens, sponges and seaweeds.\textsuperscript{66}

Prior to this Gunn had sent Brown an entire tree fern trunk (\textit{Dicksonia antarctica}), which Brown thought may have been a new species, but to determine this needed ‘very many specimens in diff states pray send me as many as you please’.\textsuperscript{67} Although an easy request on paper, to transport such a large item intact on a voyage would have taken much planning and special arrangement with the captain. In 1835, Gunn and Backhouse had described in the ‘Index Plantarum’ the safest shipment method being by laying trunks on their side on the upper deck.\textsuperscript{68} Brown had previously received similar specimens from Allan Cunningham and had been so pleased he put one on display in the staircase of the Great Hall of the British Museum.\textsuperscript{69} Along with his request for more trunks, Brown made an equally difficult request to see Gunn’s entire collection of plants ‘it must contain many things highly interesting to me pray send it addressed to me’.\textsuperscript{70} Just like Lindley, Brown wanted to be the first recipient of Gunn’s collecting efforts and pick the jewels from each shipment, showing no intention of sharing with any of his colleagues.

\textsuperscript{66} R.C. Gunn to J.D. Hooker, 15 Mar 1844, Kew DC 218.
\textsuperscript{67} R. Brown to R.C. Gunn, 25 Nov 1842, ML GC 5.
\textsuperscript{68} Presumably this method could also be used for other bulky specimens such as the grass tree, \textit{Xanthorrhoea australis}, or larger sections of \textit{Eucalyptus}. Backhouse, ‘Index Plantarum’, p. 77.
\textsuperscript{69} R. Brown, 10 Dec 1831, BM Committee Meeting Notes.
\textsuperscript{70} R. Brown to R.C. Gunn, 25 Nov 1842, ML GC 5.
Collecting other natural history

Overseas correspondents were not just grappling for plant specimens. Gunn also collected a broad range of other natural history curiosities, encompassing each category of animal, vegetable, and mineral. When William Hooker had first asked Gunn if he collected insects or birds’ skins in 1833 he had referred to the purchase of specimens: ‘are there any persons who collect & dispose of such things on moderate terms? as I am told there are at Sydney’. Although Gunn had great pride in not accepting money for his plants, he was willing to barter his faunal specimens in return for items of a perceived equal monetary value. Once James Lee was assigned to Gunn, his volume of non-plant material sent to Britain increased, as he met more people wanting specimens and had the means to provide it.

Gunn engaged with enthusiasts both locally and globally, and for those who had something worthwhile to exchange, he would offer his collecting services. Lovell Reeve, the publisher of Hooker’s entire *Flora of the Antarctic Voyage* had a passion for conchology, and Gunn arranged to send shells to London in return for books from Reeve’s publication list. Reeve happily sold the shells on Gunn’s behalf, using the proceeds to cover his costs. This was a mutually beneficial arrangement – Reeve had first pick of any shells and covered the cost of the books he sent, and ensured an ongoing customer for natural history serials – including *Conchologica Iconica*, and other natural history works at cost.

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71 Throughout Gunn’s correspondence, aside from plants there is evidence of him collecting shells, seaweed, birds, spiders, fish, beetles, fungi, sea sponges, wood specimens, rock samples, mineral samples, skeletons, skins, pelts, pickled and preserved samples and samples of tree saps and oils

72 W.J. Hooker to R.C. Gunn, 23 Feb 1833, ML GC 8.

73 L. Reeve to R.C. Gunn, 18 Jul 1855, ML GC 5.
Gunn received a similar request from the British ornithologist John Gould. The two men spent had several weeks together in the late 1830s when Gould was in Van Diemen's Land collecting specimens. When Gould’s Hobart-based distributor Thomas Ewing returned to England, he approached Gunn, asking for observations and specimens of mammals, birds and eggs. He especially wanted wedge tailed eagles and wattlebirds. Gould also needed Gunn to monitor subscribers to *The Birds of Australia* that was issued in parts, finding new subscribers and managing the payments of those already on the books.

In this instance Gunn was not to be repaid in books, but received ten per cent of all sales made, the total of which Gould suggested be deducted from Gunn’s personal bill. Gunn was flattered to act as Gould’s agent, and the job further reinforced his position at the centre of colonial scientific transactions. The task was not a simple one, however, as in the first shipment he received seventy-four book parts that were to be sent out to ten different subscribers. He also had to manage due and overdue payments for each, many of which were on his personal account. Gunn again had to decide how precious his time was, as corresponding across the colony with subscribers could swallow up entire evenings. His acceptance of the role may have been finally decided by Gunn’s need to pay off his own bills with Gould, the ten per cent discount being enough to justify the workload.74

Gunn not only dispatched dried and pickled specimens, but sent live ones as well, most notably a pair of thylacines to the London Zoological Gardens in 1850. He had earlier sent a pair of Van Diemen’s Land emus ‘a bird now almost

74 J. Gould to R.C. Gunn, 11 Dec 1846, 2 Mar 1853, ML GC 5.
extinct’ to Hooker. D.W. Mitchell from the London Zoological Society was pleased to receive the thylacines (*Thylacinus cynocephalus*), which ‘arrived in very good order’. Gunn had gone to great lengths to have a female and male tiger to send, catching and keeping the female in captivity in ‘a small unfinished house’ at St. Patrick’s Plains for six months before a male captured by James Grant joined her. They were immediately sketched for the Society’s Proceedings, soon to be followed by their newly acquired hippopotamus. Two years later Gunn received an update from his friend William Davidson to let him know that they ‘seemed in perfect health’ when he had visited. The thylacines were very popular, but their success as a breeding pair is doubtful, particularly as the male died within three years of arriving in London. The female survived approximately eight years in captivity.

The London Zoo was not the only recipient of live thylacines. Gunn procured one for Richard Propsting, a Hobart Town resident who wished to run a small private zoo, exhibiting it with other specimens he ‘may from time to time procure’. Whether he housed any other native animals is unclear, although he did unpromisingly mention that an ‘Ourang Outang’ he had imported that had

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75 R.C. Gunn to W.J. Hooker 31 Mar 1837, Burns and Skemp, *VDL Correspondents*, p. 62.
76 During her time in captivity, Gunn claimed she became quite tame, allowing him to scratch her on the head ‘through the bars of its prison without showing any anger or irritation.’ In an attempt to tame the male as well, Gunn kept them caged at his property prior to their shipment near a thoroughfare where his servants frequently passed and ‘where my children are in the habit of playing’. Despite this, it does not appear that the male was so willing to be petted. In preparation for the long voyage, Gunn attended to their diet, providing ‘twelve fat sheep (together with hay for their sustenance) as sea-stores’. R.C. Gunn to D.W. Mitchell, 29 Dec 1849, published in *Proceedings of the Zoological Society of London* 18 (1850), pp. 89-91.
77 The hippopotamus was not from an Australian collection – where Mitchell acquired it is unknown. D.W. Mitchell to R.C. Gunn 5 Jul 1850, ML GC 5.
78 William Davidson to R.C. Gunn, 2 Jul 1852, ML GC 1.
79 The eight years includes her time in Tasmania and London. She was one of the longest-living Thylacines held in captivity outside of Tasmania, the longest recorded specimen surviving eight years and two months in captivity in London and Berlin. J. Edwards, ‘List of Thylacines (*Thylacinus cynocephalus*) at London Zoo’, unpublished research paper (2006).
recently died. Propsting asked Gunn for any notes on accommodating the thylacine, and was quite pleased with the specimen Gunn found for him. It would not have been an easy task to capture a healthy adult tiger in 1853, as their population had been declining steadily since a bounty system had been in place for their capture from 1830.

Gunn was aware of the declining numbers of some native animals from over hunting. In 1836 he expressed disappointment that the outgoing Governor Arthur had not shown more interest in natural history, adding that due to this disinterest ‘many of our animals and Birds will become extinct or nearly so’. His proposed method of protecting species at risk was to capture and breed animals in captivity: ‘a few pounds employed in collecting Emus, the different species of Kangaroo, Wombat &c., would have been no great matter, & their food, being grass alone, no expense would have been incurred beyond fencing a piece of ground’. Despite some limited awareness of the scarcity of the thylacine, there was broad public fear of them attacking settler’s flocks, a particularly unfortunate conclusion as feral dogs were almost certainly the true culprits. Gunn recognised the value of maintaining species diversity, not for the animals’ own sake, but

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80 R. Propsting to R.C. Gunn, 27 Dec 1853, 10 Jan 1854, ML GC 1.
81 Gunn’s efforts at procuring thylacines went beyond the three individuals mentioned above. Kathryn Medlock has accumulated evidence of him sending a further eight live thylacines and nine skeletons, skins, or skulls to the Zoological Society of London, the British Museum, the Royal College of Surgeons and to Ferdinand Mueller in Melbourne. K. Medlock, personal communication, 1 Jul 2011, TMAG.
82 R.C. Gunn to W.J. Hooker, 16 Nov 1836, Burns and Skemp, *VDL Correspondents*, p. 59.
83 Various bounty schemes ran between 1830-1909, despite dwindling population numbers. Ironically the thylacine was announced to be a protected species in July 1936, 59 days before it was officially declared extinct, on the day the last known tiger died in captivity in the Beaumaris Zoo, Hobart. R. Hibberd, ‘The Thylacine (*Thylacinus cynocephalus*)’, in *The Companion to Tasmanian History*, ed. A. Alexander (Hobart, 2005), p. 363. For an excellent dissection of the various bounty schemes, colonial opinions towards the thylacine and the question of thylacines predating on sheep, see R. Paddle, *The Last Tasmanian Tiger: The History and Extinction of the Thylacine* (Cambridge, 2000), pp. 98-138.
rather science. He negated any suggestion of an environmentalist outlook by the fact he was still capturing thylacines for specimens in the 1850s, and when botanising would cut down especially large specimens to measure them.\(^{84}\) His awareness of animal population numbers reflects his observational skills, although his suggestions for maintaining threatened species were not destined to be successful.

Gunn had been keen to send his ornithological specimens on to William Swainson in London, although he was warned off by William Hooker as he ‘has not the character of giving…I wish he had more generosity about him.’\(^{85}\) Swainson also had a reputation for willingly accepting items, and later selling them on at highly inflated prices. Hooker did not wish to lose Gunn’s confidence and was wary of damaging their friendship, possibly shielding the colonial from another Thomas Short incident. In later years Swainson travelled to Australia and spent some time in Van Diemen’s Land in 1854, where he enjoyed the hospitality of Gunn and his family, collecting plants and shells. He was a supporter of McLeay’s quinarian system of classification and devised his own variation, being deeply interested in the differentiation of genera and species.\(^{86}\) He happily reported to Gunn that on a trip to Port Arthur he had found five or six new species for his new genus *Denisonia* which was made up of blue gums. He also found two

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\(^{84}\) During his trip to Macquarie Harbour in the summer of 1845 Gunn came across a specimen *Richea pandanifolia* that he measured to be thirty-six feet high. He could be certain of this fact as ‘I had the tree cut down on purpose,’ in order to draw his tape measure along it. R.C. Gunn to J.D. Hooker, 26 Feb 1845, Kew DC 218.

\(^{85}\) W.J. Hooker to R.C. Gunn, 24 Jun 1836, ML GC 8.

\(^{86}\) For more information on the quinarian system, see Knight, *Ordering the World*, pp. 93-106; Endersby, *Imperial Nature*, pp. 180-184.
new *Allocasuarina* species, and intended to examine *Leptospermum*, making specific distinctions based only upon differences in their capsules.\(^87\)

Swainson’s enthusiasm for splitting species could be a hindrance, and he often ‘discovered’ new species that appeared different due to changes in soil substrate or environmental conditions. William Archer was aware of the confusion that Swainson’s publications could cause, and he wrote to Joseph Hooker cautioning him that Swainson was ‘fanciful in the extreme’, having identified forty to sixty new species of *Allocasuarina* in Van Diemen’s Land alone. On closer inspection Archer found four of these ‘new’ species had been taken from one tree. Archer sniped ‘The old gentleman is evidently progressing past to the period of ultimate juvenility’.\(^88\) Despite Swainson’s over-exuberance for creating new species and his poor record as a correspondent, when he was in the colony he was generous with his specimens and was willing to discuss scientific and classificatory ideas with Gunn. He offered to share all that he had gathered, sending illustrations to Joseph Hooker for the *Flora*, and planned field trips with Gunn to Circular Head.\(^89\)

Although Swainson was a difficult individual to correspond with, Gunn struck even greater issues when exchanging material with institutions. In addition to the Botanic Gardens at Kew he had connections with several universities, the Royal Society, Linnean Society, Royal College of Surgeons, and the British Museum. The response Gunn received from each institution was mixed, but was often less than he might have desired. Gunn had encouraged William Hooker to

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\(^{87}\) W. Swainson to R.C. Gunn, 13 Feb 1854, ML GC 1.  
\(^{88}\) W. Archer to J.D. Hooker, 26 Jul 1854, Kew DC 218.  
\(^{89}\) W. Swainson to R.C. Gunn, 13 Feb 1854, ML GC 1.
forward his zoological specimens on to suitable specialists, and John Gray of the
British Museum had received his mammalian specimens in the mid-1830s.

John Edward Gray (1800 – 1875) was the assistant zoology keeper at the
British Museum. An enthusiastic and voracious collector, Gray was responsible
for substantial increases in the Museum’s collections, although he was criticised
for his high work output at the expense of scientific accuracy.\(^9^0\) Gunn had sent
several ‘uncommonly well skinned’ animals to Hooker along with birds and
insects, most likely prepared by James Lee. From experience, Hooker knew Gray
would be interested, and would send species details and books in return.\(^9^1\) Indeed,
on this occasion Hooker had anticipated Gray’s repayment to him in London, and
purchased books as appropriate for Gunn’s use.\(^9^2\) When no written
acknowledgement was forthcoming, Gunn was incensed that he was not suitably
recompensed for his efforts. He confided to Joseph Hooker:

Gray…has not yet sent me six pence worth of Anything for my enormous
box…I do not desire to profit by Natural History, but I cannot afford to
follow it extensively at my own expense merely “for the glory of the
thing” – without even Books to guide me in my researches – and when a
public Institution like the Brit. Museum could surely afford to give.\(^9^3\)

Gunn had sent a second box of zoological specimens to the British
Museum in the early 1840s, the box itself estimated by Gunn to be worth fifty
pounds, and the specimens inside nearly the same amount. The specimens
included two of the rare Van Diemen’s Land Emus, worth ten pounds each. Gunn
had anticipated that the Museum would repay him generously with books and

\(^{91}\) W.J. Hooker to R.C. Gunn, 24 Jun 1836, ML GC 8.
\(^{92}\) W.J. Hooker to R.C. Gunn, 5 May 1837, ML GC 8.
\(^{93}\) R.C. Gunn to J.D. Hooker, 15 Mar 1844, Kew DC 218.
equipment, but Gray did not issue any acknowledgement for the box at all.

Adding to the insult, ornithologist John Gould wrote to Gunn recounting how he had bought several of Gunn’s skins from Gray, yet Gunn still saw no word or repayment for this.\textsuperscript{94} Gunn often explained that all he desired was some recognition, encouragement and books in order to justify his effort and expenditure for ‘the advancement of Science’; yet a closer reading of his correspondence reveals that he frequently attached financial value to the materials he supplied and he expected a comparable return.

To settle the discord Joseph Hooker made copies of all of his and Gunn’s correspondence with Gray, in order to present a planned ‘attack’.\textsuperscript{95} Hooker’s passionate language was balanced by his generous description of Gray as a man of ‘unbound kindness & hospitality’ who had not neglected Gunn from ‘meanness’, but rather from him being ‘quite careless of his character & of his tongue & promises’.\textsuperscript{96} Hooker’s advances to Gray were fully described in his letter to Gunn five months later, which included copying out all of Gray’s letters and promises from the past six years, trawling through the Museum catalogues, and eventually Gray’s receipts from 1834 when Gunn’s first specimens had arrived. Although the Hookers had made some repayment themselves, Gray never had, reasoning that the specimens had been a gift. It took several visits until Hooker proved undeniably that Gray had originally received the specimens on condition that he provide ‘adequate return’ and any money from selling the skins would be returned to Gunn. As a final flourish, Hooker presented Gray with an offer to come and

\textsuperscript{94} R.C. Gunn to W.J. Hooker, 6 Dec 1843, Burns and Skemp, \textit{VDL Correspondents}, p. 96.
\textsuperscript{95} J.D. Hooker to R.C. Gunn, 13 May 1844, ML GC 8.
\textsuperscript{96} J.D. Hooker to R.C. Gunn, 13 May 1844, ML GC 8.
view the original correspondence written in his own hand. The matter was finally resolved when Gray gave Hooker £50 to purchase books on Gunn’s behalf.97

Gunn was understandably troubled by the effort Hooker had gone to, claiming ‘it takes 25 P.Cent off the pleasure of having the Botanical Magazine when I know the annoyance it had cost.’98 Again Gunn reiterated his only desire being for books to help him collect ‘with more effect’, but followed this with a reminder of his poverty, not having ‘£10 after all my debts are paid’. He felt the sending of Books was not intended to be equal to the value of the time and effort he exerted, but as an acknowledgment of his work. The Gray saga typified the complex web between metropole and colony, and the fine lines between gift exchange, financial gain, and appropriate remuneration. Gunn claimed that for £10 worth of books every year he would repay his benefactors ten times over, ‘my excessive fondness for collecting requir[ing] no stimulation from money’.99 His letters continued in the same vein, switching from discussion of the expense he had personally outlaid, to the small cost of books he desired in exchange, ending with the wish that Hooker impress on Gray that the whole saga had been purely driven by ‘principle’, and not ‘mercenary motives’.100

For Gunn, the widening of his interests beyond botany allowed him to engage with a broader section of the metropolitan scientific elite. He diversified the types of natural history specimens he collected, and the places he sent them. As a result he made himself an essential contact for any outsider wanting to work on Vandemonian flora and fauna, which in turn led to Gunn acting as the colonial

97 J.D. Hooker to R.C. Gunn, Oct 1844, ML GC 8.
98 R.C. Gunn to J.D. Hooker, 3 May 1845, Kew DC 218.
99 R.C. Gunn to J.D. Hooker, 3 May 1845, Kew DC 218.
100 R.C. Gunn to J.D. Hooker, 3 May 1845, Kew DC 218.
agent for natural history publishers such as Lovell Reeve and John Gould. It is important to note, however, that Gunn’s increasing capabilities beyond botany were not solely due to an interest shown by London-based experts. The attention of Swainson, Gould, Gray and others was certainly a factor, but a burgeoning local community fed Gunn’s enthusiasm simultaneously. After the arrival of the naval commander and explorer Sir John Franklin as Lieutenant-Governor of Van Diemen's Land in 1837, scientific life in the colony became increasingly organised – a process of which Gunn was at the very heart.

Scientific communities enmesh: the arrival of Sir John Franklin

Sir John Franklin was a highly decorated naval commander, Arctic explorer and fellow of the Royal Society. Accompanied by his wife who possessed her own interest in natural history, Franklin ushered in a new period of cultural development, of which science was an essential element. Gunn had already grumbled to Hooker about Arthur’s lack of interest in supporting the preservation of the native fauna, and he felt similarly about missed opportunities regarding the flora. In particular, Gunn was annoyed at the ‘immense’ amount of land and labour at the governor’s disposal that had been deployed to cultivate basic crops for the Governor’s personal household, rather than turned to a more experimental end as in New South Wales. ¹⁰¹

As John Gascoigne has discussed, government gardens in the first decades of colonisation were generally used as sites to cultivate vegetables, fruits and

¹⁰¹ Gunn added, ‘In New South Wales things are managed differently’. R.C. Gunn to W.J. Hooker, 16 Nov 1836, Burns and Skemp, VDL Correspondents, p. 59.
cropping plants to sustain the population as Arthur had done. Once this immediate need was met, they were often turned over to broader scientific interests, such as plant acclimatisation, seed production and propagation, as well as becoming a location for concentrated botanical study of the native flora.\textsuperscript{102} This change in the use of government gardens was captured by the dramatic resignation of Allan Cunningham in the Sydney, the garden’s superintendent in 1837, rather than suffer the ‘indignity’ of producing food for the governor’s table.\textsuperscript{103}

Gunn envisioned a garden in Van Diemen's Land that would similarly become a hub of scientific and horticultural interests, but was unfair in not giving Arthur credit for his attempts at establishing such an enterprise. Just such a garden had been proposed by John Henderson as part of the 1829 Van Diemen's Land Scientific Society supported by Arthur. Henderson described balancing the needs of the governor’s table, the desires of the colonial society to have a pleasure garden to promenade in, and a botanic garden for ‘introducing and improving every species of cultivation, which may tend to increase the wealth and prosperity of the state.’\textsuperscript{104}

In contrast, Arthur’s successor struggled with many of the official aspects of the governorship (Gunn had agreed that the colony under Arthur’s care had ‘attained an almost unexampled degree of prosperity’), but Franklin’s support of education and the sciences gave Vandemonians the opportunity to study at British

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\textsuperscript{102} The tension between scientific, educational, aesthetic and recreational expectations from botanic gardens is discussed by L. Gilbert, ‘From Joseph Banks to Joseph Maiden: Towards a Scientific Botanic Garden’, \textit{Historical Records of Australian Science} 11 (1997), pp. 283-300. \\
\textsuperscript{103} J. Gascoigne, \textit{The Enlightenment and the Origins of European Australia} (Cambridge, 2002), pp. 86-90. An excellent discussion of the first two decades of the Sydney botanic garden can be found in Endersby, ‘A Garden Enclosed’, pp. 313-334. This includes the details of Cunningham’s resignation, pp. 329-332. \\
\end{flushright}
universities, established a scientific society, and fostered a sense of community within the colony. Franklin’s personal connections with Britain’s scientific elite meant that he had the potential to bring the metropole closer to Gunn, with the possibility of offering some sort of middle ground between the binary colonial periphery and metropolitan centre.

Franklin already knew of Gunn via William Hooker, and the new arrivals quickly became firm friends. Their friendship blossomed on a trip they made to Flinders Island in January 1838. Within a year of the Franklin’s arrival, the idea of a natural history society in Hobart had been resurrected, and the Tasmanian Society was formally established on 17 October 1839, with six founding members. Franklin was named as patron. Their first meeting established the basic expectations the members had for their new group: that they would meet on every second Monday from 8-10 pm, and that they would rent a room to use as a museum. Further, Ewing was to contact John Gould for an account of his work in Australia, and a birdstuffer was to be employed from Bothwell.

The impetus for the reinvigoration of colonial science was partly Franklin’s attempt to fulfil requests from English naturalists for specimens, but it

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106 The six members were Gunn, Hobart surgeon Dr Edward Bedford, the Reverend Thomas Ewing, the Reverend John Lillie, Dr Edmund Hobson, and Dr Adam Turnbull. Minutes, Tasmanian Society, 17 Oct 1839, ML GC 1. Despite the Franklins lobbying the secretary of state for the colonies for a paid position, no provision was made for a collector. The position sounded ideal for several candidates in the colony – not least Gunn – but the suggested position was actually constructed in an attempt to employ Dr Edward Hobson (1814-1848), a physician and talented naturalist. C.A. McCallum, ‘Hobson, Edmund Charles (1814 - 1848)’, Australian Dictionary of Biography, online ed., accessed 29 Apr 2011, http://www.adb.online.anu.edu.au/biogs/A010503b.htm.
107 James Lee immediately springs to mind here, but the society minutes do not name him specifically, only referring to ‘a Constable now at Bothwell to be applied for as Birdstuffer’. As I have found no evidence that Lee was ever a police constable or stationed at Bothwell, it seems unlikely that it was him. Minutes, Tasmanian Society, 17 Oct 1839, ML GC 1.
was also largely due to the arrival of several scientifically minded colonists to Hobart in the preceding two years. Indeed, the two main forces behind the formation of the society were Dr Edmund Hobson, a physician and skilled naturalist, and Gunn himself, who had been relocated to Hobart in late 1838 as a member of the Assignment Board and as second Assistant Police Magistrate.¹⁰⁸

That there was no initial intention to establish a botanical garden like Gunn desired sets the Tasmanian Society apart from the earlier attempt at a scientific society in the colony. It was believed a museum would be a more useful investment instead. This is not wholly surprising when the breadth of interests of the members is taken into account. In the first year, seventeen meetings were held, featuring papers that ranged from the benefits of particular steam engines, to a comparison of the differences between the blood of oviparous and viviparous animals. The most commonly discussed topic was zoology, followed by botany, conchology, and geology. The other major component of meetings was the reading of correspondence (sent mostly to Franklin), or recently published scientific papers from London.¹⁰⁹

By the end of 1838 Franklin had read letters from several notable British correspondents, including Sir John Herschel’s report of the departure of Erebus and Terror from England to make magnetic observations in the southern hemisphere, and a letter from Robert Brown requesting plant specimens and the

¹⁰⁹ For example a paper by Berkeley on the fungi of Van Diemen's Land from the Annals of Natural History and William Hooker’s work on Vandemonian plants from the Icones Plantarum were read at the August meeting in 1840. Minutes, Tasmanian Society, 13 Aug 1840, ML GC 1.
opportunity to open a correspondence with Ronald Gunn.\textsuperscript{110} It was through Franklin’s scientific network, that news of the Tasmanian Society reached London, Herschel adding that he ‘expressed much interest in [the] infant society’.\textsuperscript{111} Brown’s request demonstrated how the Tasmanian society and Franklin’s presence were beneficial to Gunn and to colonial science, providing two different avenues to secure an introduction with naturalists in the island that had not been available to William Hooker ten years earlier.

From the initial six members, the society grew rapidly. They had elected a further six members by the end of their first year, including Dumont d’Urville and Charles Jacquinot from the French south magnetic pole exploration ships \textit{Astrolabe} and \textit{Zélée}. The following year the society hosted the captains and officers from the British polar expedition. These would have been proud occasions for members of the Tasmanian Society, but not every meeting included letters or attendance from European explorers. In early 1840 a meeting was adjourned when only Hobson and Gunn turned up. One month later a meeting was cancelled due to Franklin being away on business and several other members being unwell. Even when all the members were present, business could be a little thin – in mid-winter the only arranged speaker for the evening failed to show.\textsuperscript{112}

The Tasmanian Society was later to suffer from political in-fighting and other colonial disputes, but whatever guise the society took, Gunn remained a

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\textsuperscript{110} Other letters came from Professor William Whewell requesting information on irregular tides, and from Captain Kingston, secretary of the London Geographical Society asking for information on the Tasmanian Aborigines. Minutes, Tasmanian Society, 5 Nov and 2 Dec, ML GC 1; Minutes, Tasmanian Society, 30 Dec 1838, ML GC 7.
\textsuperscript{111} Minutes, Tasmanian Society, 30 Dec 1838, ML GC 7.
\textsuperscript{112} Minutes, Tasmanian Society, 27 Jan, ML GC 7; Minutes, Tasmanian Society, 24 Feb and 27 Jul, ML GC 1.
consistent participant and driver of proceedings. As Gunn described to William Hooker, he saw the Tasmanian Society as ‘endeavouring to ferret out the Natural History of this interesting Colony’.113 In 1839 he read papers on a field trip he made to the Huon River, and displayed a selection of edible native plants.114 He kept minutes of the meetings on a series of scrappy pieces of paper, a formalised secretary and bound minute book being introduced by Gunn’s successor Francis Henslowe in late 1840.115 It was on the reverse side of minutes for the August meeting of that year that Gunn penned a rough caricature of a grinning man, and a motto for the society: ‘Quo cunque aspicias hic paradoxux erit, All things are queer and opposite here!!!’ (fig. 17).

113 R.C. Gunn to W.J. Hooker, 18 Feb 1840, Burns and Skemp, VDL Correspondents, p. 84.
114 This was an extension of Backhouse’s ‘Esculent Plants’ paper from 1834. Some of Gunn’s drafted scientific papers and other assorted notes presented to the Tasmanian Society can be found in ML GC 3.
115 The minutes for the society made by Gunn in 1839-40 are scattered throughout ML GC 1 and ML GC 7, some being extra copies or drafts. See also Henslowe’s book, Minutes of “The Society”, V.D. Land 1841, RS 147/1.
Figure 17 The first appearance of the Tasmanian Society’s motto ‘Quo cunque aspicias hic paradoxus erit’, ‘All things are queer and opposite here!!!’ Written by Gunn on the back of his minutes of the Tasmanian Society meeting, August 1840. ML GC 2.

As well as the fortnightly meetings, one of the first acts of the society was to approach Franklin in a formal request for a colonial naturalist. Six weeks after the inaugural meeting of the society, Gunn penned a letter on behalf of members asking for a ‘properly qualified Naturalist for the Colony’, to investigate the flora, fauna and geology of the island.\textsuperscript{116} They suggested that the colony was ‘sufficiently advanced’ enough for such a position to yield ‘intellectual and moral’ advantages, and that the presence of other scientifically-minded men in the island would allow the appointee to have support and assistance in his work. Finally, the signatories explained that earlier attempts at forming a scientific society had failed, ‘not by any means from the coldness or indifference of the parties engaged in the undertaking, but solely we are persuaded from the want of a qualified

\textsuperscript{116} R.C. Gunn on behalf of the Tasmanian Society to J. Franklin, 29 Nov 1839, ML GC 7.
individual who could devote his time and abilities exclusively to its business’. Their request for funding was unsuccessful, although not from a lack of support from the governor and his wife, who particularly wished for Hobson to get the position.117

For Gunn the opportunity to engage in scientific discourse within the colony was worth the effort he invested in the Tasmanian Society. In later years when the society faltered again due to colonial politics, it was Gunn who spearheaded a renewed Tasmanian Society from his Launceston base, taking on the responsibility not only of the monthly meetings, but also the collation, editing and publishing of the *Tasmanian Journal*.

Gunn’s enthusiastic involvement in such a group reflects the value he placed upon the discussion of botany with like-minded others. His move to Hobart and involvement with the Franklins came soon after his disastrous relationship with Thomas Short, and the prospect of new friends and a new scientific forum was something that Gunn was willing to embrace. His involvement in Hobart may have shaken his sense of isolation, but Gunn did not find the fairly loose scientific society in the colony could totally remove his sense of loneliness and desire for a close botanical companion. For example, when Franklin’s successor Eardley Wilmot set about creating a Hobart-based Horticultural and Botanical Society in late 1843, Gunn thought it would go the way of its predecessors, as ‘there are no men in the Colony who give up time to these things. I am really almost the only one who steals some hours from other business to devote to Botany’.118

118 R.C. Gunn to W.J. Hooker 6 Dec 1843, Burns and Skemp, *VDL Correspondents*, p. 95. Colin Finney has provided an excellent commentary of the ups and downs of Tasmania’s scientific
Despite Gunn’s reservations about the new Hobart society and ongoing scuffles over which group deserved government patronage and funding, the publication of *Tasmanian Journal* between 1842 and 1848 demonstrated the capacity of the colonials to produce work of scientific merit. As the preface to the first volume stated, to publish the transactions of their meetings was ‘perhaps, the most important field of action for our body’, assisting research and encouraging others to engage in the field. In total three volumes were published over six years in sixteen separate parts, the *Tasmanian Journal of Natural Science, Agriculture, Statistics &c* presenting a veneer of solidarity between members of rival scientific groups (fig. 18).\(^{119}\) The first volume ran to 424 pages and included approximately fifty articles from residents, visitors and corresponding members including Joseph Hooker, John Gould and William Colenso. The reach of the society within four years was evident by their membership list, sporting thirty-three resident and forty corresponding members from Australia, New Zealand, France and Britain.\(^{120}\)

\(^{119}\) The first five parts were printed in Hobart as part of the original Tasmanian Society established by Franklin, Gunn, Hobson and others, the journal being edited by the then secretary John Gell. Following Eardley Wilmot’s forcing of the Tasmanian Society to merge with his newly established ‘Van Diemen’s Land Botanical and Horticultural Society’ in 1843, some of the Hobart members fell into line behind the governor, and others including another Tasmanian Society founder Reverend John Lillie, did not. In response, Gunn reformed the Tasmanian Society from his Launceston base, joined by Richard Davies, Charles Friend, James Grant and others. Several proposals were made between 1843 and 1848 for the northern society to amalgamate with the southern group, particularly following Wilmot’s society being granted a royal sanction in late 1844, becoming the second Royal Society. Northern members of the Tasmanian Society were furious about the whole turn of events. When referring to the Royal Society, William Valentine called them ‘a society of swindlers’, and Hobson in Victoria urged Gunn not to join in the ‘unholy alliance’. Eventually the cost in time and money to support the Tasmanian Society in Launceston separate from the Royal Society in Hobart became too much, Colin Finney calling the group ‘functionally dead’ following Gunn’s admission to the Royal Society in August 1848. As the scientific factionalism faded away, the Royal Society expanded rapidly into a vibrant, scientific society. See Finney, *Paradise Revealed*, pp. 55-61; Gascoigne, *The Enlightenment*, pp. 93-4. See also E. Hobson to R.C. Gunn, 30 Nov 1847, ML GC 1

\(^{120}\) [Gell, J.], ‘The Tasmanian Society’ (membership list), *Tasmanian Journal* 1 (Hobart Town, 1842), p. 79.
Gunn’s articles in the first volume included his paper on edible native plants, and a shorter article discussing phytogeography and the flora of Geelong in Victoria. Somewhat surprisingly, Gunn did not use the *Tasmanian Journal* as an opportunity to publish his own species, particularly as other collectors like William Colenso used their local journals for such an end. But Gunn never displayed a burning desire to name plants, instead valuing the Hooker-verified names he received in return for his specimens. Rather than providing a means of listing new plant names, the ‘Observations on the Flora of Geelong’ was more philosophical, seeking to compare the flora of Geelong with that of northern Van

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121 Endersby, “‘From having no Herbarium’”, p. 355.
Diemen's Land and pondering over the similarities and differences in the floristics.

His article revealed how open channels of scientific communication were between the colonies, as he had not collected plants he analysed, having been sent them by Geelong resident Miss Roadknight.\textsuperscript{122} Gunn had visited the Port Phillip district in the late summer of 1835, and in subsequent years received specimens from the colony from Collectors such as Roadknight, Hobson, and John Robertson.\textsuperscript{123} By publishing his analysis of Roadknight’s specimens, Gunn was copying the manner in which the metropolitan elite used his own plant collections. Just like William Hooker, Gunn corresponded with a remote collector who provided specimens that Gunn could then use to publish a paper. That it focused on philosophical rather than systematic botany was revealing, demonstrating the extent to which Gunn felt comfortable in contributing to wider scientific discussion.\textsuperscript{124}

At a time when Gunn was participating in local and global corresponding networks, Sir John and Lady Franklin’s patronage of natural history provided something in between. For a brief period the metropole came to Gunn, first with the Franklins, then in 1838 the British ornithologist John Gould visited. Gould and Lady Franklin made a party bound for Port Davey in the south west of the colony in the same year, but they were beset by bad weather and instead spent two


\textsuperscript{123} Edmund Hobson had moved to the Port Phillip district in mid-1840 in the hopes the warmer climate might improve his health. Some of Gunn’s plant lists were arranged according to collector, although the whereabouts of the specimens listed are not immediately apparent. Nevertheless Gunn wrote lists of ‘Roadknightiana’, ‘Milliganiana’, ‘Schayeriana’, ‘Hobsoniana’ and ‘Burkeiaria’. ML A316.

weeks at Recherche Bay. In this instance Gunn – and James Lee who accompanied him – had the opportunity to observe the field practices of Gould, and engage with Labillardière’s *Novae Hollandie Plantarum Specimen*. Gunn took great delight in retracing the footsteps of the famous botanist, even clambering along the same sea cliffs to collect his own pieces of *Boronia pilonema* (today *Boronia parvifolia*), the first plant Labillardière had gathered.125

Gunn took over the editorship for the second and third volumes of the *Tasmanian Journal*, published in Launceston and London between 1845 and 1848. There is no doubt that without Gunn’s constant exertions the society and journal would have folded. It relied not only on his enthusiasm for science and the society, but upon his network of correspondents, many of whom had become members and submitted papers for publication. Although Michael Hoare’s description of it as ‘a national scientific institution’ may be over-emphasising the journal’s impact, it is certain that following on from the first volume, Gunn built the *Tasmanian Journal* into the premier publication on Australian natural history.126

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125 R.C. Gunn, ‘Short Remarks on the Botany of Recherche Bay & its neighbourhood – V.D.L.’ ML A316. The Franklins later went overland to Macquarie Harbour in 1840. They invited Gunn, but due to his broken leg he again could not go. Joseph Milligan went in his place. Gunn never made it all the way to the west coast, but did get as far as the Franklin River in 1845. Burns and Skemp have included a transcription of Gunn’s ‘Remarks on LaBillardiere’s Plants collected in Van Diemen's Land’ that he appended to a letter to William Hooker in 1838. Whilst at Recherche Bay Gunn identified most of the plants collected by Labillardière, and added his own additional notes, again showing the ability of colonial naturalists to apply scientific knowledge independent of instructions from the scientific metropolis. Burns and Skemp, *VDL Correspondents*, pp. 140-142.

It was Gunn’s long-standing desire to be part of a larger scientific body that fuelled the journal’s success, and where the first volume had contained a mix of amateur and specialist authors, under Gunn’s pen the scientific elite engaged more fully, as authors and readers. Gunn wanted a London printer to make the journal more accessible to a metropolitan audience, and his diligent observance of contemporary scientific activity and participation in local and global corresponding networks gave him access to the latest discoveries and developments in Australian science.\(^{127}\)

Despite the huge workload (he was treasurer as well as editor), Gunn benefitted from his editorship by expanding his network of correspondents and his reputation as a colonial naturalist. He was as central as it was possible to be whilst still residing in the peripheries, but the demands the journal and society made upon his purse and his time could not be continually met.\(^{128}\)

Gunn’s contribution towards the success of the journal was later recognised by the Royal Society of London, who cited his involvement with the publication as a major reason for his nomination as a fellow in June 1854.\(^{129}\)

Unfortunately, by failing to receive substantial financial support from the government, the *Tasmanian Journal* faced the same problems that William

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\(^{127}\) For example the third volume published 1836-8 included articles from Ludwig Leichhardt, William Harvey, Joseph Hooker, Charles Sturt, Richard Owen, William Macleay, John Gray and Captain Philip King. Gunn also included items of interest from the proceedings of London scientific societies including the Geographical Society of London and Zoological Society of London, The British Association for the Advancement of Science, and the Linnaean Society. Further to this, Gunn reprinted articles published elsewhere, such as Joseph Hooker’s 1845 article on the Huon Pine from the *London Journal of Botany*. R.C. Gunn, ed., *Tasmanian Journal of Natural Science, Agriculture, Statistics &c.* 3 (1849).

\(^{128}\) Finney, *Paradise Revealed*, p. 59. Further documents from supporters of Gunn and general discussion of the Tasmanian Society can be found distributed throughout ML A316 and ML GC 2.

\(^{129}\) Gunn was elected FRS 1 Jun 1854, Royal Society of London Library and Archive Catalogue, accessed 20 July 2010, http://www2.royalsociety.org/. This is discussed more in chapter 7.
Hooker had found with his various botanical serials, without sufficient subscribers to cover the cost of production. The three volumes were later recognised by the Royal Society, their *Papers and Proceedings* beginning at number four.\(^{130}\)

**Conclusion**

From his first publication in Hooker’s *Journal of Botany*, Gunn had become part of a larger botanical network. During their first decade of correspondence, Gunn delivered the natural environment of Van Diemen's Land, and Hooker opened up the opportunities of a larger scientific community. As Hooker gently moulded Gunn’s collecting practices through letters and selected scientific reference works, the longevity of their correspondence relied upon both participants understanding the accepted behaviour of gentlemen naturalists.

Hooker’s network influenced the type of collector Gunn wished to be, particularly in the manner in which his contributions were recognised. The blurred lines between donor and recipient, gift exchange and barter, patron and benefactor only became more entangled as Gunn’s shipments of specimens continued to reach broader and broader audiences.

Gunn drew confidence from his growing correspondence with the British scientific elite, reflecting it in his increasing involvement behind colonial scientific developments. Eventually Gunn was able to communicate with the metropolis as Hooker had done, as editor of the *Tasmanian Journal*. It reflected his view of colonial science, remaining deferential to its London superiors, but

\(^{130}\) Richard Davies broke this news to Gunn, R.H. Davies to R.C. Gunn, 30 Aug 1850 ML GC1.
recognising the value of its local contributions. Without the local community
there would have been no regular meetings; without the interest of the
metropolitan elite the society and its journal would have foundered earlier. The
journal kept Gunn busy, but it did not replace his desire for a permanent botanical
friend. It did, however, permit moments of close companionship with visiting
naturalists, and none were more influential than Joseph Hooker.
CHAPTER 5: FRIENDSHIP AND CHANGE

Lagarostrobos franklinii (Hook.f.) Quinn

Figure 19 Dacrydium franklinii (today Lagarostrobos franklinii) or Huon Pine, from William Hooker’s London Journal of Botany 4 (1845), t. VI.
‘My Game leg is as sound as possible, & I would walk 200 miles any time you like over the Mts. of Van Diemen’s Land…Bottled Ale agrees uncommon – still – but alas I have no Botanical friend to crack a bottle with – Verily I would walk a round number of miles to see your face again.’

Ronald Gunn to Joseph Hooker, 17 Oct 1845, Kew DC 218.

Introduction

The arrival of the Erebus and Terror in Hobart Town was an important event for the members of the Tasmanian Society, the ships bringing in many officers and naturalists keen to engage with the local community. For Ronald Gunn their arrival was keenly anticipated, as one of the visitors was William Hooker’s son, Joseph. Other chapters have already explored the importance of friendship in colonial science, Endersby calling it ‘the glue that held informal networks together’. The close bond forged between Gunn and Hooker complicates the standard picture of the relationship between Kew and the colonies, Hooker’s own loneliness aboard the Erebus allowing him a deeper empathy for his colonial companions. For a short time Hooker’s botanical education met Gunn’s local knowledge, and the joy both men felt in sharing their common interest reinforced their friendship.

Aside from sharing a passion for botany, it was the discussion of a common project that tied Gunn and Hooker closely together. William Hooker had toyed with the idea of a Flora in the early 1830s, but it was not until his son travelled the southern ocean that it became an achievable target. Examining the early discussions between Gunn and the Hookers about the Flora reveals more

about their friendship, whilst also providing a sense of direction for their correspondence. Although Gunn had been collecting in order to assemble as accurate a representation of the Vandemonian flora as possible, it is worthwhile looking at how the promise of a published Flora spurred Gunn on. Projects of this magnitude invariably brought about change for all of those participating in it, and the Flora was no different. Throughout the 1840s, Gunn encountered new collectors, new correspondents, and a new way to approach colonial botany.

‘I can recall no happier weeks of my various wanderings’

In early 1840, Gunn gently chastised William Hooker for not writing to him, letting so much time elapse that ‘I am now in hopes of your Son’, with whom he could order his specimens and share in botanical conversations.2 Endersby has argued that friendship should be considered an essential ingredient in the practice of nineteenth century natural history, helping to explain why and how some people collected. In his words, ‘lots of them felt desperately lonely and botany provided a route to alleviate that loneliness’.3

Prior to Joseph Hooker’s arrival, Gunn had already experienced two brief, yet intense friendships with Robert Lawrence and Thomas Short, neither of which had ended satisfactorily. In the intervening years Gunn sought to fill the vacuum their absence had left. When the Erebus and Terror docked in Hobart Town in August 1840, Gunn was excited at the prospect of meeting William Hooker’s son who, on his account, was keen to go collecting: ‘he hopes to see much of you &

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2 R.C. Gunn to W.J. Hooker, 18 Feb 1840, in Burns and Skemp, VDL Correspondents, p. 84.
flatters himself he may be able to botanise with you upon some of the mountains of Van Diemen's Land’. William was particularly keen for Gunn to show Joseph Dawsonia, a moss named for Joseph’s grandfather. Even for the botanical elite, it was clearly a thing of pride to have a family member immortalized in a generic name.

Joseph had been appointed as Assistant Surgeon aboard the Erebus as part of James Clarke Ross’s scientific voyage to reach and map the south magnetic pole. He joined Dr. Robert McCormick – the voyage’s official naturalist – and Hooker quickly adopted the unofficial role of ships’ botanist and naturalist’s assistant. William vented to Gunn his dissatisfaction with his son’s provisions onboard, wishing Joseph could have employed his own experienced assistant, as ‘one pair of hands cannot collect all that ought to be collected’. William was worried that Joseph would spend much of his time changing pressing papers and arranging specimens when a ‘more scientific Collector’ could be making notes and drawings whilst his assistant tended to the plants. Gunn could sympathise

4 William sent this letter of introduction with Joseph aboard the Erebus. W.J. Hooker to R.C. Gunn, 10 Sep 1839, ML GC 8.
5 The genus Dawsonia was named by Robert Brown after Dawson Turner (1775-1858), British banker and naturalist who specialised in cryptogams, completing pioneering work on moss and algae. He had connections to Joseph Banks and was a contemporary of Robert Brown, maintaining a vast corresponding network of his own. His eldest daughter Mary married William Hooker and was Joseph’s mother. Dawsonia occurs only in the southern hemisphere in Australia, New Zealand, New Guinea, Solomon Islands and the eastern part of Malaysia. The Tasmanian species, D. superba, is the largest moss in the island and can grow to twenty-five centimetres tall, its size lending it to sometimes be mistaken for a pine seedling. A. Fraser, ‘Turner, Dawson (1775-1858)’, in Oxford Dictionary of National Biography, online ed., accessed 12 May 2011, http://www.oxforddnb.com/view/article/27846; B.O. van Zanten, ‘Dawsonia’, in Flora of Australia 51 (Canberra, 2006), pp. 128-9.
7 W.J. Hooker to R.C. Gunn, 10 Sep 1839, ML GC 8. Gunn complained to Lindley of a similar problem and wanting a servant, as the sorting, storing and maintenance of his collection took
Chapter 5: Friendship & Change

*Lagarostrobos franklinii* (Hook.f.) Quinn

with the Hookers’ frustrations, as he had complained about the same problems himself in the previous year.8

Joseph Hooker and the crew of *Erebus* and *Terror* actually made two visits to the island, one in 1840 and a second in the winter of 1841. Hooker’s arrival was a defining moment for Gunn, enabling him to indulge in botanical conversations, collecting trips, species identification and botanical in-jokes. If Gunn’s interest in botany had been at risk of waning, or becoming diffuse from a broadening interest in natural history, Hooker’s presence in 1840 and again the following year channelled and cemented it. Gunn’s joy at Hooker’s presence was not one-sided, as Hooker too had experienced loneliness on board ship. That both men could empathise with the other’s experiences of practising botany within a limited scientific community provides some explanation for their quick, tightly forged bond of friendship.

It is worthwhile to distinguish between Hooker’s two stops in Hobart Town. Other studies that have discussed Hooker’s trips to Van Diemen’s Land have either underplayed their importance, or (more frequently) blurred the two stopovers into one.9 But for Gunn and Hooker, the visits were strikingly different experiences, as Gunn was only present in Hobart Town in 1840. During Hooker’s second stay, Gunn remained in Launceston with a severely broken leg, and the two men did not meet.10 That they overcame this separation via correspondence longer than the physical act of collecting specimens. R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley.

8 ‘the labour of collecting, drying, &c…falls entirely on my shoulders,’ R.C. Gunn to W.J. Hooker, 21 Apr 1838, Burns and Skemp, *VDL Correspondents*, p. 74.


10 This incident is discussed below.
and became even closer friends in 1841 reveals just how much each depended on the other to relieve their sense of isolation. The timing of each visit also affected Hooker’s botanical opportunities, as the first stop from August-November encompassed spring and the beginning of summer. The second visit, April-July, was during autumn and early winter, and would not have yielded the same profusion of flowering and fruiting plants.

Hooker was delighted to meet Gunn in Hobart, and their close, easy friendship is reflected in the quick, undated notes exchanged between shore and vessel anticipating time to be shared. Gunn became Hooker’s official guide to everything Vandemonian from plants to colonial society. They walked to Government House dinners together, and spent time with Gunn’s wife and their children at her family home at Glen Leith.\(^{11}\) Despite Gunn’s busy work schedule, he and Hooker went on several short field trips together, taking in Mount Wellington and the surrounds of Hobart Town.\(^{12}\) Gunn was excited to have the opportunity to discuss botany over cups of tea and grog, escaping the rigors of his government life.\(^{13}\)

\(^{11}\) Six short, undated letters from R.C. Gunn to J.D. Hooker from 1840 can be found in Kew JDH/2/10; two notes from J.D. Hooker to R.C. Gunn written onboard the Erebus while she was in port in 1840 are part of ML GC 8.

\(^{12}\) It has been suggested that Hooker was slightly irritated by the requests of Sir John and Lady Franklin to attend dinners at Government House, as they took away from his chances to go collecting. Lady Franklin’s dinner book for 1840 shows that during their time in port, Captains Ross and Crozier attended eighteen official dinners and Hooker five. He declined one further invitation. During this period Gunn attended six dinners, also declining one event. The following year far fewer dinners were recorded, the Captains attending six, Hooker two (he declined two more) and Gunn none. Lady Franklin’s dinner book Aug – Nov 1840, Apr – Jul 1841 RS 18/3.

\(^{13}\) The comfortable and relaxed nature of the two men’s friendship can be demonstrated by this invitation from Gunn: ‘I can assure you I so heartily abominate all ceremony & form that you cannot please me better than by coming in your plainest garb – as my only object in wishing the pleasure of your company is to enjoy a quiet yarn on Botanical matters - & the luxury of sitting in an old coat & pair of easy shoes is not to be despised.’ R.C. Gunn to J.D. Hooker, undated [1840], Kew JDH/2/10.
Hooker declared he was ‘indebted’ to Gunn, who taught him so much about the native vegetation, ‘we either studied together in the field or in his library’. When Gunn was unable to join him, he sent James Lee as collecting assistant, Hooker referring to Gunn’s servant being ‘an experienced guide and plant-collector’.\textsuperscript{14} During his three months ashore, Hooker covered a substantial portion of the island, going as far south at Port Arthur and northwest into the interior to the Nive River.\textsuperscript{15} For Gunn those three months were glorious, sharing a close botanical friendship, repairing some of the scars left by Lawrence’s death and Short’s betrayal. Hooker recalled his time as equally wonderful, ‘I can recall no happier weeks in my various wanderings over the globe, than those spent with Mr. Gunn, collecting in the Tasmanian mountains and forests, or studying our plants in his library, with the works of our predecessors Labillardière and Brown.’\textsuperscript{16} Both men found succour in the other, Hooker finding a guide and source of local botanical knowledge, Gunn able to share his passion with someone as dedicated to plants as he was.

Gunn resented the time that his employment as Sir John Franklin’s private secretary consumed. While the move to Hobart provided an opportunity for him to engage with a growing colonial scientific community, it did not necessarily allow him time to go collecting. When reminiscing of this time to Lindley, however, Gunn painted a different picture of his day-to-day existence: ‘Whilst in office I

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\textsuperscript{14} Hooker, ‘introductory essay’, p. cxxv.
\textsuperscript{15} According to specimens held by K, Hooker also collected at Clarence Plains, Sandy Bay and around the valleys of Mount Wellington. Kew Herbarium Catalogue collector’s search, accessed 1 July 2010, http://apps.kew.org/herbcat.
\textsuperscript{16} Hooker, ‘introductory essay’, p. cxxv. At the time, Joseph wrote to his father saying he spent nearly every night at Gunn’s house where they would examine plants together. Hooker found Gunn ‘a most excellent fellow’ who was ‘full of enthusiasm & care[d] for nothing but his plants’. J.D. Hooker to W.J. Hooker, 7 Sep 1840, as cited in Endersby, \textit{Imperial Nature}, p. 102.
\end{flushleft}
never obtained one days leave to ramble in search of plants’. He bitterly described the colonial government as ‘never in the slightest degree encour[ing] or foster[ing] Botany or any brand of Natural History’. These claims are surprising as Franklin’s governorship was a period of cultural and scientific development and intellectual and social growth in the colony. No doubt Gunn’s position did require long hours at Government House, but his anger may have reflected his frustration that he could not spend more time with Hooker.

Gunn’s claims of being overworked were not expressed in his letters to William Hooker, nor can they be supported by a dearth of plant specimens in his herbarium from this period. In fact, he had specimens collected in every month of 1840 except June and August, with the vast wealth collected during September to December when Hooker was in town. Nevertheless, Gunn clearly looked back upon his time as private secretary with some resentment, in retrospect valuing his time spent botanising over his time working. This sentiment did not affect Gunn’s personal relationship with the governor, calling Franklin ‘a warm & worthy friend’ upon the occasion of the latter’s recall to London. Furthermore, Franklin trusted their friendship enough to make Gunn his colonial agent, overseeing

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17 Emphasis Gunn’s own. R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley. Gunn added that on the one occasion he took leave to go collecting at Lake St. Clair, he was penalised a month’s wages. It was during this trip that Gunn collected four type specimens, including Persoonia gunnii, and Isoetes gunnii. Buchanan, Collecting Localities, p. 19.
18 Gunn’s work was not the only time commitment he had whilst in Hobart, although his other activities could all have been undertaken with Hooker in tow. At this time he was Secretary of the Tasmanian Society, Secretary of the Hobart Horticultural Society, President of the Launceston Horticultural Society and overseeing the creation of a private Botanic Garden for Lady Franklin at her property on the outskirts of town. It does not appear the full garden was ever established, although a walk along the New Town Rivulet to a Greek folly, Ancanthe, was established. R.C. Gunn to W.J. Hooker, 18 Feb 1840, in Burns & Skemp, VDL Correspondents, p. 86.
19 HO database of Gunn plant specimens; Buchanan, Collecting Localities, pp. 18-19.
property worth several thousand pounds.\textsuperscript{20} Regardless of differences over work requirements, Gunn and Franklin both found practical benefits from their strong friendship.

Gunn was already an experienced property manager by the time Franklin entrusted his estates to his friend. Gunn departed the government service in early 1841 to manage William Lawrence’s properties in the north of the island, Franklin describing the new job as ‘more to his taste than the confinement of a Public Office where you have to work somewhat after the manner of a Horse in a Mill’.\textsuperscript{21} Aware that the \textit{Erebus} and \textit{Terror} were due to return the next winter, Gunn was anxious to squeeze another field trip in over the summer, freshening his herbarium before Hooker’s arrival. Just as Lawrence had botanised during his time on the Black Line, Gunn took advantage of his move from Hobart to Launceston, and made a trip to the central highlands. Once in his new role, Gunn was left managing five large properties, some other smaller farms and was an executor of Lawrence’s £27 000 fortune.\textsuperscript{22} All at once he had to become an expert at keeping sheep, cattle and horses, maintain fences and boundaries, and run the estate at a

\textsuperscript{20} R.C. Gunn to W.J. Hooker, 6 Dec 1843, Burns and Skemp, \textit{VDL Correspondents}, p. 95. Franklin’s departure assisted Gunn in building up his reference library when Franklin allowed Gunn first pick from his shelves. Gunn admitted he ‘purchased every Book on Natural History which I could see’. R.C. Gunn to J.D. Hooker, 8 Dec 1843, Kew DC 218.

\textsuperscript{21} Gunn was managing the estates following William Lawrence’s death in early 1841, but had taken the appointment when Lawrence recognised his failing health. The estates were intended to support Lawrence’s widow and their nine remaining children. J. Franklin to W.J. Hooker, 6 Aug 1841, in Burns & Skemp, \textit{VDL Correspondents}, p. 89. Gunn also mentioned his retirement to W.J. Hooker 5 Dec 1840, in Burns & Skemp, \textit{VDL Correspondents}, p. 86; and reminisces on the same to Lindley, R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley.

\textsuperscript{22} Gunn later complained of his workload to Joseph Hooker: ‘having to farm 30,000 acres, 17,000 sheep, Cattle Horses &c. in proportion – buy & sell all myself – keep Books, &c. it is no joke. I am now, besides being Bank Director, managing all the Bank Estates out here. I am trustee of an Insolvent Estate’ R.C. Gunn to J.D. Hooker, 12 Mar 1847, Kew DC 218. Gunn described the size and value of Lawrence’s estate to Lindley, R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley.
profit. This was Gunn’s first taste of being a landed gentleman of sorts, and besides the hard work, he seemed to take readily to the challenge.

Gunn’s move out of government service into a more gentlemanly line of work suggests that one of Gunn’s main motivators throughout his life was a desire to be of a gentlemanly status like Lawrence or Archer. But class or status aspirations were not as big a factor in Gunn’s motivations as they may at first appear. Gunn had always been acknowledged as a gentleman in the colonies, all of his letters being addressed to ‘Ronald C. Gunn Esqr.’ His desire to own land and amass wealth had been one of the reasons he had originally left his position at Barbados, but in this aspiration Gunn was joined by the majority of free emigrants to Van Diemen’s Land who had arrived prior to 1833.

It is true that some of Gunn’s botanical friendships had led to improvements in his social status and employment, but it was not a shared interest in botany alone that achieved this. Gunn developed a close friendship with the Lawrence family from his first move to Launceston, and Franklin employed Gunn because he needed someone capable who could temporarily fill the post until an official replacement arrived from England. Gunn did harbour a desire to be able to work ‘con amore’ at botany, without the drudgery of daily employment, but he knew that that style of life was only a fantasy – neither Lawrence or Archer pursued botany without a thought to income, and Joseph Hooker certainly did.

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25 Gunn’s brief tenure was explained as ‘never more than a temporary measure while Franklin awaited the arrival of Francis Henslowe’ from England. Finney, *Paradise Revealed*, p. 51. Franklin offered Gunn the post as private secretary in a hurried note, explaining he wanted someone who was enthusiastic, loyal and with the ability to hold Franklin’s confidence. J. Franklin to R.C. Gunn, 17 Feb 1840, AOT Correspondence.
similarity to Gunn’s: ‘Our acquaintance, my dear friend, has been, indeed, Brief!...but, believe me, I shall ever remember you; and though it is not probable that we shall ever meet on Earth again, Yet I endeavour to console myself with the hope of hearing from and corresponding with you.’

Gunn consoled himself the best way he could, with plants and nostalgia, recalling his time with Hooker the previous year:

Do you remember your first trip to see Hookeria pinnata? – & your admirations of the Cryptogamia on that Creek? – & Do you remember drawing Corks out of Bottled Ale upon an improved principle?

But even this was marred by Gunn’s memory of the ‘cursed’ Legislative Council that prevented him from going collecting more often. As Endersby has discussed, Colenso, Gunn and Hooker each reminisced happily about when the Erebus had been in port.

Another popular way for the men to maintain a sense of closeness and connection was through portraiture, Hooker requesting of Gunn:

a portrait of your august self…if you cannot get a drawing or a daguerreotype of your old block done out there, why you must come here & shew yourself. – What would I give to have you here, old friend, for one little day?

Gunn valued highly a set of ‘Portraits of Botanists’ he had, but was disappointed that only William, and not Joseph, was included in it. Gunn promised to send his own likeness in return so that the old friends could see each other once more.

There was no one to make a daguerreotype in the colony, but in any case he

38 W. Colenso to J.D. Hooker, 1841, as cited in Endersby, Imperial Nature, p. 84.
39 Emphasis Gunn’s own. R.C. Gunn to J.D. Hooker, 4 Jul 1841, Kew JDH/2/10.
41 J.D. Hooker to R.C. Gunn, Oct 1844, ML GC 8.
42 R.C. Gunn to J.D. Hooker, 3 May 1845, Kew DC 218.
thought they looked ‘miserable’. Instead, he paid three guineas to sit for the colony’s best portrait painter, the convict artist Thomas Bock. Afterwards Gunn declared the portrait to be so ‘unceremoniously unlike me’, that he sat for another one.\textsuperscript{43} One year later Gunn triumphantly included ‘My Portrait!’ in a case along with plants, wood specimens and some mosses.\textsuperscript{44} The mishap over the portraits is particularly interesting because of the three known portraits of Gunn, one is a photograph taken much later in life, and the other two are paintings attributed to Bock created at approximately the same time. One is held at Kew Gardens, and the other remains in Australia. It is a reasonable assumption that Kew possesses the truer image and the other was the one Gunn rejected (fig. 20). Only the Kew portrait has been completed and is far more flattering than the other, showing Gunn as a gallant gentleman, with a clear steady gaze and a slim frame.


\textsuperscript{44} R.C. Gunn to J.D. Hooker, 21 Dec 1846, Kew DC 218.
A portrait could strengthen the bond between collecting friends, personalising the relationship and triggering memories of time spent together. When Joseph Hooker departed Hobart Town, Gunn did not hide the strength of his feelings towards his new companion:

> here have I been breathing for months the same Atmosphere as J.D. Hooker without having been permitted to spend 24 hours at one time in his Company. If ever we meet again I trust it may be under happier auspices – & won’t we yarn about the Boronias & Tethratheca until we are tired.\(^\text{45}\)

\(^{45}\) Emphasis Gunn’s own. R.C. Gunn to J.D. Hooker, 4 Jul 1841, Kew JDH/2/10.
Despite his best efforts to make a meeting, Gunn was to remain an isolated botanical collector, never to see his new companion again. Gunn’s letters to Hooker were more informal in tone than most of his other correspondence, the only other similar exchange being between Gunn and his sister-in-law Fanny. Gunn’s intimacy reveals how much closer he felt to Hooker than his other corresponding acquaintances, providing further explanation for his depressed mood when hearing of Hooker’s departure with the Erebus. For historians it is fortunate that the two men had to rely entirely on correspondence, as other times when Gunn had shared a close botanical companion (for example with Robert Lawrence, or during Hooker’s first visit), any written communication besides shorthand notes were unnecessary because they saw each other so frequently. Instead, Hooker and Gunn’s friendship during 1841 was maintained purely by correspondence, and although their geographical closeness made their letter exchange swift, there is no escaping that their friendship was a corresponding one, just like Gunn’s relationships with other colonial naturalists such as Joseph Milligan and James Grant.

The idea of Flora

When Hooker left Hobart Town for the last time, Gunn attempted to buoy his spirits by concentrating upon cataloguing the complete flora of the island of

46 These letters are complete with gossip, nonsense and bad jokes, one letter including the postscript ‘Tell Emily – for her information & guidance – that young Ladies in America drink a pint of yeast before going to bed at night to make them rise in the morning.’ Emphasis Gunn’s own. R.C. Gunn to F. Gunn, 29 Nov 1837, Wilson private collection.
Van Diemen's Land. Gunn had been an active advocate of such a work since his earliest collecting days in the 1830s. A common aim for Victorian naturalists searching for order in the world of science was to chart an area’s flora or fauna in totality. Beginning with the small island to the south of New Holland appeared an excellent way to gain some indication of what the temperate Pacific flora was like.

Gunn had previously assisted in the creation of a popular flora with James Backhouse in 1835, and had produced at least one detailed plant list himself, organised according to families. Joseph Hooker had discussed a modest flora with Gunn in Hobart Town as Gunn mentioned finding a ‘stray sheet of your Flora of V.D.L.’ On his return to England, however, Hooker with the assistance of his father worked to realise a larger project including full floras of the Antarctic, New Zealand and Tasmania. Gunn found Hooker’s interest infectious and set his mind to the project: ‘I could assist you most materially in forming a collection to publish…which would be most interesting as being the Southern point of Terra Australia &, (being an Island) it could be made much more perfect than that of any other portion of New Holland…I shall I think be able to assist you in 500 different ways.’

47 Alexander von Humboldt (1769-1859) and Augustin Pyramus de Candolle (1778-1841) had produced some preliminary work on how geographical distribution can affect speciation, but it was Charles Darwin (1809-82) who recognised the importance of geographic isolation as an agent for speciation, although this was not until the mid-late nineteenth century. For more see J. Browne, The Secular Ark: Studies in the History of Biogeography (New Haven CT, 1983); and for discussion of the broader ecological impact of isolation see A.W. Crosby, Ecological Imperialism: The Biological Expansion of Europe, 900-1900, 2nd ed. (Cambridge, 2004), pp. 70-103, 269-93.
48 It was only in early 2011 that this manuscript was identified in the Mitchell Library, as it had been attributed to William Colenso and indexed accordingly. It is unmistakably Gunn’s hand and is written in a similar easily accessible style as the ‘Index Plantarum’. My thanks to Ian St George for drawing this manuscript to my attention. W. Colenso, N.Z. plants Vol. 5 [R.C. Gunn flora], ML A235.
49 R.C. Gunn to J.D. Hooker, 18 Apr 1841, Kew JDH/2/10.
50 Huxley, Life and Letters, pp. 82-3. See also Endersby, Imperial Nature, p. 53.
51 R.C. Gunn to J.D. Hooker, 10 May 1841, Kew JDH/2/10.
The work, entitled *The Botany of the Antarctic Voyage*, was published in sections between 1843-1859, the finished product bound as three volumes: one on Antarctica and other small islands, one on New Zealand and the last on Tasmania, each volume consisting of two parts.\(^{52}\) The long years taken to bring the final part into print must have been agonising for Gunn, who eagerly received the parts of each volume as it was published. In the meantime, Hooker worked simultaneously on several botanical projects and published small sections of the Tasmanian flora in journals, such as the *London Journal of Botany*.\(^{53}\)

Meanwhile Gunn enthused about the potential for the work, reporting to William Hooker that the idea ‘delights me beyond measure’.\(^{54}\) Two days later he wrote in a similar fashion to Joseph, ‘Your Father has delighted me with a proposal which he intends making to you to publish all the Southern plants! It will be a magnificent concern. For my sake push away at it. I shall aid you by specimens as far as practicable.’\(^{55}\) He envisioned a high quality publication similar to William Hooker’s *Icones Plantarum* that Gunn described as ‘delicious’. ‘Get all our Tasmanian plants figured in that way & they will do.’\(^{56}\)

Gunn’s zeal did not waver during preparation of the manuscript, despite Joseph outlining his difficulties in obtaining funding and lacking time to complete the project. Being the third volume in the series, Joseph had already spent years on the project and began to wonder if it would ever end, particularly as he found

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\(^{52}\) *Flora Antarctica* (1843-1847); *Flora Novae-Zealandiae* (1851-1853); *Flora Tasmaniae* (1853-1859). The two parts of *Flora Tasmaniae* bound together into one volume are dated 1860.


\(^{54}\) R.C. Gunn to W.J. Hooker, 6 Dec 1843, in Burns and Skemp, *VDL Correspondents*, p. 95.

\(^{55}\) R.C. Gunn to J.D. Hooker, 8 Dec 1843, Kew DC 218.

\(^{56}\) R.C. Gunn to J.D. Hooker, 15 Mar 1844, Kew DC 218.
the New Zealand flora was a much bigger task than he had first anticipated and doubted his capacity to complete the Tasmanian in the same manner. Funding was a constant issue, as was the issue of finding a suitable publisher. William and Joseph searched together and even with their combined reputation for scientific publications, made fifteen approaches before being successful with the lithographer Lovell Reeve. Even then, Hooker agreed he would make no profit from the work, it all going to the publisher. The plan to produce the flora in sections was aimed at securing subscribers, and therefore ensuring that Reeve would recover his costs. Drumming up such an audience required yet more energy from Hooker, who diligently took to the task ‘though it does me no good’, as even with a bumper readership he could not make a profit.57

The difficulty in finding a publisher reflected the market for natural history monographs in the mid-nineteenth century. Hooker described the market as ‘glutted’, filled as it was by accounts of numerous expeditions and explorations, and popular works for gardeners and hobbyists. Hooker also feared the fate of Robert Brown’s *Prodromus* of 1810.58 Nevertheless, he pushed on, and was momentarily buoyed in 1844 when the admiralty and treasury awarded him a £1000 grant for the whole project of Antarctic botany, but the government insisted that it include 500 stone-cut illustrations, which Hooker priced at £2 each, therefore swallowing the entire grant.59 Hooker scraped together money from

57 J.D. Hooker to R.C. Gunn, 13 May 1844, Kew DC 218. The efforts that could go into producing a single natural history work has been discussed in great detail by James Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation* (Chicago, 2000), particularly chapter 4, ‘Marketing Speculation’, pp. 111-54.

58 Mabberley, *Jupiter Botanicus*. See full discussion in chapter 1 on Brown’s success and failure with this work.

59 J.D. Hooker to R.C. Gunn, 13 May 1844, ML GC 8.
various sources, whilst living on his assistant surgeon’s pay of £150 per year. His father could not afford to employ him, but gave £100 per year to the work, as did Joseph Hooker’s wife. He had another £300 grant spread over five years and £400 that was really intended for him to order the 100 000 specimens he had brought back from the Himalayas. 60

Gunn helped as much as he could. He took on the job as Reeve’s agent in Van Diemen's Land to secure subscribers, and busied himself with gathering useful information for the author. This involved sending more duplicates and preparing pages of notes on his plant observations. William Hooker reinforced Gunn’s sense of importance in updates on Joseph’s progress, remarking that Gunn was the only real botanist in the island, ‘I am delighted to think that the world is soon likely to know how much science is indebted to you for your untiring exertions.’ 61  No doubt as each letter and parcel reached Joseph’s desk, he further appreciated Gunn’s excitement at the prospect of a flora. Gunn was not just a correspondent; he was also a sounding board and a collaborator.

Hooker had an ambitious plan to publish the New Zealand and Tasmanian floras simultaneously to save time, but having both in press increased the risk of confusing the plates and descriptions being used in each book. According to this plan Hooker could produce the first part of Flora Tasmaniae in 1850, suggesting to Gunn the main benefit of the scheme being that ‘it will stop your mouth’. 62  Of course this was meant in jest, but may have hidden Hooker’s frustration at the

60 J.D. Hooker to R.C. Gunn, 23 Jul 1843, ML GC 8. Extra funds from the Van Diemen’s Land Government were later secured to assist with the cost of publication, which is discussed in chapters 6 and 7.
61 W.J. Hooker to R.C. Gunn, 7 Apr 1845, ML GC 8.
62 J.D. Hooker to R.C. Gunn, 12 Aug 1846, ML GC 8.
species identifications, but in that relationship Stuart would always have remained in a secondary position. For Stuart, aligning himself with Mueller allowed him to establish his place in a corresponding network in his own right.75

Gunn may not have been able to satisfy Charles Stuart, but Stuart’s work provided an example of how botanical collecting was to change for Gunn and his contemporaries in the 1840s. After a decade of collecting, Gunn was highly skilled at locating and producing good plant specimens. He had previously sent thousands of sheets to the Hookers comprising the most common plants in the colony. In order to continue contributing, he had to specialise. Gunn was no longer collecting the same volume of material that he had in the early 1830s, and his letters to the Hooker had changed too, no longer an assortment of collecting numbers, but a discussion on particular named species and varieties, reinforcing his botanical competence.76

The Flora was a constant source of inspiration for Gunn, providing the impetus for him to seek out new plants in new places. The project sat at the forefront of his mind, so much so that he mentioned the Flora in every letter he wrote to Joseph Hooker. His appetite was further whetted after he received each small segment of the Flora Antarctica, and he encouraged Hooker to commit to a

75 Stuart sent plants to Mueller from 1843 onwards, but he did remain in contact with Gunn, and later Archer. In one letter Archer wrote to thank Gunn for ‘permitting old Stuart to ransack your garden’. Meaning that Gunn had allowed Stuart to collect specimens for Archer from the garden of native plants surrounding Gunn’s house. W. Archer to R.C. Gunn, 10 Jul 1852, ML GC 4. Five of Stuart’s letters to Mueller including a letter introducing Mueller to Archer, ‘only a beginner in the science but very enthusiastic in the cause’, have been published. See C. Stuart to F. Mueller, 25 Apr 1849, in Home et al., Regardfully Yours, Vol. 1, pp. 105-7.
76 For an example of Gunn’s increasing nomenclatural confidence when discussing any unknown plants, he increasingly described specimens in relation to family groups, if not genera, rather than by using collecting numbers. For one example see R.C. Gunn to J.D. Hooker, 8 Dec 1843, Kew DC 218.
supplement – fifteen years before the original framework of the books was published – to ensure his future finds would be included.

Part of Gunn’s confidence in having enough specimens to fill a supplement came from his firm idea of how many plants existed in the colony, believing in late 1845 that there were 100-200 new dicotyledons left to collect, and about half that amount in new monocotyledons.\(^77\) In the early 1830s Gunn had collected 300 plants in a single season, but that was when everything was new. To capture those final species would require careful planning and targeted field trips to inhospitable regions, particularly the south west. Hooker was willing to push Gunn even further, towards more specific collecting activities:

> how indeed my dear Gunn you must sprawl on your hallowed belly on the top of the Mts & pick little things out of the ground…I must still urge you to condescend to little things of all kinds.\(^78\)

Hooker intended to write a ‘complete’ flora of the island, leaving no plant group out. Like Gunn, Hooker had estimated the number of plant species in Van Diemen's Land by applying his knowledge of global plant distribution. His method required knowing the total plant population of another island, and altering the number of resident species according to geographic size. In this case, Hooker’s species estimate came from comparing Van Diemen’s Land to Ireland.\(^79\) Logically, he could not anticipate that a smaller land footprint could house a

\(^77\) The logic behind Gunn’s calculations is unknown, but was possibly based upon his fifteen years of field work and making an estimate based on the size of the areas of the island he had not visited. R.C. Gunn to J.D. Hooker, 17 Oct 1845, Kew DC 218.  
\(^78\) J.D. Hooker to R.C. Gunn, 12 Aug 1846, ML GC 8.  
\(^79\) Currently Tasmania’s land size is calculated to be 68 102km\(^2\), including all its offshore islands. The mainland alone measures 64 103km\(^2\). Ireland measures 84 431km\(^2\) See Australian Bureau of Statistics, ‘1384.6 – Statistics – Tasmania, 2008’, accessed 11 May 2011,  
higher density of species. Each time Gunn sent a duplicate, Hooker received it as reinforcement that there was nothing new to be found amongst the vascular plants. Gunn’s intention was to show the different locations at which the same species occurred, and to provide as many examples as possible to allow for close comparisons. This went against Hooker’s taxonomic attitude of lumping plant groups together, and he viewed the extra specimens as a nuisance to process, organise and house. To stem the tide of specimens going to Kew, Hooker offered firm advice on what he regarded as useful:

you have collated so ably & well that there cannot be a large amount of Phenogamic plants yet to be discovered, & we have as many duplicates of most as we know what to do with, I would therefore particularly call your attention to the smaller things & lower orders…You cannot always continue collecting with the naked eye, & now that you have ceased sending harvests of flowering plants from your own homestead you will turn to those with pleasure. We are now so overpowered with duplicates & have so little time to distribute them, that I would earnestly request you to attend more to the quality than quantity of the specimens.

If Gunn wished to continue collecting, he would need to turn his attention to other plant groups, and produce high quality specimens. Gunn had always struggled to identify mosses, fungi, algae and lichens, as he had limited reference texts to work with, and they proved hard to physically manage. Fungi were difficult to transport and preserve save by carrying lots of pickling jars, which was most often impractical, ‘the d——d mushrooms are more plague than enough. They ought to be gathered & described on the spot & that cannot be done by

80 Joseph Hooker uses this logic and method for describing plant population sizes by comparing plant distributions to British locations, so plants could exist in ‘an area perhaps as large as Middlesex’, ‘in an island smaller than Ireland’, or ‘limited to an area not greater than Yorkshire’. Hooker, ‘On the Huon Pine’, pp. 139-40.
81 J.D. Hooker to R.C. Gunn, Oct 1844, ML GC 8. William Archer scathingly commented on the Gunn duplicates at Kew ‘It is astonishing how many utterly unnecessary specimens Gunn collected & forwarded to England’. W. Archer diary, 3 Apr 1858, UTA A7/2. For more on this, see chapter 7.
me. ‘Lichens and mosses were so small they needed good eyes and good
equipment to discern speciation. As Gunn got older and his eyes deteriorated, he
became frustrated with this type of work, noting to Hooker ‘I have not got such a
compound microscopic eye as you.’ The cryptogams are a time-consuming
group for any person to name and describe, and Gunn always felt he was
collecting in the dark without names and notes:

you might get some of your deputies to glue a small piece of each species
to a piece of paper and add the name &c.. If you do that I shall promise to
collect – but it is now upwards of eleven years since I sent Home my first
sp. & down to the present time do not know half a dozen species by name.
I shall certainly stop the supplies unless you give me the names of
everything.  

Gunn’s frustrations with cryptogams were understandable. Fungi, mosses
and lichens were hard to collect, preserve and transport. Moss samples often had
to be collected as heavy wet sods of soil, and lichens had to be transported still
attached to their substrate, often a rock, to keep them intact. These were not plants
that were easy to carry in a knapsack. The Hookers would not have had an easy
task in naming those species they did get, as Gunn was unsure of how to best
transport such plants, and tended to send many jumbled together with an
apologetic note.

82 Emphasis Gunn’s own. R.C. Gunn to J.D. Hooker, 6 Oct 1844, Kew DC 218.
83 R.C. Gunn to J.D. Hooker, 17 Oct 1845, Kew DC 218.
84 Emphasis Gunn’s own. R.C. Gunn to J.D. Hooker, 15 March 1844, Kew DC 218.
85 Joseph Hooker originally had asked for mosses to be sent packed together, but later realised that
it created too much work at too great an expense to untangle at his end. He later requested that
Gunn spend more time on separating the species, even if that was at the expense of sending more
specimens, pushing for Gunn to pay more attention: ‘By devoting several days to Cryptogamicae
alone, I collated upwards of 70 species…in Auckland & Campbells Isd alone: more than twice the
number our limited collection in Tasmania amounted to. – In all your last collecting of Cryptog.
there was only one I had not gathered’. J.D. Hooker to R.C. Gunn, Oct 1844, ML GC 8.
Gunn was more interested in algae, although again desired more information on species names and how best to collect them. As with the cryptogams he began sending many species tangled together, which was little help in discerning which collecting number went with which specimen. In the summer of 1844 he hired a steamboat with his friends to collect algae off the northern coast, but at every spot had difficulties with the tides, collecting nothing but a bout of seasickness. He also struggled with how to best preserve the larger seaweeds. Delicate algae could be collected in an album by floating the plants onto paper and drying them, preserving their colours and patterns, a hobby sometimes undertaken by ladies.

Larger species including the kelps proved more of a challenge for Gunn:

I got plenty of what I presume to be Claudia elegans. It grows upon the stones at dead low water. I find the coarser & larger kinds become brittle & break when dried in the shade, and look so villainously ugly that I have pitched all I collected to the old Boy – as I am sure you would begrudge freight for such stuff.

Much to Gunn’s surprise and pleasure, Joseph Hooker took a great deal of interest in the conundrum of drying large seaweeds, and was distressed to learn of specimens being tossed into the sea:

You must above all things send the larger seaweeds: you cannot tell what lamentations we have made over them you told us had been thrown away because they looked so black & nasty. This must not be: Bless you, one of

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86 R.C. Gunn to J.D. Hooker, 23 Sep 1844, Kew DC 218.
87 R.C. Gunn to J.D. Hooker, 24 Jan 1844, Kew DC 218.
88 Examples of Gunn’s work can be seen in his algal album at MEL (this item is discussed in chapter 4). These types of albums tended to be aesthetic rather than scientific, and today it is difficult to know how to store them. HO has a collection of these nineteenth century algal albums, including one created by the daughter of Commandant Charles O’Hara Booth at Port Arthur penal settlement.
89 The ‘old Boy’: Gunn is referring to the ocean. R.C. Gunn to J.D. Hooker, 15 Mar 1844, Kew DC 218.
those Laminaria’s is worth a dozen smaller more beautiful things, many are excessively curious & they are the least known of any Algae.  

Gunn was urged on by Hooker, and directed how to create more useful specimens. Gunn obliged, but was very pleased when he received a letter from William Harvey, an Irish botanist specialising in algae. Harvey intended to visit the colony, thereby relieving Gunn of being solely responsible for seaweeds.  

‘it is a great blemish to my collection not to be able to tell people what [it] is’  

Despite Hooker encouraging Gunn to collect non-vascular flora and discouraging the collection of duplicates, there was one plant that the Hookers wanted most of all: the Huon Pine. It was a strange anomaly that a scientific description of Huon Pine, the most valuable timber in Van Diemen's Land, was not published until 1845. This was despite it being in use for forty years as the major shipbuilding timber in the colony and the harvesting of this wood being the prime motivation for establishing a penal settlement at Macquarie Harbour as early as 1822.

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90 Underlining Hooker’s own. J.D. Hooker to R.C. Gunn, Oct 1844, ML GC 8.
91 For more on Harvey, see chapter 7.
92 Although there were other useful native timbers in the colony, Huon Pine was the most desirable because it was easy to work and was durable in water (being impervious to rot due to its natural oil content). This oil also made Huon Pine an excellent furniture timber as it deterred moths. It was officially ‘discovered’ and reported by Captain James Kelly and merchant Thomas Birch in 1815, its usefulness being officially reported to J.T. Bigge, see ‘Examination of T.W. Birch taken before John Thomas Bigge, the Commissioner of Inquiry, 29 March 1820’ in Historical Records of Australia Series III. Despatches and Papers relating to the Settlement of the States. Vol. III. Tasmania, January-December, 1820 (Sydney, 1921), p. 356. For more on the pine and the penal settlement of Macquarie Harbour, see Maxwell-Stewart, Closing Hell’s Gates, pp. 3-6, 159-60.
Both William and Joseph Hooker had become aware of the lack of suitable specimens of the pine at Kew to provide an adequate description, as none bore fruiting bodies, and specimens were difficult to get. Being a dioecious conifer, ripe cones of the pine were required for an accurate description. This meant that a collector not only had to locate the pine in fruit, but specifically a female pine in fruit, as in the family Podocarpaceae, it is differences in the female cone that separate the genera.\(^{93}\) To further add to the challenge, fruiting bodies are only found on mature plants, requiring a collector to scale the tree to obtain their material.

Many attempts had previously been made to gather diagnostic specimens without success, including material collected by Allan Cunningham from the Huon River in 1819.\(^{94}\) Gunn had sent branches from the Huon River in 1839 to Joseph, admitting he had no specimens in flower or fruit but they ‘may help you a little’.\(^{95}\) Joseph was incredulous that Gunn had not seen the plant in flower, making clear his desire to examine it fully as ‘it is a great blemish to my collection not to be able to tell people what [it] is.’\(^{96}\) Hooker tentatively placed it in the genus *Athrotaxis*, along with the pencil pine and king billy pine, although he added that some ‘knowing ones’ called it *Dacrydium*.\(^{97}\)

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\(^{93}\) See Curtis, *Student’s Flora* 1, ‘*Dacrydium franklinii*’, p. 3.

\(^{94}\) At K an unnumbered specimen of *L. franklinii* was found undated, collected from ‘Mc Quarrie’ Harbour by Lieutenant A.J. Smith that could be much earlier than this specimen.

\(^{95}\) R.C. Gunn to W.J. Hooker, 20 Aug 1844, Kew DC 218.

\(^{96}\) J.D. Hooker to R.C. Gunn, Oct 1844, ML GC 8.

After Cunningham, and Gunn’s efforts in the south, Gunn charged Joseph Milligan to collect material from the west coast in 1842. Milligan had been appointed as medical officer to the Franklins for the overland expedition to Macquarie Harbour, a trip Gunn had been invited to join, but could not due to his broken leg. On their return, Gunn was disappointed to find that ‘strange to say & to my great regret,’ no Huon Pine had been collected by the party.98 Meanwhile, William and Joseph repeated their desire for better specimens, William wanting ‘to be able to determine what the Huon Pine really is’.99

To appease the Hookers, Gunn duly set aside two weeks for a trip to the southwest, aiming for Macquarie Harbour, and the elusive pine. A month later, Gunn began his letter victoriously to Joseph:

My dear Hooker,

Well! I have now I think obeyed your orders – found the Alsophila & got the Huon Pine – so that you must now find out some fresh task for me to perform.100

Gunn’s joy at collecting this much-desired specimen seemed almost to diminish under the greater pleasure he got from accomplishing a task for Joseph. Gunn described a little of his journey, illustrating the effort required in collecting the specimens. He had left Launceston on 28 January with three horses, three men (presumably Gunn’s convict servants), and his long-time friend Dr. James Grant. The party travelled forty-six miles south to the base of the Western Mountains, climbed them, ‘a task of great difficulty with horses’, and turned west to Bronte,

98 Buchanan, Collecting Localities, pp. 27, 34; R.C. Gunn to W.J. Hooker, 6 and 19 Dec 1842, in Burns and Skemp, VDL Correspondents, pp. 93, 95. For more on Milligan, see chapter 3.
99 W.J Hooker to R.C Gunn, 16 May 1843, ML GC 8.
100 Alsophila is a tree fern, now known as Cyathea australis (R.Br.) Domin., and was another specimen Hooker had asked Gunn to collect. R.C. Gunn to J.D. Hooker, 26 Feb 1845, Kew DC 218.
the plant ‘in nature’, suggesting that any others accompanying Cunningham, Gunn or Franklin – including Joseph Milligan – were not regarded as scientists. By naming such a significant plant for Franklin, Hooker acknowledged his standing as an ex-Governor, traveller, officer and scientist. He was also able to offer gentlemanly thanks for the Franklin’s support during the stay of the *Erebus* and *Terror*, and finally to congratulate those ‘enlightened individuals’ for encouraging the scientific cause in the colony.\(^{114}\)

‘all the alpine plants are good’\(^{115}\)

No matter how much Gunn wished to please Hooker and collect non-vascular plants, it was his knowledge of the flowering plants that members of his colonial corresponding network most wanted to access. Gunn was aware of the botanically unexplored regions of the island, each new environment potentially revealing new species. After obtaining the Huon Pine, one of the next requests from the Hookers was for Gunn to explore the west coast and alpine regions for new plants, as they were under-represented in the Kew collections. Joseph believed the alpine flora was ‘not very rich’, but he was aware Robert Brown had published species from Mount Wellington in the south that Hooker did not possess.\(^{116}\)

Gunn did make several attempts at reaching the west coast and south west of the colony, but was constrained by time and expense. Instead he planned a trip

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\(^{115}\) Underlining Hooker’s own. W.J. Hooker to R.C. Gunn, 7 Apr 1845, ML GC 8.

\(^{116}\) J.D. Hooker to R.C. Gunn, 12 Aug 1846, ML GC 8.
to Mount Olympus near Lake St. Clair in the summer of 1847, on what would prove to be his last major botanical expedition. Unlike his previous trip to the Franklin River, Gunn made the approach from Hobart, which allowed him a trip south to Brown’s river and to visit to his wife’s family at Glen Leith on the Derwent River.\(^{117}\) He took two companions with him: his brother-in-law Jamieson, and Jamieson’s cousin Brooks. Gunn’s familiarity with the region from previous trips in 1841 and 1845 led to a sophisticated plan allowing the three men to walk northwards to Lake St. Clair at the same time that two of Gunn’s servants with packhorses travelled south over the mountains to meet them from Launceston. In this manner all of the gear arrived, whereupon the men set about preparing a boat in order to cross the lake and reach Mount Olympus on the opposite shore.\(^{118}\)

After making their crossing, the next morning the party of five commenced scaling the mountain including several false starts as they worked around cliffs and small waterfalls. Near the top Gunn was pleased to discover a new fagus, in fruit.\(^{119}\) His excitement at seeing a completely new plant was matched when he found several other ‘rare’ alpine plants such as the king billy pine \textit{Athrotaxis selaginoides} and another alpine conifer \textit{Microcachrys tetragona}. Before he could explore more, the weather closed in and the party had to

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\(^{117}\) Gunn’s wife Margaret had travelled with him, but presumably stayed with her family at Glen Leith.

\(^{118}\) This involved melting pitch to seal the bottom of the boat that had been left exposed to the sun. Clearly the boat was an item left by the lake for such a purpose, but whether Gunn carried in the pitch or not is unclear. The servants were unnamed, but would not have included James Lee, who by this time had his Ticket of Leave.

\(^{119}\) This was later named \textit{Nothofagus gunnii} and is discussed in the thesis conclusion.
descend.\textsuperscript{120} The group spent three more days at the base of the mountain exploring around Lake St. Clair. Although Gunn found no more novelties, he noted that the vegetation on the east and west sides of the lake were strikingly different, one side bearing rainforest species, and the other dry sclerophyll with eucalypts dominant. This nod towards plant distribution revealed the extent to which Gunn had developed an interest in to philosophical botany and his ability to apply it to his environs.

In the following months Joseph Hooker published Gunn’s letter describing his trip in the \textit{London Journal of Botany}. It was not a highly scientific article, but served to describe the alpine environment to the metropolitan readership. Alongside the letter was a fragment of Hooker’s work towards the \textit{Flora Tasmaniae}, a large list of 140 new species plus some previously published. Of all of those described, 130 cited Gunn specimens as their main reference, and ten were named for Gunn. Gunn’s pleasure at the honour would have been mixed with frustration at the time it took to go from collection to publication as many of the specimens cited were old: twenty plants cited Lawrence specimens – often in tandem with Gunn – and six were Backhouse’s. Many of Hooker’s ‘new’ plants had been collected in the early 1830s. One cited Scott, presumably Dr. James Scott in Hobart Town who had employed the convict artist William Gould.\textsuperscript{121} Despite the annoyance of the long lag before publication, it would have been gratifying to see the specimens finally come to light.

\textsuperscript{120} Mt. Olympus is 1449 metres above sea level and is snow-capped much of the year. R.C. Gunn to J.D. Hooker, 21 Jan 1847, Kew DC 218.

\textsuperscript{121} Hooker, ‘Contributions towards a Flora VDL’, pp. 106-125, 265-286, 461-479.
Gunn stops writing

At this point in his collecting career, Gunn appeared willing to specialise, chasing increasingly specific botanical targets. After his Mount Olympus trip the next obvious location to aim for would have been Port Davey on the south west coast, an expedition that would require considerable time, expense and planning. But there was an unexpected break in Gunn’s stream of correspondence. He wrote to Joseph Hooker in March 1847, and to William in 1849. It was a decade before he picked up his pen again.122 William Hooker had previously commented that he would enjoy corresponding with Gunn even if there were no plant collections being sent, but unlike other colonial collectors this did not occur.123

The causes of an unexpected cessation in a corresponding relationship have received little attention from historians, if for no other reason than it is difficult to study an absence in the record. Endersby has puzzled over the change in behaviour, suggesting the Gunn lost interest in botany, as he became a prosperous member of colonial society.124 Nonetheless, Gunn’s cessation in collecting and writing is of interest if for no other reason that it contrasts so starkly with his earlier seemingly boundless enthusiasm that extended right up until 1849. That Gunn was juggling increased work and family responsibilities in

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122 After his last letter to Joseph, Gunn wrote three further letters to William Hooker: 16 Jun 1847, 17 Mar 1849 and 10 May 1849, see Burns and Skemp, VDL Correspondents, pp. 117-124. It would be safe to assume that father and son shared these letters, but this does not explain why Gunn stopped writing to Joseph. The break in his correspondence was never properly resumed, and those few letters Gunn did write to Joseph were short and generally business-like. McCalman’s idea that Hooker remained ‘in close and respectful contact with his old colonial helpers, like Ronald Gunn’ in his later years is erroneous. McCalman, Darwin’s Armada, p. 366. 123 William Archer continued to write to William Hooker up until Hooker’s death in 1865, and wrote to Joseph Hooker until his own death in 1874. In New Zealand William Colenso maintained connections with William Hooker and later Joseph Hooker, his correspondence with the latter lasting well after Colenso ceased collecting. See St George, Colenso’s Collections, pp. 7, 394. 124 Endersby, Imperial Nature, p. 98.
the late 1840s is clear, and it would be understandable that botany and other extra-
curricular activities would have to take a lesser role.

It is hard to believe, however, that Gunn would completely abandon his long friendship with the Hookers. Gunn admitted he was time-poor, but there was no indication there that he had lost interest, and he still valued his friendships highly, as can be see in his second last letter to William: ‘I always look upon you as one of my oldest and most valued friends,’ followed by ‘My Zeal remains but alas! my time is sadly trenched upon by other and less pleasant employments than Botany.’ Another surprise is that Gunn did not stop participating in other natural history activities, remaining an active participant in all manner of colonial scientific societies and networks.

One general feature of Gunn’s letters that differed to others like Archer or Colenso was how little he discussed personal matters. He focussed upon topics of natural history and other colonial news. His remarks about Lawrence were intimate, but that was a person Hooker knew, and a naturalist. Without that deeper layer of emotional commitment, Gunn may have struggled to find a good enough reason to write. Perhaps William or Joseph could have extended the botanical discussion by sharing more the intricacies of botanical science, involving Gunn in the broader debates of their discipline. Instead the letters they exchanged became even more botano-centric over time.

As their correspondence continued, the books and equipment Gunn desired became ever more expensive and harder to procure as his library filled up with gifts from grateful correspondents. As his skill and knowledge had improved,

\[125\] R.C. Gunn to W.J. Hooker, 17 Mar 1849, Burns and Skemp, *VDL Correspondents*, p. 119.
he wanted more detailed texts. As Gunn’s library expanded, it became more
difficult for the Hookers to source appropriate books to send. William had to send
out to London, Paris and Germany for particular items, and later Joseph attended
auctions and had journals bound specifically to send to Launceston.

As with the finite number of useful botanical works, there was also only so
many new plant species that Gunn could find. His lack of engagement cannot be
explained simply because he ‘gave up’. As has already been discussed, Gunn
found the cryptogams and algae difficult to gather, store and identify, and felt he
lacked the references and assistance from Kew that he needed to do a better job.
Although he had a microscope, he did not enjoy microscopy in particular
(whereas William Valentine and William Archer both enjoyed spending hours at
time completing dissections and peering at sections and slides).\textsuperscript{126} As Gunn was
getting older his eyesight deteriorated, adding to his frustration. It is also possible
that he found it difficult to invest the time to become as adept at identifying non-
vascular plants as he was with their vascular counterparts. The simple aesthetic
pleasure of working with flowering plants over moss and fungi may also have
influenced his behaviour. It would not be unreasonable to suppose that Gunn
enjoyed collecting flowering plants more than anything else, and when he was no
longer encouraged to do so, he lost the passion for botanising.

The original excitement of the correspondence may have been sustained if
Gunn had become more involved in the naming and classifying of his specimens,
or in other aspects of philosophical botany such as plant distribution. He had
dabbled a little in these areas, but was either not interested in pursuing this sort of

\textsuperscript{126} See chapters 6 and 7.
hypothesising, or did not have the time to devote to it. Perhaps if Gunn had had
the companion he wished for to provide support and enthusiasm he may have
ventured into these areas, and without support from the Hookers, he was left to his
own devices.

Conclusion

Gunn and Hooker shared an enthusiasm and dedication to botany that
ensured the longevity and quality of their later correspondence. That they only
spent a few months physically together illustrates how intense their connection
must have been, challenging any notion that the friendship was one-sided, valued
more by one participant than the other, or was merely a relationship Hooker could
manipulate to receive the information he wanted.

Following Hooker’s visit, the two men shared a common goal and
aspiration: the *Flora Tasmaniae*. William Hooker and Gunn had already discussed
their desire for such a work, but it was Joseph who made it a real possibility.
Gunn was invigorated by the project, confident that he could amass a complete
representation of every plant in the colony. The *Flora* became the centrepiece of
their correspondence, reinforcing their friendship as they collaborated from either
side of the globe.

In the 1840s Van Diemen’s Land was no longer ‘untrodden’, nor ‘a land of
mystery supposed to abound in anomalies’, as Matthew Friend had described it
ten years earlier.127 Instead there was a changing botanical ideology represented

127 M.C. Friend’s address to the Van Diemen’s Land Society, 29 May 1830, *Hobart Town Courier.*
by Stuart favouring the movement towards scientific specialisation. The Flora
required a complete floral survey, and the Hookers began to push Gunn to look to
fill the gaps in their herbarium. William and Joseph encouraged the collection of
non-vascular plants, but the difficulties in collecting, storing, preserving and
identifying these groups was a source of frustration to Gunn.

With Gunn having been so enthusiastic about botany for over fifteen
years, it is strange to see a sudden stop in communication, with no suggestion of a
falling-out between the writers. Perhaps work became particularly frantic, or
Gunn faced a personal crisis, or he lost interest in struggling alone with mosses
and algae. Two things are certain: he did not stop writing altogether, nor did he
completely disengage with natural history. In 1848, he started corresponding with
another colonial collector, the architect William Archer. It was Archer who was to
continue in Gunn’s wake, making his own contribution to colonial botany.
CHAPTER 6: CREATION & CONFLICT

*Tetratheca gunnii* Hook.f.

*Diselma archeri* Hook.f.

**Figure 21** William Archer’s sketch for Ronald Gunn comparing their two herbaria: Archer’s empty cupboards on the left, and Gunn’s neatly packed and full, with excess stacked on top, as well as a full collecting satchel and plant presses beside. W. Archer to R.C. Gunn, 9 Aug 1848, ML GC 6.
‘Botany for ever! with it’s [sic] wonderful & beautiful forms, & it’s delightful associations. Politics are a necessary evil however, – but after all the snarling, slandering, quarrelling, & abuse of politics, Botany indeed presents one with a bed of roses.’

William Archer to Ronald Gunn, 2 Apr 1855, ML GC 4.

Introduction

William Archer’s sketch of his and Gunn’s herbaria side by side was a deferential nod to Gunn’s expertise and botanical experience (fig. 21). But instead of capturing a man who had collected more than he had storage for, perhaps it was showing the efforts of one man who had collected it all, and another who was merely starting out, fresh and enthusiastic, with space to expand in the years ahead. Gunn and Archer took different approaches to botanical taxonomy. Gunn had been shaped over his entire collecting career to be loyal and deferential to the Hookers and to Kew. Archer was self-taught from reference books with no one to put limits on what he should or should not aspire to do.

Through the use of case studies, the motivations of both men can be explored, revealing the strengths and weaknesses of each, and the rewards that could come from taxonomic persistence. Case studies can also demonstrate the complexity surrounding the naming of new species, a process that could involve elaborate negotiations between colony and metropolis, collector and taxonomist.

‘Definite gaps in nature’

Despite Gunn’s continued references to his isolation, he had always received some form of taxonomic assistance. He had learned first from Lawrence
and later from George Morand. He had been advised and shaped by William Hooker and other British naturalists, including those who assumed the authority to name new species. Many collectors battled with Joseph Hooker about naming and classifying plants, their differences occurring on several levels, especially in relation to the concept of species.

As discussed in chapter 3, Hooker asserted that there were fewer extant species than commonly believed. A crucial aspect of this idea was Hooker’s concept of species limits, that is, how much variation there was within a species before it was demarcated as a new species in its own right. As Peter Stevens has argued, Hooker encouraged his collectors to think in terms of broadly-delineated species, establishing two opposing viewpoints – that variation was limited, and that species were fundamentally constant, yet still quite variable. If these ideas were followed through by his colonial collectors across the globe, Hooker would have far fewer species to deal with in his accumulative centre. It also accommodated a coarse sorting of plants as they came in, ready to be redistributed into finer taxonomic categories at a later date. Of course, one major hurdle was that every systematist had differing ideas of where a species boundary lay, making even that first sorting process difficult.

One of the major colonial botanical headaches for Hooker was Ferdinand Mueller, whose tireless efforts on the Australian flora resulted in him sending thousands of new names to Kew both on specimens and in manuscript form for checking. As he did not have a complete and authenticated herbarium in Melbourne, Mueller had to send his work away to be edited before publication. At

1 Stevens, ‘Hooker, Bentham, Gray and Mueller on Species Limits’, 346-7.
first Hooker and Bentham were delighted to assist, a mood that soon changed due to the sheer volume of material Mueller sent, described as ‘several foolscap reams’ that required far more time and attention than Hooker could spare.²

Hooker raised the issue surrounding different concepts of variation with Mueller: ‘There is nothing so much wanted as systematic contrasts of the results of independent workers. I tremble for the whole fabric of Species under the ordeal! If you, I, Lindley, Brown & Archer differ so much about orchids, where is truth? We want to teach that divergence of opinion regarding species is the law not the exception.’³ Hooker found it best to remind his collectors and colleagues not to focus too much upon species limits and variation. If they did, of course, all plants would appear ‘fluid and without boundaries’. Instead, where such examples occurred in nature they were to be considered the exception, and the collector should not dwell too much upon it. As Stevens described Hooker’s view, ‘there were usually definite gaps in nature’.⁴

In addition to the concept of species, Endersby discussed two other major sticking points between the colony and metropole when it came to naming. One was the power of the reference herbarium, providing a vast body of evidence to support any taxonomic claims. In addition to herbarium specimens, however, a colonial collector could make use of fresh material and field characters that were only observable in living plants.⁵

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⁴ Stevens, ‘Hooker, Bentham, Gray and Mueller on Species Limits’, p. 349.
⁵ Endersby, “‘From Having No Herbarium’”, p. 352.
The power to name made the task of encapsulating a region’s flora easier, particularly when the names were created in only one place. Although Hooker encouraged his collectors to use the natural system, he would not allow them to add to it by creating new names themselves. As Endersby described it, Hooker’s ‘opposition was largely prompted by his need to concentrate botanical authority in his own hands’. This drive for sole authority was a pragmatic attempt by Hooker to lessen his workload, whilst simultaneously strengthening Kew’s hold upon global botanical science, by removing the opportunity for any other naturalists to participate in the discussion.

Before Joseph Hooker was old enough to write to Gunn, let alone have a clear sense of the appropriate taxonomic involvement of his correspondents, William Hooker had subtly moulded Gunn along these lines. As a result, despite his expertise drawn from years of fieldwork, research and discussion, Gunn was generally deferential to Kew when it came to naming new species.

William Archer’s concern with revisiting already published names aligned him – without him knowing it at the time – with Mueller and the frustrations of working in a field where previous work had been conducted quickly and often incompletely. As Lucas has discussed, Mueller lamented of the ‘weak’ published works: ‘under how great a disadvantage I have laboured here in consequence of having in the majority of cases to recognize my plants by perfectly adequate

6 Endersby, “‘From Having No Herbarium’”, p. 352; Endersby, Imperial Nature; Stevens, ‘Hooker, Bentham, Gray and Mueller on Species Limits’; Stevens, ‘Why Do We Name Organisms?’, Taxon 51 (2002).
7 Endersby, “‘From Having no Herbarium’”, p. 353.
diagnoses & descriptions’. Gunn was aligned with the Hookers, and worked hard to show his understanding of species boundaries, his collecting notes from the 1830s onwards containing many references to varieties within a species. From a closer examination of these notes some points of tension are revealed.

Genera such as Stylidium, Leptospermum and Cardamine contained individuals that appeared to be more than just varieties, but Gunn cautiously did not take responsibility for suggesting speciation: ‘I strongly suspect there must be more than one species in this lot but I cannot perceive any striking character to separate one var. from the rest…To you I leave them.’ Epacris impressa caused some headaches. Gunn noted four varieties under the number 522, suggesting that separate specimens may have been discernible. He had already noted that flower colour and plant size were not fixed characters, and that minute observation was necessary to see if there was speciation. Today E. impressa is still a puzzle due to its polymorphism – it displays flowers through the spectrum from white into pinks and a dark red. The flowers can be different lengths, the flowering times vary from place to place, and the plant habit extends from dwarf and compact to tall and leggy.

Boronia was an even more challenging genus to sort as Gunn explained to Lindley, ‘the number of species of Boronia in the Colony is very much greater than my friend Sir W. J. Hooker appears to expect’. Under his collecting number

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9 R.C. Gunn collecting slip 1837/102 Stylidium. See also collecting slip 1837/486 Leptospermum and collecting slip 1837/781 Cardamine. RHS RCG.
10 R.C. Gunn collecting slip 1837/522 Epacris impressa, RHS RCG.
12 R.C. Gunn collecting slip 1837/790 Boronia, RHS RCG.
790 Gunn included three varieties, one of which was ‘so much larger and the leaves so much more developed that I should be almost authorized to give it a separated N\textsuperscript{o} did I not believe that perhaps a slightly better soil…lead to its greater luxuriance – however I must leave it to your decision.\textsuperscript{13}

This was a genus that required an acute sense of smell as well as sharp observation skills, as each species of \textit{Boronia} produced a different scent, each quite strong and discernible even when dried. Gunn used his nose to differentiate plants, as he considered it ‘a pretty sure mode of judging that plants are not varieties’.\textsuperscript{14} He relied on this key character to discern a further species of \textit{Boronia}, number 667 that he called ‘Lemon Plant’. He admitted that when dry it looked like his \textit{Boronia} number 8, but was convinced it was a distinct species, ‘not only from size, soil, situation &c. but from the remarkable difference in the smell’.\textsuperscript{15}

In the \textit{Flora Tasmaniae} Joseph Hooker admitted he was ‘quite unable to detect absolute characters between the various Tasmanian…species. Mr. Gunn depends on the smell…I have followed his determinations implicitly’.\textsuperscript{16} Of the seven \textit{Boronia} Hooker published, all the names referenced at least one Gunn specimen, and two bore his name, one as \textit{B. gunnii} Hook.fil., and the other \textit{B. citriodora} Gunn MSS., the latter based upon Gunn’s numbers 667 and 894.\textsuperscript{17} Despite the thousands of Gunn’s reference specimens cited in the \textit{Flora} and the numerous places where his notes were used in conjunction with Hooker’s descriptions, \textit{B. citriodora} was one of only two plants in the entire \textit{Flora} that cited

\textsuperscript{13} R.C. Gunn collecting slip 1837/790 \textit{Boronia}, RHS RCG.
\textsuperscript{14} R.C. Gunn collecting slip 1837/790 \textit{Boronia}, RHS RCG.
\textsuperscript{15} R.C. Gunn collecting slip 1837/667 \textit{Boronia}, RHS RCG. See also collecting slip 1837/894 which Gunn believed was a dwarf of the same species.
\textsuperscript{16} Hooker, \textit{Flora Tasmaniae} 1, p. 66.
\textsuperscript{17} Hooker, \textit{Flora Tasmaniae} 1, p. 68.
Gunn as the naming authority. Gunn had described a new species of *Boronia*, but had maintained a strong sense of species limits. The other plant he was the naming authority for – *Tetratheca procumbens* Gunn ex. Hook.f., pushed into the vagaries of variance well beyond what Joseph Hooker could ever have been comfortable with.

*Tetratheca*

For someone with such vast experience in his field, it is curious that Gunn rarely stepped outside of the role of deferential colonial. With *Boronia* and *Epacris* he was willing to suggest speciation when absolutely necessary, but these were gentle and rare actions. There was only one case where Gunn really tested the accepted boundaries of the peripheral naturalist, when he openly disagreed with his scientific superiors. He maintained his contrary position for his whole collecting career, gathering evidence and observing in the field, and it was all done for a delicate purple flower.

*Tetratheca* is a wholly insignificant plant in size and stature with branching stems and tiny leaves, easily lost in a broad plain of straggling grey-green shrubs. It is a low growing dark green herb with small, corrugated leaves that sport lots of tiny hairs, making the plant feel sticky to touch. Its one distinction is its flower – a violet four-lobed bell hanging towards the ground, the hint of colour setting it apart from the whites and creams of other scrub plants. In the centre of the flower are large dark anther tubes, appearing too large to sit within its four thin petals, the colour, shape and size of the flower making the genus distinctive in the field (fig. 22). Why was Gunn attracted to *Tetratheca*? He
could have chosen the noble conifers, or the iconic – and Joseph Hooker-pleasing – *Eucalyptus*, or the striking form and flower of *Richea*. All were eye-catching, endemic and novel. Instead he chose a plant no one else was interested in. With *Tetratheca* Gunn not only found a niche, he uncovered a systematic battleground.

**Figure 22** *Tetratheca gunnii*. Photograph courtesy of Roy Skabo.

Gunn’s relationship with *Tetratheca* had begun during his first collecting trips to the Western Mountains. He included two unnamed *Tetratheca* numbered 309 and 217 in his shipment to William Hooker in 1833, and continued to amass new specimens at every opportunity. Hooker welcomed every new addition to his herbarium and duly added the sheets to his shelves. Four years later more of no. 217 arrived in Glasgow, attached to a note in which Gunn was ‘inclined to hold
out most strongly for the right of 217 to be considered distinct.\footnote{18} In the same note he agreed that two other plants (nos. 21 and 193) he had regarded as species but were indeed only varieties. This made his ongoing claim for no. 217 more powerful as he had demonstrated his willingness to accept Hooker’s opinions when they were valid. Included with the specimens were some field notes, describing no. 217 as ‘procumbent or suberect’, always small and close to the ground, regardless of the soil it grew upon.

In the same year Gunn sent duplicates of no. 217 to John Lindley, explaining that Hooker believed it only to be a variety of \emph{T. pilosa}.\footnote{19} In the same shipment he included a white variety, no. 649. He was at pains to point out that drying could lead to a misunderstanding of the true flower colour: ‘The flowers of this Genus are apt – when dried carelessly – to become \textit{yellow}...\textit{I think} the only variety when growing is \textit{white}.\footnote{20} Gunn’s conduct shows that he was not merely trying to inflate the number of recognised \textit{Tetratheca}, as he was certain that the white plant was merely a variety of the purple. It would have been an easy decision to suggest speciation on flower colour alone, but Gunn knew that such a claim would not stand up to a rigorous examination of the specimens.

At this time Joseph Hooker was beginning to work on part of his father’s herbarium, and on his examination of the specimens concluded that there were two distinct species in \textit{Tetratheca}, one of which included four varieties.

Labillardière had first described the genus in 1805 with \textit{Tetratheca pilosa} and \textit{T.}
glandulosa. In Joseph Hooker’s opinion, it was under the former name that Gunn’s no. 217 and no. 309 sat as variants. Gunn’s opportunity to challenge these ideas came in 1840 when Hooker was in Hobart, and the two men could pore over the live and dead specimens together, debating the merits of speciation. Gunn was left disappointed in this instance as he reported to William Hooker after Joseph’s departure, ‘Your son was satisfied before he left…that Tetratheca glandulosa & pilosa were distinct species…but I reserve to myself future proof that Tetratheca 217 is also distinct’. 21 Hooker’s own recollection of that time was quite different. He claimed that whilst in Van Diemen's Land he settled on four species, three of which were indistinguishable when dried, but noticeably different when growing. 22

Unaware of Hooker’s thoughts, Gunn continued to collect his ‘proof’ to claim a third species during the 1840s. Each was sent with annotations to support his argument: ‘This very small species I sent you in 1837 when you made it a var. of pilosa. I cannot assent, even yet, to this. I send more specimens – which possess a striking likeness one to the other’. 23 Within a few years he had broadened his dispute from one new species to two – ‘The Tetrathecas bother me a little I must confess but I do not despair proving by & bye that we have at least 4 species. – I am gathering and observing.’ 24

21 Emphasis Gunn’s own. In this paragraph Gunn also discusses that he and Hooker had determined two distinct species of Ranunculus and ‘at least’ two Pelargoniums. He added that ‘The Boronias must remain for the present’, suggesting his dissatisfaction with the accepted number of species at that time. R.C. Gunn to W. J. Hooker 31 Oct 1841, Burns and Skemp, VDL Correspondents, p. 91.
22 Hooker, Flora Tasmaniae 1, p. 33.
23 R.C. Gunn collecting note, Tetratheca, 217/1842, K 000591918.
24 Emphasis Gunn’s own. R.C. Gunn to J.D. Hooker, 20 Aug 1844, Kew DC 218.
Hooker’s heart would have plummeted at the thought that he was due to receive even more sheets to fill his groaning herbarium shelves. Gunn’s newest candidate for speciation had been collected in 1843 during a trip the Asbestos Ranges in the island’s north. This was no. 1944, ‘so distinct in its habit & appearance that I for the present keep it separate. I have sought in vain for distinct characters & yet failing in the leaves & flowers – there is really nothing to fall back upon but the general aspect of the plant in a state of nature.’

25 He sent several specimens and a sheet of over twenty pencil sketches including flowering habit, leaf arrangement and dissections of the flower and fruit, adding ‘I do not know whether you will feel disposed to add this to your interminable varieties of *T. pilosa*, or raise it to the rank of a Species’ (fig. 23).

25 R.C. Gunn, collecting notes *Tetratheca gunnii*, K 000591923.
26 R.C. Gunn, collecting notes *Tetratheca gunnii*, K 000591923.
Two months after finding 1944, Gunn returned to his original Tetratheca hunting ground on the Western Mountains. It was there that he had a success regarding the long-running dispute over Tetratheca nos. 309 and 217. He had already determined that that white no. 649 was really a variety of no. 217, and on closer inspection discovered that no. 309 was a high-altitude variety of the same number, and happily collapsed all his specimens under no. 217, confident enough to include a tentative name, Tetratheca procumbens to reflect its low-growing habit.27 From Gunn’s position this made his argument for a separate species easier, as he could focus his attention on two cases rather than three, particularly

27 R.C. Gunn, collecting notes Tetratheca gunnii, K 000591923.
when he was faced with the challenge of determining distinct characters on plants that were different when fresh but indistinguishable when dried.

As Gunn’s sheets of nos. 1944 and 217 reached Kew, Joseph Hooker remained undecided on the question of distinct species. His problem stemmed from his need to find distinct, permanent characters on the dried specimens. Although he had agreed the plants looked quite different from one another when alive, those habits could not be captured on a herbarium sheet, and in the interests of consistency, Hooker needed quantifiable differences in his herbarium, not in the ground of a country on the other side of the globe. He made two more attempts to separate the species, but using the evidence before him returned to his original two species concept.28

The dichotomy between Gunn and Hooker rested upon a single detail – Gunn based his hypotheses upon living and dried material, whereas Hooker could rely only upon the dried. At the simplest level any botanist working with dried material alone would miss all the nuances of colour, form, environment and geology as well as all the finer detail of the living cells that are lost when they desiccate and collapse. The advantage Hooker had to overcome this seemingly insurmountable obstacle was that every plant he saw from all over the world had received the same treatment and remained in a constant, stable state once affixed to a sheet and shelved.

Hooker was not the only botanist who advocated the merits of working strictly with dead material. Alphonse de Candolle believed that the naturalist overseeing a global collection was better equipped to make classificatory

28 Hooker, *Flora Tasmaniae* 1, p. 33.
judgments as the specimens *en masse* would self correct any collecting biases, theories or habits produced by an individual in the field. Geographically distant plants could be compared, one to the other, and it was their differences in a dried state that provided evidence for speciation.

As Gunn had noted with *Tetratheca* no. 1944 there were no obvious distinctions that could be found in the dried plant although these could be detected in ‘the general aspect of the plant in a state of nature’, a state which Hooker could not examine. European specialists could read more books and consult more specimens of *Tetratheca* than a locally placed naturalist, but as the herb was an Australian endemic, they could never examine as many living plants as the men on the ground. The anxiety that a dried plant might misrepresent its live counterpart accounted for much extra notation by far-flung colonial collectors, as well as countless hours rechecking specimens before their voyage to Kew.

This was not the first time Gunn had struggled with obtaining proper recognition from London for knowledge of an endemic species, having already corrected the views of European zoologists towards the Thylacine. In the first decades of the nineteenth century, published accounts recorded the animal as a marine predator, sporting a compressed tail to assist with swimming, like an otter. When this erroneous description was again published in 1834, Gunn rallied against it, writing to William Hooker:

31 That most of the Thylacines noted at this time were recorded as residing near the sea reflected the fact that most observations were made from the deck of an expedition vessel rather than from land-based field expeditions.
The tail is not compressed, neither is it at all aquatic in its habits. They are most numerous inland…Deductions are frequently too hastily drawn by naturalists (or persons professing to be such) from isolated facts. That the *Thylacinus* may often be seen on the sea-coast, as also every other species of our quadrupeds, is quite probable…but as to its *fishing*, it is out of the question.32

Although Gunn may have chiefly directed his fire at William Swainson the author of the 1834 entry in Hugh Murray’s *Encyclopaedia of Geography*, he was by implication being critical of two other authors of the ‘marine predator’ theory, Geoffroy Saint-Hilaire and Cuvier. The London scientific community did not embrace the colonist’s critique, despite the fact that Gunn was quite correct in his observations. Instead, his contrary colonial opinions were ignored. Indeed, no further Gunn-authored ‘notices’ on Vandemonian animals were published in London scientific periodicals for a decade.33

This tension between local knowledge and metropolitan practice was experienced in other colonies as well. In New Zealand William Colenso debated the importance of field characters in determining ferns. When his new species were rejected by Kew he remarked, ‘had I but *dried spns. only*, as you have had there, I am pretty sure I should have made the same, or greater, mistakes.’34 In Victoria, Ferdinand Mueller similarly valued field observations. For his work on *Tetratheca* he used the direction of the sepals in live plants as a distinguishing

32 This letter excerpt was printed, unedited, without Gunn’s permission. R.C. Gunn, ‘Notices Accompanying a Collection of Quadrupeds and Fish from Van Diemen’s Land’, *Annals of Natural History; or, Magazine of Zoology, Botany, and Geology* 1 (London, 1838), pp. 101-106.
34 W. Colenso to J.D. Hooker, 27 Dec 1884, cited in Endersby, “‘From Having no Herbarium’”, p. 352.
feature, a character not picked up until George Bentham published the genus in *Flora Australiensis*.35

Peter Stevens argued that Bentham was more sympathetic to the use of field characters than Joseph Hooker, breaking rank with his contemporaries. The scientific elite displayed such a low opinion of the value of fieldwork, it is not surprising that notes describing colour, smell, habit and plant form were often considered unnecessary or unreliable, and such annotations were often not transcribed, or fixed to the specimen, and they were thereby lost.36

Stevens went so far as to describe Hooker as a ‘traveller’ rather than a field botanist. To Hooker the value of field observations was in their capacity to extend the limits of species rather than producing diagnostic observations.

Bentham was more open to the usefulness of field notes, but only for ‘smaller’ scale floras. He thought it was too much detail for something as large as the *Flora Australiensis* that required a massive herbarium, whereas it was an ideal approach to adopt for something smaller like a colonial flora of Victoria. This point not only devalued Mueller’s work, but simultaneously justified Bentham’s own position in writing the flora for a continent he had never visited from behind the gates at Kew.37


36 Such field notes can be an invaluable resource. That Gunn’s *Tetratheca* notes have been retained with his specimen sheets provides extra depth to the understanding of the nomenclatural process. Even today the value of field notes can be overlooked, as can be seen in the growing number of plant digitisation projects. Kew’s online herbarium catalogue for example, captures images of its plants without moving or lifting any notes or sheets that may be obscuring plant specimens underneath. This allows such notes to be read, but can prevent examination of parts of the specimen itself, and when a note is double-sided or notes are adhered in layers, the reverse or under layers are also obscured.

37 Stevens ‘Hooker, Bentham, Gray and Mueller on Species Limits’, pp. 352-353. Bentham’s *Flora Australiensis* spanned seven volumes and some four thousand pages. The current *Flora of...*
Bentham’s openness to using field characters for a flora of a single colony was at odds with the methodology William and Joseph Hooker pursued for the colonial floras scheme. Their idea required a central collection point, a process they regarded as more efficient. It was cheaper and faster to await a team of volunteer collectors to find every representative species and send them to Kew than it was to send one man out to travel the globe, scouring each colony as he went. In accordance with this, Joseph Hooker and the Flora Tasmaniae did not embrace Gunn’s speciation in relation to Tetratheca, since Hooker could not find the distinct character differences Gunn saw in the live material amongst the specimens in his herbarium.

The lack of clear differentiation in dried specimens drove straight to the core of the lumping/splitting debate. Colonial collectors who might notice striking differences in the field wanted this difference expressed through the publication of individual species. By contrast, Hooker wanted discrete, quantifiable characters that remained visible in a dried herbarium specimen. He noted that in the field Tetratheca differed in ‘habit, size, colour, form of foliage, of sepals, petals, and amount and nature of hairiness’. He went on to explain his standing clearly, if in a slightly condescending manner for his colonial audience:

Now, as a general rule, differences, to be of a specific nature, should be accompanied by absolutely distinctive characters, however slight, in the organs of reproduction, and these I do not find in the plants under Victoria completed in 1999 in no way fits Bentham’s idea of a ‘smaller’ work, filling four volumes and approximately 3,500 pages. Mueller no doubt would have been extremely pleased with the latter work. For further discussion of Mueller’s part in producing the Flora Australiensis, see Home et al., Regardfully Yours 2, pp. 21-26. 38 Drayton, Nature's Government, pp. 201-6.
consideration. It must be borne in mind that plants so common as these are very apt to run into stirpes and races.39

The Tremandraceae featured in the first published section of the Flora *Tasmaniae* in 1855 and included a long preamble from Hooker, admitting his open dissatisfaction with the species list. He maintained his concept of two distinct species plus a further four varieties. One was *T. ciliata* Lindl., a new species published by John Lindley in 1838 from Victoria collected on Thomas Mitchell’s expedition into the interior.40 Gunn had furnished Hooker with no. 648 from the mouth of the Tamar River, proving its range extended to Van Diemen's Land as well. The second Hooker called ‘another more common form’, *T. pilosa* Labill., which he divided into four varieties.

The four varieties of *T. pilosa* referenced more Gunn specimens, including nos. 21 and 193 that Gunn had conceded as varieties in 1837. Hooker made it clear that the varieties were ‘merely induced by accidental associations of colour, soil, habit etc., & that no two persons would approach to any conformity if independently selecting them in the Island or in collections’.41 It was an acknowledgement that Gunn was free to maintain any lingering doubts he had about the variants under *T. pilosa* whilst simultaneously reasserting Hooker’s position of dominance as the author.

Hooker included the other Labillardière species *T. glandulosa* Labill., as a third inclusion supported by another Gunn specimen number with only ‘abundant throughout island’ written alongside. Hooker doubted the strength of this entry,

39 Hooker, *Flora Tasmaniae* 1, p. 34.
41 Hooker, *Flora Tasmaniae* 1, p. 35.
but was not about to challenge the work of Labillardière on this difficult genus. More surprising was the other two species added to *Tetratheca*, *T. procumbens* Gunn, MSS. and *T. gunnii* Hook.f. In the genus preamble Hooker placed the responsibility for these two species squarely upon Gunn, ‘he remarks the extreme forms retain their character with considerable consistency throughout the Island’.42

Hooker did not openly support Gunn’s assertions, but was willing to humour him in this instance. *Tetratheca procumbens* was based on no. 217, which Gunn had ‘held out most strongly’ for. Hooker conceded that it appeared very different, but sported no characters that made it distinct. *Tetratheca gunnii* was named by Hooker for Gunn, the name being a sign of respect for Gunn’s tireless work on the species. This was based on Gunn’s no. 1944 from the Asbestos Ranges, and although noted by Hooker again as ‘distinct-looking’ he added ‘in my opinion a very doubtful species’.43

Another surprise was that Hooker dedicated some of his Admiralty funding to illustrate the two new *Tetrathecas*. The two plants were credited to the illustrator William Fitch, but there is a striking similarity between Gunn’s sketches and the coloured dissections (figs. 23 and 24). Whether Gunn agreed to the publication of his sketches is unknown as there are no known records of Gunn’s response to the published *Flora*. That he was uncredited today appears unjust, but at the time this was not an uncommon occurrence. William Archer’s work was subjected to the same treatment, much to his dissatisfaction: ‘Mr Fitch is lithographing the drawings of orchids, and adds his name to mine as delineating

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42 Hooker, *Flora Tasmaniae* 1, p. 33.
43 Hooker, *Flora Tasmaniae* 1, p. 36.
them, somewhat unfairly I think, for at the most he only adds a flower or two, and
an unnecessary drawing of a dissection, excepting in a very few cases.\textsuperscript{44}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure24.png}
\caption{Detail of dissections of \textit{Tetratheca gunnii} attributed to Fitch and
Brooks but taken from sketches by Gunn as illustrated above in fig. 23. J.D.
Hooker, \textit{Flora Tasmaniae} 1, Plate VII.}
\end{figure}

It was unusual for Gunn to show such open resistance to Hooker’s
classificatory decisions, and with such strength of feeling, Hooker conceded in
part to Gunn’s wishes, perhaps thinking it fair to indulge his collector in this
instance. In total the \textit{Flora} included five species of \textit{Tetratheca}, all with Gunn
numbers as the reference specimens. Hooker had not conceded defeat, but
recognised it was sensible to acknowledge Gunn’s expertise in this genus.

In 2011, botanists at the Tasmanian Herbarium reconfirmed all five
species: \textit{T. ciliata} and \textit{T. labillardierei} (the current name for \textit{T. glandulosa}), \textit{T.}

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\textsuperscript{44} Anita Hansen compared the original Archer orchid paintings held by the Linnean Society of
London and Tasmanian Museum and Art Gallery to the 56 species attributed to him printed in the
\textit{Flora Tasmaniae}. She found that only two of the total 27 plates were solely attributed to Archer,
the other 25 attributed jointly to Archer and Fitch. Anita Hansen, ‘The Illustrations and Work of
diary, 24 Aug 1857, UTL 61/1. Archer’s illustrations are discussed further in chapter 7.
\end{footnotesize}
*pilosa* with two subspecies; *T. procumbens* and *T. gunnii.* Gunn’s two species have been accepted since 1855, although no distinct characters have yet been found to differentiate them from *T. pilosa.* Just like Hooker 155 years ago, botanists are still struggling to locate distinct character differences between the species and are hesitant to claim work on the genus is complete. Hooker could not detect permanent differences between his five species of *Tetratheca* when working with dried herbarium specimens, and although they did appear distinctly different in the field, those phenotypic characters were not enough to base speciation upon.

Although the five names have remained, the Tremandraceae has been subject to other taxonomic change. Most notably, the family has recently been reclassified as the Elaeocarpaceae, reflecting a new understanding of this group’s relatedness to other angiosperms. Just as Joseph Hooker tried to group individuals in the ‘truest’ order possible, this reshuffling and renaming of families is designed to reflect a more ‘natural’ arrangement of Tasmanian plants. Furthermore, two new species of *Tetratheca* have been added to the *Flora,* one from Flinders Island and the other from Freycinet Peninsula. Both are as yet officially unnamed and will initially be published using the Australian standard for informal names. Gunn would have been overjoyed at the recognition of two more species, but these are

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45 Aside from habit, the size of the apical pore at the tip of the anther is the only distinct character difference to be found amongst the Tasmanian *Tetratheca.* This has been used in the 2011 Flora online, but being such a minute difference it would be preferable to find another, more distinctive character. M. Duretto, personal communication, Oct 2010, HO.

both modern discoveries, and are not related to the numerous other varieties he believed to be distinct.

There has not been any dramatic change in determining the physical characteristics of species since 1855, and so Hooker’s conundrum remains. If tested on a chemical or genetic level it may be possible to determine the sameness or difference of *Tetrathea* which could be of some help, but such complicated techniques would be of little assistance to botanists working in the field or without access to sophisticated equipment.  

In nature *Tetrathea* is easy to overlook as a small spindly herb with pretty, but unremarkable flowers. Perhaps its insignificance lent itself to Gunn, a fragment of vegetation that he could work on unchallenged. It was undeniably Gunn’s speciality; he maintained his interest in these plants for his entire collecting career. *Tetrathea* was the only genus for which he passionately argued, laying down his reputation so that his species would be recognised by Joseph Hooker. Gunn’s fastidious field notes and sketches reveal his strength of feeling, but Hooker was not a scientist who looked to field observations for species characteristics. Where a colonial collector honed their skills in the field, professionals such as Hooker, de Candolle and Bentham worked from vast amassed collections. Even if they admired and valued field notes, they could not afford to advertise the fact, as the very admission would threaten their positions at the apex of the botanical world. Regardless, Gunn persisted in sending extra notes, many of which Hooker retained and attached to the specimen sheets,

47 A. Gray, personal communication, January 2010, HO.
suggested that in the case of *Tetratheca* every scrap of evidence was required for him to make a final decision.

This example shows how dogged an adversary Gunn could be. That botanists today are still unable to come to a clear solution to the issue justifies both Hooker’s and Gunn’s position on the matter. Neither was being frivolous, rather asserting their personal convictions. Hooker may have made a calculated concession with *Tetratheca*, allowing his collector an indulgence – five species, two illustrations, one species name and one authority name – as recognition of Gunn’s exertion and loyalty. Importantly, however, this was the only time that Gunn asserted himself as a botanist, as distinct from a collector. It was not a decision he took easily. As he forlornly wrote to William Hooker, ‘You must not forget that I am not so clever a Botanist as to be able to read off the description of a plant & at once recognise it…I have almost abandoned all hope at ever being better than a mere culler of weeds & wild flowers for you.’

Aside from this genus, Gunn maintained his long-standing deference to the Hookers and to Kew. His *Tetratheca* was only a small fragment of the larger packages he put together for shipment, the rest conforming to his standard collecting ethos. In this his taxonomic methods stand in stark contrast to those of William Archer.

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48 R.C. Gunn to W.J. Hooker, 17 Mar 1849, Burns and Skemp, *VDL Correspondents*, p. 119.
Archer arrives on the scene

When William Archer began corresponding regularly with Gunn in mid-1848, Gunn instantly recognised Archer’s self-confidence in his botanical abilities. Archer enjoyed the privileges of the landed gentleman, having the means to order books and supplies as he needed them, rather than relying on barter and gift exchange. Archer’s letters were immediately warm and friendly, lacking the deferential tone that Gunn was accustomed to reading from his other colonial correspondents. But Archer was unlike the other naturalists who wrote to Gunn: he was Tasmanian-born, the second eldest son of one of the largest landed dynasties in the colony. The Archer family had settled in the Norfolk Plains in the north of the colony, laying claim to massive tracts of land that extended from Launceston, south to Cressy and Longford, and west to Deloraine and the Western Tiers. The central property, ‘Woolmers’, was built and maintained by scores of convict servants, whose labour ensured wealth enough for William to spend six years in England training as an architect. On his return home in late 1842, Archer showed off his skills in the construction of a new Italianate portico at ‘Woolmers’, the first of many architectural ventures.

It is difficult to pinpoint the beginning of Archer’s botanical interests. His natural flair for botanical illustration may have been honed during his years of schooling in England.\(^49\) Perhaps he grew tired of the straight lines and angles of the built environment, and preferred to capture the sinuous shapes and curls of flowers and foliage. From this close observation of plant structures he would soon

have accustomed his eye to similarities and differences between genera, and the characteristics of species making each distinct from the next.

This was a very different entrance into the botanical curiosities of Van Diemen's Land compared to that of Robert Lawrence or Ronald Gunn. Where Archer learnt first by seeing and drawing, Lawrence and Gunn had depended more upon matching a collected plant to a description or image, later comparing a newly acquired specimen to those in their ever-growing herbaria. Where Lawrence and Gunn could collect hundreds of plants new to science, Archer was able to delineate deeper distinctions within those genera.

Botany in the eighteenth and nineteenth centuries had become a very visual science, and students were encouraged to draw every plant they saw to aid their understanding of various plant parts. As with other areas of natural history, plant illustrations were standardised by works such as William Hooker’s *Botanical Illustrations* that reinforced standardisation and desired conventions. Although John Lindley cautioned students against wasting too much time on drawings when a standardised description would do, the ability to draw was clearly advantageous. As Gunn’s dissections of *Tetratheca* showed, sketches

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50 For example, when Gunn first collected *Blandfordia punicea* in the summer of 1833, he believed it to be the New South Wales species *B. grandiflora* because he picture-matched it to Smith’s *A Specimen of the Botany of New Holland* (see chapter 3).

51 It was encouraged to remove any idiosyncrasies seen in an individual (such as an insect-nibbled leaf, or squashed and damaged petals) to make each illustration representative of the entire species. W.J. Hooker, *Botanical Illustrations: Being a Series of Figures Intended to Illustrate the Terms Employed in a Course of Lectures on Botany, with Descriptions* (Edinburgh, 1821).

accompanying specimens and descriptions could be highly instructive. Archer’s advantage over Gunn and others was his natural talent.

Archer’s interest in Vandemonian plants was clearly well developed by early January 1848 when he wrote in his journal about collecting specimens of the native grass *Anthistiria australis* and sketched a flowering spike. By August of that year Archer had begun corresponding with Gunn, displaying a capacity to delineate differences between plants that superficially appeared similar. In one of his earliest letters he discussed the alpine conifers, a *Podocarpus* he had collected that differed from Joseph Hooker’s published description, and the juvenile vegetative characteristics of *Phyllocladus*. He recognised the need to make further investigations, including a sketch of himself gathering a branch to show to Gunn (fig. 25).

![Figure 25: 'I will procure a large branch for you some day': William Archer’s sketch of himself collecting a branch in a letter for Ronald Gunn. Note that Archer is carrying a vasculum on his back. W. Archer to R.C. Gunn, 9 Aug 1848, ML GC 6.](image)

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53 W. Archer diary, 7 Jan 1848, UTA A7/2.
Archer clearly already possessed a formidable grasp of botanical Latin and the mechanics of plant classification. His English education provided him with a sound knowledge of Latin and Greek, allowing for an easy understanding of botanical descriptions. His artistic flair also meant that he was able to support his descriptions with accurate illustrations.

Archer knew the work of the leaders in Australian botany and was constantly adding to his library, using Gunn as one way to acquire books. One letter contained a cheque for eight pounds for texts that Gunn had procured on Archer’s behalf, Archer explaining ‘I must have books, I find’. Included in that letter was a list of nineteen native plants growing in his garden at ‘Cheshunt’, outside Deloraine. This hinted at where Archer’s personal botanical drive lay. Unlike Gunn, Archer did not traverse large tracts of the island, but rather explored the mountains surrounding his and his family’s estates. He favoured certain plant groups like the conifers, mosses and orchids, preferring to specialise rather than cast about for new additions to science. Archer’s financial circumstances would not have escaped Gunn, further highlighting the difference between the two men. Where Gunn was apologizing to Lindley and Hooker for poor specimens because he did not have a specimen book, or was writing to ask for more paper, Archer had a proper vasculum and herbarium cabinet ready to be filled.

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55 This put Gunn in a strange social situation, having Archer defer to him for suggested books and as the only person with the contacts to procure them. At the same time, Archer was employing Gunn as his agent, participating in a commercial transaction. As a result, Archer was not bound to Gunn in the need to access a reference library and, furthermore, was happy to make taxonomic decisions using his library alone, without discussion with Gunn. W. Archer to R.C. Gunn, 9 Aug 1848, ML GC 6.

56 In the summer of 1848 Archer had purchased two tin vascula. In late 1849 Archer had six herbarium cabinets made for his specimens measuring three feet tall, fourteen and a half inches.
He was anxious to fill his herbarium as quickly as possible, which led to his amassing lots of small plant fragments, with little care for creating duplicates to send away, let alone swap with others nearby. ‘I have so much leeway to make up that I have not time to procure large specimens: – they would fill up my vasculum too soon, & I should be obliged to leave many plants behind’. He added that if he came across anything new he would of course collect more and share such finds with Gunn, so that Archer could in turn ‘cull’ some other items from Gunn’s private collection. This economical form of collecting would have allowed him to fill his shelves, but could have been regarded as selfish – if Archer had gathered something unique, he would not have had enough to share around.

Prior to his first letter, William Archer was not unknown to Gunn. Not only did both men live in the north of the island, one was an extremely active public servant and the other a member of one of the largest landed families in the colony. It is reasonable to imagine that Gunn would have been delighted to find another gentleman collector in the colony, perhaps another candidate to fill the ‘blank’ left by Lawrence and quash his sense of loneliness. Just as Lawrence had done in the past, Gunn could guide Archer into the best collecting practices, plan field trips, discuss specimens and tease apart the latest scientific articles from Europe. But their botanical relationship did not catch ablaze, rather it sputtered wide and twelve inches deep. At the same time he ordered a box to hold sketches, the items together costing twelve pounds. Such luxurious storage was not within Gunn’s grasp at the same point in his botanical career. W. Archer diary, 1 Feb 1848, 26 Sep, 26-27 Nov 1849, UTA A7/2.

This drive for a complete personal herbarium was not just the behaviour of a novice, but an attitude that remained with Archer for his entire collecting career. He did not see the value of duplicates, and found large specimens unwieldy. His approach to creating the ideal herbarium is discussed further in chapter 7.
like a cheap candle. Much of this was due to their deep-seated political differences.

The two men had met four years earlier at a Launceston political meeting assembled to discuss the merits of discontinuing convict transportation. There were many distasteful aspects to the way convicts were disciplined, the manner in which the probation system operated, and the stigma or ‘stain’ that many believed transportation cast over the entire island. \(^{59}\) Under the leadership of the congregational minister John West many public meetings were called to discuss the issue, and it was at one of these that Archer and Gunn met across the floor.

Gunn was nearly forty years old and had lived most of his life within colonies whose prosperity rested upon the exploitation of unfree labour. First at the Cape then later Barbados, Gunn had become accustomed to a society where slavery was the norm. His family’s income had largely been secured by their employment in the Bourbon Regiment, a regiment comprised of former slaves. With such an immersion in societies built upon the exploitation of bonded labour, it is unlikely he would have questioned the morality of convict society in Van Diemen's Land. \(^{60}\)

That both he and his elder brother had lived secure, comfortable lives and raised families whilst working within the machinations of convictism would only have strengthened Gunn’s pro-transportation outlook. He believed convicts supplied a much-needed source of cheap labour that would ensure the colony’s

\(^{59}\) Kirsten McKenzie has discussed how scandal – particularly sexual scandal – was used as a propagandist tool, discrediting colonies supported by unfree labour, both slavery and transportation. In addition to scandal, she believes the colonial elite felt the use of bonded labour compromised their respectability in the eyes of their imperial counterparts. K. McKenzie, Scandal in the Colonies: Sydney and Cape Town, 1820-1850 (Melbourne, 2004), pp. 122-26, 142-52.

\(^{60}\) Baulch, ‘Biographical Note’, p. xiii.
success. This may have been the dutiful government line, but was a position strengthened by his positive experiences of the system. Without George Morand and James Lee, Gunn would never have been able to collect the same number of specimens. Without labour to carry his equipment, specimen book and provisions, Gunn would not have been able to travel to as many distant or remote places. For him, it was convict labour that made his ambitious collecting career possible. Convict labour had built the major infrastructure in the colony, and regardless of how many unemployed free men left the island to find work, Gunn did not believe there was a better, stronger or more efficient labour alternative.

Conversely, Archer embraced the anti-transportation cause. Like many others, his family’s success had been built upon convict labour, but this did not mean that Archer saw such labour as his right as a colonist. The anti-transportationists included a large base of the landed elite, graziers and professional men who believed convicts came from a criminal class that could never be fully reformed. This was despite the reality that many had employed convicts who had been perfectly well behaved and therefore seemingly reformed. Basing their campaign upon that used by New South Wales some years earlier, they delivered increasingly exaggerated claims supporting their cause, citing high unemployment, the vulgarity of the probation gangs and how the colony was doomed to become a ‘sink-hole of crime’. 61

61 Kirsty Reid described the language used by the group as that of ‘extreme moral outrage’. This sentiment led in 1851 to the creation of the Australasian League, the first inter-colonial political organisation in the country. Reid provides an excellent discussion of the development of this movement, including its preoccupation with preventing ‘unnatural acts’ between male convicts in probation gangs. K. Reid, Gender, Crime and Empire: Convicts, Settlers and the State in Early Colonial Australia (Manchester, 2007), pp. 211-45. See also A. Alexander, Tasmania’s Convicts, How Felons Built a Free Society (Sydney, 2010), pp. 91-7.
Opinion in the colony was polarised over the issue. The public meetings continued, including one in Launceston on 10 May 1847. Archer and his fellow anti-transportationists had been planning the gathering for several months. Archer’s notes made the whole affair sound chaotic, the meeting beginning at noon with arguments over who would take the chair. This was followed by more confusion when a member of the anti-transportation committee called for his own group to produce evidence for its foundation, a sticky issue that was resolved by the speaker getting ‘a most severe setting-down’. It was not a small gathering, Archer estimating nearly 1000 attended, the meeting running for seven hours.

The pro-transportationists were represented by Ronald Gunn and the printer James Barnard, but ‘the meeting hissed them constantly and w[ould] scarcely listen to them at all’. Such a public lack of respect would not have induced Gunn to have warm feelings towards any member of the opposition, of which Archer clearly was a very active member. Archer’s involvement in the issue sparked a political awakening and he later ran for the Legislative Council on the anti-transportation ticket.

Archer’s political views did not prevent him from applying to be a member of the Tasmanian Society at a time when Gunn was both secretary and editor of their journal, the organisation being carried largely by Gunn’s efforts. The independent nature of science did not mean that Gunn had to like Archer, and it appears that although the men did correspond, they never became friends.

62 W. Archer diary, 10 May 1847, UTA A7/2.
63 James Barnard, another pro-transportationist, was one of the other longest serving members. Archer was elected a member on 2 Jun 1847, but he did not publish anything in the journal until after his return from England in 1860. [Gunn, R.C.], ‘Minutes of the Tasmanian Society, June 2, 1847’, *Tasmanian Journal* 3 (1847), p. 243.
Archer’s openness and willingness to share new discoveries in his early letters to Gunn ceased within a few years and their letters became more distant and business-like. Gunn fulfilled his gentlemanly responsibilities as the centre of his colonial scientific network, but despite his admissions of loneliness to the Hookers, he could not be a friend to William Archer.

Archer was self-assured in his social position in the colony, and with the luxury of purchasing any books or equipment he required did not slip into the grey area of being ‘paid’ for his efforts. Because he did not engage in the barter or exchange of material as Gunn had, Archer’s relationship with his fellow naturalists was always different. Gunn had the advantage of meeting Joseph Hooker in person, and having participated in botanical discourse with the scientific metropole for fifteen years, cherished the friendships he had. Just as Gunn did not introduce Charles Stuart to the Hookers, he did not introduce Archer. Rather, Archer seized an opportunity to introduce himself.64 It was six years before Archer began writing to Joseph Hooker. During that time he concentrated on several plant groups, training his eye by drawing and familiarizing himself with the vegetation.

Archer showed an enthusiasm in his correspondence with Gunn that was unusual when compared to the other colonial correspondents. The suggestion that Gunn produce his own flora was one common thread in Archer’s early letters. Archer became aware of Ferdinand Mueller’s intention to publish a flora of South

64 The location of Archer’s first letter to Joseph Hooker is unknown, but it was written by Archer on behalf of the Legislative Council offering a grant for the production of the Flora Tasmaniae. Hooker accepted the funding, and from 26 Jul 1854 Archer corresponded personally with Hooker on all manner of botanical subjects. W. Archer to J.D. Hooker, 26 Jul 1854, Kew DC 218. See also chapter 7.
Australia, and later with Charles Stuart’s help, the flora of Van Diemen’s Land. Archer believed Gunn would produce a better result, but recognized that Gunn’s time and finances were limited.

He had deduced – as Hooker was to do – that the colonial market would be best secured through publication by subscription. Off the top of his head Archer named eight members of the Tasmanian and Royal Societies that would be interested as well as himself. ‘Pray advise at once. – Science, the Tasmanian Society, the Royal Society, your adopted Country, Fame – all call on you to diffuse that information which you have so indefatigably collected, and are so thoroughly competent to set forth. Now do!’ Following such rousing words, Archer added that if Gunn could not perform the task, then he should share his knowledge with Mueller who was an able substitute. Two months later Archer added a postscript, ‘I wish you would publish the descriptions of all the known plants in Tasmania!’ Such encouragement showed Archer’s belief in Gunn’s superior knowledge, but also illustrated that above all what he wanted was a reference book. Once he was aware of Joseph Hooker’s plans there was little mention of Archer’s earlier wishes, instead he looked towards Britain, writing, ‘How I long for it’.

Archer’s enthusiasm aside, his use of the title ‘Tasmania’ may have caused some little stir for Gunn, who strictly observed government protocol regarding geographical names. The name ‘Tasmania’ was commonly in use in the 1820s and 1830s, but the official name change was not completed until 1856. The

65 W. Archer to R.C. Gunn, 9 Feb 1849, ML A316.
question of which name was more appropriate was discussed locally and in
Britain in the 1840s. It was not until 1854 that a proposal to change the name
was officially made, as part of the colonial transformation that followed the
cessation of convict transportation in 1853. Queen Victoria’s approval was given
the following year, and the new name came into effect the same day as the new
era of self-government, 1 January 1856. In Gunn’s pre-1856 letters he only once
cited ‘Tasmania’ as his address, in every other instance using ‘Van Diemen’s
Land’. He maintained similar conduct regarding the Australian continental
landmass, preferring ‘southern coast of New Holland’ until the official change to
‘Australia’ in 1850. Gunn and Archer’s use of ‘Van Diemen’s Land’ and
‘Tasmania’ respectively, illustrated their many differences. Their naming
preference reflected a generational divide, demonstrating their political views, and
opposing ideas on botanical nomenclature.

‘There must & will ever be great difference in opinion in the
matter, for no two men would give the same description even
of a haystack’.71

With his years of experience and active involvement in the international
botanical sphere, it is understandable that Gunn did not respond well to Archer’s
imprudence regarding botanical nomenclature. In the first eighteen months of

68 [Gell, J.], ‘Name of Van Diemen's Land’, *Tasmanian Journal* 1 (1842), p. 414; and G.B.
69 T. Newman, ‘Tasmania, the Name’, in The Companion to Tasmanian History, ed. A. Alexander
70 Burns and Skemp, *VDL Correspondents*, p. 85.
71 W Archer to WJ Hooker, 22 May 1865, Kew DC 75.
correspondence, Archer discussed approximately twenty-three genera, plant
groups or species with Gunn, ranging from broad groups of ferns and moss to the
specifics of whether *Podocarpus lawrencei* stood as a variety of *P. alpina*. He
often included detailed sketches in the margins, such as the stages of a moss
capsule discharging its spores, or other characteristics he believed were
diagnostic. His skills as a draftsman enabled him to capture not only the detailed
characteristics of a plant, but also various life cycle stages (fig 26).

**Figure 26** Archer’s sketch showing the stages of pollen discharge, including (a)
the bud in section; (b) the capsule rupturing; (c) after the pollen is discharged; (d)
the anther after pollen discharge; and (e) the front view of the bud. W. Archer to
R.C. Gunn, 17 Nov 1848, ML GC 4.

Much to Gunn’s discomfort, Archer was uninhibited in his criticism of
those who had published errors, and sometimes used his sketches to correct the
published descriptions of others. In his first letter to Gunn, he sketched the three
stages of the release of spores from a fern capsule in response to heat. Archer
described the capsule cracking, becoming erect and then ‘throwing themselves
back’, thereby flinging the spores away from the individual, ‘with great rapidity
and the action of little catapults’. He also noted that the capsule could repeat this
motion more than once if the first attempt was unsuccessful, before closing.
Archer believed that this sort of detail was important to record both in words and as an illustration, and he was frustrated that John Lindley had, in his view, inadequately described this complex occurrence as ‘bursting with elasticity & thus scattering the sporules’, which Archer found insufficient (fig 27).72

Figure 27 The three stages of sporule release from a fern capsule, Archer using illustration to more thoroughly explain plant processes. W. Archer to R.C. Gunn, 9 Aug 1848, ML GC 6.

His swipe at Lindley met with a rebuke from Gunn, Archer’s next letter containing the hasty addition, ‘Pray do not think that I would dare to criticize the celebrated Lindley, to whose admirably arranged work I am so much indebted: – it merely struck me that he might not have examined the capsules of dorsiferous ferns as I chanced to do’.73 Archer’s critique of Lindley’s work had, however,

72 It is ironic that Archer was using illustration to add detail to Lindley’s technical description, as it was Lindley who encouraged novices to focus upon the written word because it was quick and easily standardised, ‘it requires a much longer time to make a drawing than a description; very few persons know how to draw correctly, and still fewer are able to represent with the pencil with sufficient fidelity, what a description expresses in a few words.’ [J. Lindley], ‘Botany’ in Library of Useful Knowledge: Natural Philosophy, Vol. 4 (London, 1838), p. 214. The view of Lindley and others towards drawings in relation to descriptions is further discussed in Secord, ‘Botany on a Plate’, pp. 38-9.
73 W. Archer to R.C. Gunn, 28 Aug [1848], ML GC 6.
clearly challenged Gunn’s notion of what was appropriate in gentlemanly
correspondence. His staunch loyalty to the experts in Britain made it difficult to
accept the confidence Archer showed in his corrections.

The differences in method between the two only became more pronounced
as Archer began examining the alpine conifers, which necessarily involved
criticizing Joseph Hooker’s recent journal article on the Huon Pine. As Hooker
had frequently cited Gunn specimens as part of that article, Archer was effectively
also questioning Gunn’s botanical credentials.74 Within a year, Archer reported to
Gunn that he had established the new genus in the conifers that he intended to call
Pherosphaera, instantiated by the species Pherosphaera athrotaxoides.75 His
confidence in discussing and debating the characteristics of different closely
related species showed how formidable his knowledge was. Archer not only had
the nerve to suggest a new genus of conifer to Gunn, in the same letter he
discussed Schizaea in relation to Brown’s Prodromus descriptions, his reasoning
on the names of the violets, and for good measure, a list of locally collected
fossils.

The ability of Archer to convey such complicated notions would later
make him invaluable to Joseph Hooker during the final stages of compiling the
Flora Tasmaniae. Nevertheless, his lack of caution when correcting the work of
other published botanists displeased Gunn. When he first began corresponding,
Archer had acquired most of his knowledge from books, particularly Lindley’s

74 See chapter 5 and the discussion surrounding Huon Pine.
75 W. Archer to R.C. Gunn 27 Apr 1849, ML GC 4. Archer later changed the name to P.
hookeriana when his work on the species was published, the text taken from a letter Archer had
sent to John Lindley. W. Archer, ‘Note on Michrocachrys, Hook. fil., and on a new allied genus of
Coniferae of Van Diemen’s Land, Hooker’s Journal of Botany and Kew Garden Miscellany 2
(1850), pp. 51-52.
*Introduction to the Natural System of Botany*. With such a text-based focus, Archer’s eye for illustrative detail meant he was particularly frustrated when he found descriptions insufficient or incomplete. His letters contained phrases such as, ‘the Mersey Podocarpus; it does not agree with Dr Hooker’s description’, ‘I have been sadly misled as to the ‘Microcachrys tetragona’ by Dr Hooker’s description of the plant’, or having found a *Phebalium* and ‘believing it to be new…I have since discovered it in flower & fruit, and have ascertained that it does not nearly accord with the description of any Rutaceae in Meisner, therefore I give it a name’.

Gunn viewed these comments as criticism of the work of Hooker and his colleagues, and by extension, criticism of his own botanical efforts. For Archer, critically discussing the botanical research of others in private correspondence was the best way to engage with contemporary scientific knowledge and building upon it. But he misjudged Gunn, whose loyalty and deference to Kew would not accept the corrections of someone with, as he saw it, little botanical experience.

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76 John Lindley, *An Introduction to the Natural System of Botany: Or, a Systematic View of the Organisation, Natural Affinities, and Geographical Distribution of the Whole Vegetable Kingdom; Together with the Uses of the Most Important Species in Medicine, the Arts, and Rural or Domestic Economy* (London, 1830).

77 W. Archer to R. C. Gunn, 9 Aug 1848, ML GC 6; W. Archer to R.C. Gunn, 27 Apr & 7 Dec 1849, ML GC 4. Carl Daniel Friedrich Meisner (1800-1874) was a Swiss botanist who worked on several of the iconic Australian plant families including Fabaceae, Myrtaceae, Mimosaceae and Proteaceae. He also produced *Plantarum Vascularum Genera*. His names are marked with the authority ‘Meisn.’.

78 A decade earlier Gunn had shown a similar distaste for some of the work James Backhouse completed independently of Kew, particularly Backhouse’s willingness to name new species: ‘Backhouse used to say – Better give a plant a wrong name than none at all, but I am not inclined to follow that principle as I find erroneous names once given most pertinaciously adhere – whereas a plant without a name is ready to receive the true one’. R.C. Gunn to W.J. Hooker, 21 Apr 1838, Burns and Skemp, *VDL Correspondents*, p. 75. Further examples of Backhouse’s willingness to name new plants can be seen in his manuscript describing plants at Moreton Bay when he named a new genus ‘Robsonia’ for his uncle. LS MS 416. According to APNI, there has never been any publication citing this name.
Archer remained confident in the power of his illustrations, which he believed provided a more accurate means of describing plants, and thereby enabled a truer form of classification. One of his projects was to illustrate the Orchidaceae, a particularly difficult group to work with as they were small, difficult to locate in the field, and had a short flowering period. In their vegetative state, native orchids are only notable by how unremarkable they appear to be, often bearing just a few leaves adpressed to the ground, or remaining invisible as an underground tuber.

Gunn had a good orchid collection prepared by Charlotte Smith at Circular Head, but Archer was able to add coloured illustrations portraying these complex, somewhat architectural structures as they appeared when fresh.79 Archer knew how desirable orchids were to a European audience, and was further encouraged when he heard of the ‘pictorial memoranda’ Lindley was creating for each species, each colour illustration including dissections and ‘drawings of all important parts’.80

Archer’s first offerings to Joseph Hooker four years later included these illustrations. Where Gunn, Milligan and Stuart followed the more ‘traditional’ route of beginning correspondence with an offering of plant specimens, Archer supplied his botanical drawings. His collection of orchid watercolours – which by 1854 numbered approximately sixty different species – were later to form the backbone of the orchid illustrations in the second part of the *Flora Tasmaniae*.81

79 Charlotte Smith’s orchid book is discussed in chapter 2.
80 W. Archer to R.C. Gunn, 17 Nov 1848, ML GC 4; W. Archer to R.C. Gunn, 7 Dec 1849, ML A316.
81 W. Archer to R.C. Gunn, 23 Jun 1854, ML GC 4; Hooker, *Flora Tasmaniae* 2; Hansen, ‘The Illustrations and Work of William Archer’. Further discussion can also be found in chapter 7.
Chapter 6: Creation & Conflict

_Tetratheca gunnii_ Hook.f.; _Diselma archeri_ Hook.f.

But Archer was known to Joseph Hooker well before their correspondence began, as John Lindley had published a description of a new genus in _Hooker’s Journal of Botany and Kew Garden Miscellany_ in 1850. Joseph would have paid attention not only because of the close association with his father’s work and his special liking of conifers, but also as Archer’s work included a correction of his own taxonomic error. From his first letters to Gunn Archer had discussed a puzzle of the alpine conifer _Microcachrys tetragona_ Hook.f. First Archer noticed that it had two habits, seeing it in both erect and prostrate forms, one with its leaves pressed into the branches, and displaying much larger cones than the other.82 Two weeks later Archer added his triumphant conclusion that Hooker’s description was indeed incorrect as _M. tetragona_ was dioecious, not monoecious as published, something Hooker could not have known, ‘not having gathered the specimen’.83

Nine months later Archer asserted to Gunn that he had indeed discerned a new genus that he intended to call _Pherosphaera_.84 It is probable that Gunn thought the suggestion rash, particularly because Hooker’s description had been based upon a Gunn specimen from Lake St. Clair.85 Archer was therefore calling both Hooker and Gunn into question, and all based upon only a few years experience. This discovery encouraged Archer to look for errors amongst other plant groups. He offered to publish _Pherosphaera_ in the _Tasmanian Journal_ believing it would show how active and scientific the society was, but Gunn – as

83 W. Archer to R.C. Gunn, 28 Aug [1848], ML GC 6.
84 W. Archer to R.C. Gunn 27 Apr & 28 Jun 1849, ML GC 4.
editor – did not agree, and further discouraged Archer from publishing at all. At the same time, Archer explained his new idea for validating his names to Gunn:

I think I shall forward descriptions & specimens of what I consider new to Professor Lindley, asking him to communicate them to Dr Hooker should he not have them, and to cancel my names should he possess them. – I do not wish to embarrass our delightful science, but would rather do my utmost to relieve it from embarrassment, & the confusion caused by illwritten & insufficient descriptions.86

Note that this was the same tactic used by Mueller when he sent his named material to Kew, asking Hooker and Bentham to cancel duplicate names. Archer either did not detect Gunn’s warning him off the naming of new plants, or he simply disagreed with Gunn’s point of view and sought a higher authority. By this point Archer no doubt was straining against the firm control Gunn wielded over natural history in the colony. Before Archer, most things scientific and everything botanical had gone through Gunn. Gunn did not delay in forming a reply, first reminding Archer how he had nurtured and encouraged his botanical interest by loaning and giving books, discussing botanical publications and sharing specimens. He then unleashed his true feelings regarding the naming of plants:

I disapproved of what appeared to me your fondness for giving names without using every precaution to ascertain first whether your plant was new, and whether it had not already been named by some previous collector. Still this was at most (without publication) but a harmless foible, and I cautioned you more as a friend and an older man than from any jealous or envious feeling. My conduct towards Lawrence, Backhouse, Milligan, Hooker, Smith &c. will shew that I have in my intercourse with them been rather disposed to add to than detract from their just merits.87

86 W. Archer to R.C. Gunn, 29 Dec 1849, ML A316.
87 R.C. Gunn to W. Archer, 3 Jan 1850, ML A316.
Gunn then signed off: ‘As, with such feelings, it is most undesirable that any further correspondence should take place between us, we shall close it, if you please, with this letter.’

The strength of Gunn’s response revealed how seriously he took the right to name new discoveries and his role in the colonial botanical network. He was not afraid to remind Archer of his place in the botanical pecking order, as Gunn listed his most notable correspondents, using their names to further validate his position in the right. He had never picked away at the work of his botanical predecessors, and did not appreciate Archer doing so, showing a clash between his older scientific practices compared to Archer’s more modern ideas. This letter further demonstrated how Gunn had modelled himself upon the Hookers. In a postscript Gunn instructed Archer to keep the copy of Robert Brown’s *Prodromus* that Gunn had lent him, having a second copy of his own. This symbolic act, giving the most revered and valuable book of the time on the Australian flora to Archer accompanied by such a pointed letter, reinforced Gunn’s image as a benefactor, disinterested in petty disputes and focused purely upon science.

This is the only known letter remaining from Gunn’s side of the correspondence with Archer. As well as revealing his fiery temper, it provides evidence of the extent to which he believed Archer had broken the gentlemanly understanding of how the scientific network operated. As the senior figure in the local scientific community, Gunn was not afraid of cutting Archer off. Gunn’s sharp tones echoed his descriptions of Thomas Short when writing to William Hooker a decade earlier. If Archer did respond to this outburst, Gunn did not keep the letter, and their faltering correspondence ceased for a time.
It was only following the London publication in 1852 of Archer’s description of *Pherosphaera* that Gunn recommenced his correspondence, although no longer did Archer include the excited discussions and questions regarding his latest finds, nor were there any further ink sketches in the margins. Perhaps Archer felt that he no longer required Gunn’s approval, now that he was in print with *Pherosphaera hookeriana* W.Archer bis. Archer had achieved the recognition he had craved, and had done so five years before Gunn achieved the same accolade, and for no less than a new conifer.

*Diselma archeri* and the coniferous tangle

Archer’s work on the pines centred around three conifers that all looked superficially the same, dark green leaves like tiny overlapping roof tiles. The mountain pines can live for hundreds of years, their gnarled stems creeping over rocks, forming tangled dwarf mountain forests. Like the Huon Pine, their most obvious differences are found in the female cones, one looking like fleshy red strawberries hanging from the ends of its branches, another with drooping clusters of brownish-red cones, and the third with red cones held in the upright apices of its stems.88 All three plants grow in exposed alpine areas, environments that have always been of interest to botanists due to their high level of endemism.89

88 The first description is for *Microcachrys tetragona*, the second *Phaerosphaera hookeriana* and the third *Diselma archeri*.

89 These plant communities are highly sensitive to fires, making them very different to the majority of lower-altitude Australian plants that have adapted fire into their regenerative lifecycles. Further descriptions of the conifers can be found on G. Jordan’s ‘Key to Tasmanian Vascular Plants’, School of Plant Science, University of Tasmania, last modified 2011, http://www.utas.edu.au/dicotkey., and discussion of their presence in the fossil record in Hill and Orchard, ‘Composition and Endemism of Vascular Plants’, pp. 110-122.
When Archer noticed the prostrate alpine conifer and compared it to Joseph Hooker’s description of *Microcachrys*, he realized that the male and female specimens described were actually from two different plants. Just like the dioecious nature of Huon Pine had caused problems when obtaining diagnostic specimens, the dioecious nature of the other conifers was further confused, as when in a vegetative state many of the pines all look superficially the same.

Archer decided to split Hooker’s *Microcachrys* in two, the male retaining its name with a new female specimen, the original female becoming his new genus *Pherosphaera*, in which he described the ‘true’ female and male parts.

Unwittingly, Archer had made the same error as Hooker: under Archer’s *Microcachrys* the male he described was true, but the female was actually from a third – new – genus, *Diselma* (fig. 28). Meanwhile, Archer’s description of *Pherosphaera* also mixed two conifers, his male specimen description lacking the decisive detail necessary to distinguish *Pherosphaera* from *Microcachrys*, or indeed *Diselma*. Archer’s description of the female, however, was correct, legitimising his new name.90

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Figure 28 *Diselma archeri* illustrated by Fitch in J.D. Hooker’s *Flora Tasmaniae* 1, plate XCVIII.

When publishing the *Flora Tasmaniae*, Hooker had the opportunity to clear up attempts at separating the conifers, a task he undertook with Archer who as he wrote, ‘kindly aided me in clearing up this confused matter’. $^{91}$ Hooker correctly kept *Microcachrys tetragona* and *Pherosphaera hookeriana*. He further

$^{91}$ Hooker, *Flora Tasmaniae* 1, p. 355.
named the other element from Archer’s 1850 description as a new genus and species, *Diselma archeri*, named in Archer’s honour in recognition of his hard work.

Unbeknownst to Archer, he had entangled himself in a taxonomic mess that was not fully unravelled until Brummitt, Mill and Farjon in 2004 tackled what they called the ‘chaos’ of Tasmanian conifers, ‘the worst nomenclatural tangle that any of the present authors has ever had to face’. In the twentieth century *Pherosphaera* was deemed synonymic and was superseded by *Microstrobos*, a name that thanks to Brummitt *et al.*’s detailed work has now been deemed invalid.

Just like Gunn, Archer had been honoured in a species epithet, and was the naming authority for a genus and a species. Gunn may have been a little embarrassed by Archer’s work, as some of the earliest confusions with *Microcachrys* and other conifers was due to the misapplication of Gunn-numbered specimens. As Gunn did not number each collection but rather retained the same number across his entire herbarium for species he thought were the same, his conifer collection included a conglomerate of conifers filed under the one number.  

Of further interest in this case was the value of field observations. As we saw with the discussion of *Tetratheca*, the Hookers did not generally take field notes into account when describing species, even when the observable characters

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92 Brummitt *et al.*, ‘The Significance of “It”’, pp. 530-531.
93 Brummitt *et al.*, ‘The Significance of “It”’, p. 530. Buchanan discusses Gunn’s numbering system in *Collecting Localities*; and Buchanan, ‘Ronald Campbell Gunn’; Gunn also described his numbering in a letter to John Lindley, R.C. Gunn to J. Lindley, 11 Dec 1843, Kew Letters to Lindley A-K.
on a live plant were highly diagnostic. In the case of the conifers, Brummitt et al. discussed how it was (and is) very easy to confuse the genera, as they look so similar and grow together in the same environment. As a result they are often collected simultaneously, and unless field notes are retained can be extremely difficult to distinguish.\textsuperscript{94}

Because of this, the Coniferae was one of the rare groups for which Hooker used field observations. He described eight genera and ten species, all ten referencing Gunn numbers. Three also referenced Archer’s observational input, particularly in describing growth habit and height. Those conifers endemic to the island included the most descriptive detail and as Hooker acknowledged, ‘I have in this matter to express further my obligation to Mr. Archer, both for his assistance in settling the synonymy, and for some very valuable notes and observations upon the pollen and ovules, etc., of many of the Tasmanian Conifers, made upon living specimens.’\textsuperscript{95}

Such an open reliance upon field notes revealed the weakness for the botanist isolated from the environment on which they are working. There is a further puzzle, as it is unclear why Hooker was willing to consider field observations as diagnostic for the conifers and not for \textit{Tetratheca} or any other genus. The different approach may have reflected Hooker’s ideas of species limits – although conifers were superficially similar, on closer inspection discrete distinctions between cones could be made. Hooker viewed herbs such as the Tremandraceae or Ranunculaceae as having as Gunn had described, it a ‘tendency to run into varieties’. Hooker did not want his collectors to focus too much upon

\textsuperscript{94} Brummitt \textit{et al.} ‘The Significance of “It”’, p. 529.
\textsuperscript{95} Hooker, \textit{Flora Tasmaniae} 1, p. 356.
groups that were hard to delimit, but rather expend their energy upon the more worthwhile task of examining genera that displayed ‘definite gaps’.

Conclusion

There is no doubt that William Archer’s involvement in the colonial botanical scene posed a threat to Gunn’s position as the superior Vandemonian botanical correspondent. Archer was a wealthy gentleman with the self-confidence to assert his ideas. He had a good education in the classics and was comfortable with Latin and Greek, as well as having an architecturally trained eye that brought a new dimension to his botanical illustrations. Furthermore, he was twelve years younger than Gunn, held politically progressive views, and was willing to correct the work of botanical giants such as John Lindley or William Hooker. Perhaps the threat of Archer’s new kind of botany was lessened as Gunn became involved in other pastimes, and moved away from the role of physical collecting into a position as the colonial natural history expert, the man whom everyone – including Archer – contacted with their enquiries, desires, and discussions.

Archer brought a new type of colonial botanical practice to the table, providing updates of already published work, participating actively in correspondence and producing superior coloured illustrations of native plants captured in their live state, a feat that even the most talented artist at Kew could not manage. He was the first true botanical illustrator in the colony after the convict William Buelow Gould, and his work was highly prized by the scientific elite in London. Although Archer was communicating with John Lindley by 1850,
he was not writing directly to the Hookers, instead still using Gunn as a conduit to Kew.

Archer’s involvement was not in direct competition to Gunn’s, he rather complemented the older collector. Archer’s youth, vigour, and artistic skill made him a valuable correspondent. As his enthusiasm for the Flora grew, so too did his network of scientific contacts, culminating in a trip to Kew where he was to spend four years working alongside Joseph Hooker preparing one of the most significant scientific texts of the century.
CHAPTER 7: COLLABORATION

Prasophyllum archerii Hook.f.\(^1\)

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**Figure 29** Prasophyllum archeri, illustrated by Archer and Fitch in Flora Tasmaniae 2, t. 113b.

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\(^1\) This *Prasophyllum* had a generic name change in 2002. Its current name is *Corunastylis archeri* (Hook.f.) D.L.Jones & M.A.Clem. Baker and Duretto, *Census of Tasmanian Vascular Plants*, p. 88.
‘It remains only to mention my friend William Archer, Esq., F.L.S., of Cheshunt…I am indeed very largely indebted to this gentleman, not only for many of the plants described, and much of the information I have embodied in this work, but for the active interest he has shown during its whole progress, and for the liberal contribution of the thirty additional plates, all of which are devoted to the Orchideae, and chiefly made from his own drawings and analyses.’

Joseph Hooker, Introductory Essay to the *Flora Tasmaniae*, p. cxxvii.

Introduction

For Archer, the extraordinary meeting of the Linnean Society of London on 1 July 1858 was of great importance. On that night he presented them with a folio of fifty of his finest illustrations of Tasmanian orchids in a leather bound volume with gilded lettering entitled, ‘Original Drawings of Tasmanian Orchideae, by William Archer F.L.S.’. He had been refining his artistic abilities for ten years, and this folio contained his very best work. Several other books were presented at that 8pm meeting, including the ninth part of James Sowerby’s *The Grasses of Great Britain*, and George Bentham’s *Handbook of the British Flora*. But the meeting had been called especially to conduct elections for a new member to the Society’s council, following the death of Vice President Robert Brown two weeks earlier.

Archer was an active participant in the Society – he had paid his life membership within weeks of arriving in London in 1856, and had attended every meeting he could since then. In Archer, the colony had travelled to the metropolis, and he was not about to sit shyly in the back row. At this meeting he acted as one of three electoral scrutineers, and thus participated in the process that elected George Bentham first to council, and then unanimously to Vice President.
After a long eulogy to Brown, the reading of six papers to the twenty-five members was the only business remaining for the evening. Archer usually enjoyed engaging with current scientific discourse, but already the night was old and he, like the others, had little enthusiasm to sit on the long wooden benches listening to several hours of new discoveries and hypotheses. Nevertheless, Joseph Hooker began by reading two papers by Charles Darwin and Alfred Russel Wallace, which Archer duly noted in his diary:

Papers of great interest by Mr Darwin & Mr Wallace on the difficult subject of the origin of species & varieties, & the causes of extinction of species, &c. &c. were read by Dr Hooker & commented briefly on by Sir C. Lyell. – It seems that the conclusions arrived at by both naturalists were very similar, and were come to quite independently of each other, – Mr Darwin having a clear claim to priority. – Busy at Inverness Terrace, - the works of cleansing &c. not finished.2

Archer’s response was typical for the members that night. He was an attentive listener and interested in the topic, but it did not strike him as astonishing.3 He seemed most taken by the way in which two separate people could come up with such similar theories. Subsequent diary entries did not suggest that Archer went away and mulled over their hypotheses, rather he focussed his attention upon moving into his new house, five minutes’ walk from

2 W. Archer diary, 1 Jul 1858, UTA A7/2.
3 It is notable that a Tasmanian-born man happened to be in the audience listening to the now famous paper. Linnean Society President Thomas Bell concluded in his Presidential Address for 1858: ‘The year which has passed has not, indeed, been marked by any of those striking discoveries which at once revolutionize, so to speak, the department of science on which they bear.’ Browne, Charles Darwin: The Power of Place, p. 42. Adrian Desmond and James Moore described the mood of the evening: ‘no fireworks exploded, only a damp squib. The meeting was overlong, the talks rushed, and the whole was greeted in silence.’ Desmond and Moore, Darwin, p. 470. For a succinct retelling of this meeting including a list of all of those in attendance see J.W.T. Moody, ‘The Reading of the Darwin and Wallace papers: An Historical “non-event”’, Journal of the Society for the Bibliography of Natural History 5 (1971), pp. 474-76. See also P.J. Bowler, Charles Darwin: The Man and his Influence (Cambridge, 1990), p. 113; and R. England, ‘Natural Selection Before the Origin: Public Reactions of Some Naturalists to the Darwin-Wallace Papers (Thomas Boyd, Arthur Hussey, and Henry Baker Tristram)’, Journal of the History of Biology 30 (1997), pp. 267-90.
Hyde Park. It was only in the years that followed that Archer recognised the
importance of that evening, later calling Darwin the ‘modern Merlin of Science’.

The 1850s was an important decade for the development of botany in Van
Diemen's Land. Although Gunn had withdrawn from his collecting, it was in the
mid-1850s that he received the most significant recognition of his botanical
contribution. Meanwhile, Archer went from being a novice collector living at the
foot of a mountain range on the colonial periphery, to an active participant in the
discussion which took place at the centre of metropolitan science. Examining the
development of Archer and Gunn over this period illustrates how colonial botany
changed over thirty years from Lawrence’s first tentative steps, to Archer’s return
from Kew, and the completion of the Flora Tasmaniae.

Colonial scientific society, 1850s

Eight years before the Linnean Society, Archer’s influence in botanical
science was only just beginning to rise, coinciding with Gunn’s retreat. In Van
Diemen's Land Archer embraced his own community and engaged in botanical
discourse. He had invested in his education, purchasing books for his library
including De Candolle’s Prodromus, Sowerby’s Manual of Conchology, Murray’s
Encyclopedia of Geology and forty volumes of Jardine’s Natural Library. He
negotiated the purchase of Christ College’s ‘spare’ copy of Gould’s Birds of
Australia, in return for three works valued at over twenty pounds, plus an

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4 W. Archer to J.D. Hooker, 2 Dec 1868, Kew DC 172.
additional £37 and sixteen shillings to be paid over two years. The high cost of
this work had ensured Gould’s *Birds* was out of reach to most people.\(^5\)

He engaged with other scientific men in the colony, sharing books
including Brown’s *Prodromus* with Dr. Lillie, his microscope with Dr. Valentine
in Campbell Town, and collecting specimens with Charles Stuart in the Cataract
Gorge in Launceston. These friendships were clearly of great joy to Archer as he
admitted staying up until one a.m. with Valentine examining specimens of the
moss *Hookeria pennata*.\(^6\)

In the field, Archer focussed on specific plant groups rather than targeting
new environments that might promise botanical novelty. His ongoing physical
ailments and responsibilities to work and family meant his ‘field trips’ were
usually only one or two days in length, and taken in and around the Archer family
properties (fig. 30). An analysis of his diaries suggests that Archer found just as
much enjoyment going fishing, seeing his family, walking with his dogs or riding
his horses as he did in botany, and he spent equal times doing each. His friends all
being gentlemen from the surrounding districts – and members of the Tasmanian
Society – would have discussed such things while hunting ducks or catching
‘herrings’.\(^7\)

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\(^5\) W. Archer diary, 8 May and 21 Jun 1851, UTA A7/2. Gunn had purchased his at a discount by
subscription when it was first published, thereby allaying paying the full amount in one hit. Gunn
was so proud of his copy that he kept one volume permanently on a display stand in his house at

\(^6\) This name is no longer recognised, it is now *Cyathophorum bulbosum* Labill. W. Archer diary,
31 May, 6 Jun and 6 Sept 1850, UTA A7/2.

\(^7\) Botany should not be considered a safe pastime – see Short’s introduction to *In Pursuit of Plants*
where he describes the untimely deaths of several plant collectors in Australia. But there were
other gentlemanly pursuits that were equally dangerous. Archer’s hunting parties, for example, do
not sound especially enticing. A diary entry for April 1851 happily described how he had ‘tried’
his new Colt revolver and ‘was satisfied that a man might be readily killed with it at 50 yards’.
The following day Archer and four friends went on a shooting trip during which one member of
the party was hit just below the right eye by the cartridge of a discharged gun, and Archer himself was later shot by the injured man on his left cheekbone. One member of the party was a doctor and extracted the shot, finding simultaneously that Archer had damage on his hat, side and left leg. Remarkably Archer’s next comment was simply ‘A brace and a half of ducks, in good condition, were also bagged. We dined in the Kitchen, and spent a pleasant evening.’ Despite his enjoyment of the day, he does not appear to have gone shooting with any of the same men ever again. W. Archer diary, 8-9 Apr 1851, UTA A7/2.

**Figure 30** Detail map of William Archer’s collecting localities in Van Diemen’s Land, 1847-1874.
Archer’s election to the Legislative Council aided his growing interest in botany by introducing him to a broader field of scientific acquaintances. His trips to Hobart on horseback allowed him to survey the changing environment as he moved north to south, and the city’s commercial opportunities meant his orders for books and equipment reached his hands a little faster.8

While Archer viewed his seat in the Legislative Council as an opportunity to forward the anti-transportationist cause, he also saw a chance to promote natural history. He had been impatiently awaiting the publication of Hooker’s *Flora Tasmaniae*, and during his second year in Council worked up a proposal for the Government to donate £300 to the cause. In nervous anticipation of having to argue strongly for such a generous sum, Archer approached Gunn for assistance in describing the benefits of the work to the colony.9

To Archer’s delight, the other members not only readily supported his idea, they went further and voted to increase the grant to £350. This was aided by the fact that several of the members had some interest in natural history themselves. Indeed, the only real obstacle Archer faced was a long debate between members about how many copies of the work the Government should expect in return, and where they were to be distributed.10

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8 For example Archer ordered his first microscope from England, and it arrived in Hobart during his first session on the Council. W. Archer diary, 19 Jun 1851, UTA A7/2.
10 It was eventually agreed that six copies were expected in return, to be deposited at the Library of the Legislative Council, the Tasmanian Public Library, the Royal Society of Van Diemen's Land, the Mechanics' Institutes in both Launceston and Hobart, and the Launceston Public Library. Prior to this agreement several members had been pushing for even more copies: John Leake argued strongly that Campbell Town should have a copy to be held by the local clergyman, Henry Anstey, Member for Oatlands, suggested copies for each district (adding that he would happily look after his district’s books personally). Richard Cleburne from the Huon joined Anstey in his motion, and it was with some effort that Archer had them withdraw it, settling upon the six copies to major public reference collections. It was this aspect of the meeting, and not the actual proposal, that the
Unfortunately as the proposal was passed with little debate, the Council minutes contain little beyond noting the title of the work as ‘Botany of Van Diemen’s Land’. Archer later admitted to Hooker that his central argument was that ‘all enlightened governments were distinguished by their grants for scientific purposes’.\textsuperscript{11} Aside from the members’ personal interest, they could expect an economic benefit to stem from any exercise that increased knowledge of the colonial landscape.

The Legislative Council’s grant made the government the second-largest sponsor of the \textit{Flora} after the British Admiralty. Not only was it an astonishingly large sum at the time, it remains the largest Tasmanian government grant ever issued to support a single scientific publication. Taking conversion into account the £350 grant in 1853 is equivalent to £37,000 today, or AU$60,000.\textsuperscript{12} The action did demonstrate the growth and maturity of the colony: the move showed that Van Diemen’s Land was economically strong and able to invest in colonial nationalism, and could no longer be simply regarded as an Antipodean gaol.

Archer wasted no time in divulging the good news to Joseph Hooker. Gunn had not been forthcoming with an introduction in previous years, but Archer was now able to introduce himself on Council business. Making the most of his

\begin{flushleft}
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\footnotesize\textsuperscript{11} W. Archer to J.D. Hooker, 26 Jul 1854, Kew DC 218.
\footnotesize\textsuperscript{12} Measuring historical economic worth is always difficult, and near impossible if attempting to take into account the value of the economy of a British colony. This amount is taken from the Gross Domestic Product deflator calculator from L.H. Officer, ‘Five Ways to Compute the Relative Value of a UK Pound Amount, 1830 to Present’, MeasuringWorth, accessed 12 Nov 2010, www.measuringworth.com/ukcompare. This calculator uses data for Britain only. It would be safe to assume that if a colonial economic calculator could be used the dollar value would be higher again.
\end{flushleft}
opportunity, Archer also sent several of his orchid drawings as a gift. This mixture of business and pleasure illustrated the changing nature of gentlemanly science, as it became increasingly socially acceptable to discuss matters of finance. In this way Archer was able to signal to Hooker both his significant personal interest in the *Flora*, and his capacity to make further contributions to it.\(^{13}\)

Archer’s commitment to the *Flora* and to Hooker did not end after the government grant. In his second letter he enthused about the importance of botanical knowledge. He also revealed that he was in the process of writing to the Colonial Secretary of New Zealand to convince that colony that they too should donate a similar sum. He went still further, authorising Hooker to receive £100 towards the *Flora* from Archer’s personal London agent. This substantial donation was not a wholly selfless act, however, as Archer wished it to be spent on ensuring his orchid illustrations could be included, doing justice to the fine and delicate flowers.\(^{14}\)

During the 1850s Archer rapidly increased his engagement with the scientific centre. He asked Hooker to show the orchid paintings to Robert Brown: ‘If that celebrated Botanist would condescend to look over my orchids and should feel satisfied with the representation…& will tell me so in an autograph note, I need not say how much I shall treasure the communication.’\(^{15}\) Archer also began planning a return trip to England to meet his new friends, once his health had improved. When Hooker told Archer of the forthcoming visit of Irish Phycologist

\(^{13}\) W. Archer to R.C. Gunn, 11 Oct 1853, ML GC 4.
\(^{14}\) W Archer to J.D. Hooker, 26 Jul 1854, Kew DC 218.
\(^{15}\) W. Archer to J.D. Hooker, 26 Jul 1854, Kew DC 218.
William Harvey, Archer assured Hooker he would gladly meet him, ‘taking the liberty to introduce myself as a correspondent…of your’s [sic]’.  

William Henry Harvey (1811-1866) had been encouraged as a professional botanist from the age of nineteen, when he discovered a moss – *Hookeria laetevirens* – that was previously unrecorded in Ireland. At William Hooker’s request Harvey began describing cryptogams and algae for Hooker’s *British Flora* of 1833. He was a well-travelled botanist by the time he reached Western Australia in early 1854, already having spent seven years at the Cape, as well as extensively travelling Britain and parts of continental Europe, and spending a year exploring the west coast of North America. Botanically he travelled even further, his systematic talents being accented by his lithographic skills. He published works on flora from Britain, Mauritius, South Africa, Antarctica, New Zealand, North America and Australia. Harvey was an extremely affable man and shared close friendships with William and Joseph Hooker, Nathaniel Ward, Robert Brown and Asa and Jane Gray. For Archer, the chance to spend time with Harvey, who arrived in the colony in January 1855, was understandably exciting.

The sense of anticipation was mutual – Harvey wished to see native conifers and valleys of tree ferns, none of which he had seen in Western Australia. Archer had written to promise that Harvey could ‘tumble out of bed into a pine

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16 Archer told Hooker he was suffering from ‘pleuritis, or some other itis, or semi-it is’. He struggled with his health, particularly his respiratory health, for much of his adult life. W. Archer to J.D. Hooker, 26 Jul 1854, Kew DC 218.
This was a far pleasanter prospect than Harvey’s accommodation in a Launceston hotel, where he had been beset in bed by ‘very fat bugs’, which he had ‘killed heaps upon heaps until my candle went out’. After that troubled night’s sleep, Harvey walked the two miles from Launceston to Gunn’s house at Newstead.

Unlike Archer, Gunn was not enthused about his guest, Harvey arriving early in the morning and unannounced, when Gunn was still in bed. Harvey’s timing was unfortunate, coming a month after Gunn’s eldest daughter Margaret died from consumption, which markedly affected Gunn’s emotional health. Harvey settled himself in the drawing room with several copies of *Punch*, where Gunn eventually appeared for breakfast and botanical chat.

This is not to say that Gunn was not pleased to meet Harvey. The two had been corresponding since Joseph Hooker introduced them via letter in 1845, following an incident where Gunn had tossed out his seaweed collection thinking it ugly, whereas Harvey declared it rare and precious. The inauspicious breakfast meeting was not their first contact, as Harvey had written to Gunn from his first stop in the colony at George Town. He and Gunn frequently corresponded prior

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20 Margaret Isabella Gunn was the first surviving daughter and second surviving child from Gunn’s first marriage to Eliza Ireland. She was born at Rio de Janeiro during the voyage from London to Hobart Town, and was 28 years old when she died. R.C. Gunn to F. Gunn, 15 Jul 1835, Wilson private collection. Death notice for Margaret Isabella Gunn, *Launceston Examiner*, 18 Jan 1855. Harvey knew of Gunn’s grief before arriving in Launceston, as the two men had been corresponding from George Town. See W.H. Harvey to R.C. Gunn 14 Jan and 21 Jan 1855, ML GC 2.
21 George Town was regarded as a particularly rich place for seaweed collecting, and had been thoroughly scoured by Gunn in previous years. W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, *Contented Botanist*, p. 188.
to Harvey’s arrival in Launceston, Gunn acting as recipient for the Irishman’s mail, and as the link between Kew and Harvey.\(^{22}\)

In the year before Harvey arrived, Gunn had been elected a Fellow of the Royal Society of London. The honour of being admitted to the world’s most prestigious scientific society was made even greater, as he was the first permanent Australian resident to be made an FRS. It was Gunn’s knowledge in ‘many branches of science particularly Botany and Natural History’ and his efforts as editor for the journal of the Tasmanian Society that earned him his nomination.\(^{23}\)

Becoming an Australian fellow was an especially difficult task for several reasons: the number of new Fellows who could be elected each year was heavily restricted, and each nomination had to be accompanied by six or more existing Fellows, at least three of those knowing the candidate personally. As Rod Home has pointed out, there were few Fellows resident in Australia, let alone in one colony, and Gunn’s nomination included as proposers the only two Fellows then living on the continent, William Denison and Phillip King.\(^{24}\)

It was the George Town port officer and astronomer Matthew Curling Friend FRS who championed the cause, sending the certificate for Gunn’s nomination around to other fellows for support before sending it to Britain. The colonial secretary James Bicheno signed it in 1848 with ‘great pleasure’, adding that ‘there are few persons who deserve the honor better’.\(^{25}\) The process was no surprise to Gunn, Friend asking him to pass on the names of all his

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\(^{22}\) W.H. Harvey to J.L. Gray, 6 Oct 1853; W.H. Harvey to W.J. Hooker, 29 Jan 1854, Ducker, *Contented Botanist*, pp. 68, 77.

\(^{23}\) R.C. Gunn (1808-1881), certificate of election and candidature, RSL.


\(^{25}\) J. Bicheno to M.C. Friend, 2 Jun 1848, ML GC 7.
correspondents, explaining, ‘I have plenty of my friends independently of yours but is well to muster all our strength’. 26

The process of nomination was anything but speedy – by the time Gunn was elected on 12 June 1854, Bicheno had been dead for over three years. Owen Stanley’s name was also annotated on the certificate ‘late Captain HMS Rattlesnake’, as he had died in 1850, presumably signing his name during his voyage to Australia and New Guinea in 1846. 27 This meant that it had taken at least eight years for the application to amass its signatories. Even after the certificate was presented to the Royal Society meeting, it took another three months before Gunn was elected, as every application was hung in the meeting room where other members could sign their support from knowing the candidate directly or ‘from general knowledge’. By the time of his election, Gunn’s certificate sported six signatures from those who personally knew him, and another five from general knowledge. 28 This was a reasonably large number for a candidate from the other side of the globe, when compared to other applicants elected at the same time. 29

26 M.C. Friend to R.C. Gunn, 12 Jun 1848, ML GC 7.
27 Gunn did not meet Stanley in 1846, but had met him previously as a member of the Terror voyage, where Stanley was engaged in making astronomical and magnetic observations. F. West, ‘Stanley, Owen (1811-1850)’, Australian Dictionary of Biography, online ed., accessed 29 Jun 2011, http://www.adb.online.anu.edu.au/biogs/A020436b.htm.
28 The signatures on Gunn’s certificate were from William Denison, Matthew Curling Friend, Owen Stanley, Philip King, James Bicheno and Joseph Kay. William Hooker, Robert Brown, John Bennett, John Gray and James Martin all signed ‘from general knowledge’. Joseph Hooker’s signature is notably absent; this was due to his being a Council member for the Society, a position that precluded him from signing certificates.
29 By comparison, an England-based applicant from the same electoral group received twenty-two signatures, eighteen knowing him personally, and St Petersburg-based Karl Ernst von Baer’s application sported nine signatures from fellows who knew him. Robert Hunt (1807-1887), certificate of election and candidature, RSL; Karl Ernst von Baer (1792-1856), certificate of election and candidature, RSL.
Surprisingly, Gunn’s elevation to FRS went unnoticed by the colonial press, which made no mention of the occurrence.\textsuperscript{30} Despite this, his appointment was an important symbol for colonial science, as the metropolis acknowledged Gunn’s work to be of significant value. The lack of fanfare he received was in part due to Gunn’s withdrawal from colonial scientific pursuits. By 1854 Gunn’s herbarium had lain untouched for several years, and his unmounted specimens had become brittle and tangled in unidentifiable lumps. Harvey had first-hand experience of this on each of his passes through Launceston. He was particularly keen to work through Gunn’s algae collection. Harvey immediately noted the neglected condition of Gunn’s herbarium, and did little to hide his frustration that what Gunn had written so much about in the preceding years held ‘not very many novelties – & the specimens are not put up with the care that I like’.\textsuperscript{31}

Any ideas that Harvey had entertained of filling the gaps in his own herbarium by using items from Gunn were quickly squashed as he noted that Gunn had put off the work of sorting and mounting his plants, complaining of being overburdened with official duties. Even more alarming was Gunn’s lack of interest in the collection he did have, as Harvey discovered a specimen from a new and ‘remarkable’ algal genus Harvey had recently described at Port Phillip. Gunn explained he had collected it some years before but had neglected to send it to England, thinking it common.\textsuperscript{32}

Aside from plants, the two men shared their experiences and acquaintances of the Cape Colony. Gunn’s contacts in South Africa had alerted

\textsuperscript{30} The only mention of Gunn being FRS in local newspapers was made in his obituaries in 1881, \textit{The Launceston Examiner} 14 Mar 1881; and \textit{The Mercury} 28 Mar and 14 Apr 1881.
\textsuperscript{31} W.H. Harvey to J.D. Hooker, 24 Feb 1855, Ducker, \textit{Contented Botanist}, pp. 196-7.
\textsuperscript{32} W.H. Harvey to J.D. Hooker, 24 Feb 1855, Ducker, \textit{Contented Botanist}, p. 197.
him to Harvey’s presence only a few weeks after he had arrived there in 1835, at that point regarded as a ‘very zealous & indefatigable young Botanist, & a Pupil of Dr. Hooker’s’.  

They also discussed Harvey’s ambitious plans to make a trip to Port Davey in the south west of the island. Harvey hoped that such a wild and remote spot would produce new algal genera, and being unvisited by naturalists thought it a likely place to find new terrestrial vascular species as well. It was difficult for Gunn to resist the invitation, especially knowing the Hookers had been pressing him to visit the region for several years, but due to Gunn’s fragile emotional state Harvey travelled to Port Davey alone. He was disappointed to find that the southwest coast of the island was too rugged for most delicate seaweeds. His collecting was further hampered by heavy rain, fierce wind and huge surf. After a week he had only a few specimens, disappointed that even tidal pools were infrequent occurrences on the coast due to the porous nature of the rock.

While Gunn and Harvey enjoyed frequent visits where they shared ‘a world of botanical talk’, they did not go out collecting together. Harvey went alone to explore Launceston’s Cataract Gorge and the banks of the South Esk River, looking forward to meeting the gentleman friend of Hooker, ‘a W. Archer’. On 15 February, Archer harnessed his horse Snip and drove his gig to Deloraine to collect Harvey ‘the celebrated algologist’ in order to bring him to ‘Cheshunt’ for a week of collecting in the mountains.

34 W.H. Harvey to Gunn, 9 Oct 1854, ML GC 5.
35 Harvey knew of Archer as a friend of Joseph Hooker, not a friend of Ronald Gunn. W.H. Harvey to H. Todhunter, 9 Feb 1855, Ducker, Contented Botanist, p. 185.
By lunchtime the men were bumping along a ten-mile road little better than a cart track amidst what Harvey described as ‘wild forest’. One day earlier Harvey had ridden in the coach box seat from Launceston to Deloraine, admiring farms and cleared pastures along the way, despite the rowdy nature of the drunken farm hands that joined him on the journey.36 He was impressed by the open plains, although this was lessened when he also saw the rough clumps of vegetation and dense thickets of unkempt hawthorn hedges that surrounded them.

As an introduction to the cooler, wetter vegetation of the western mountains, Archer described the trees along their route; first *Eucalyptus*, then as it got wetter celery top pine, *Phyllocladus aspleniifolius*. Harvey was enchanted by the spreading branches and glossy dark leaves of the myrtle, *Nothofagus cunninghamii*, the contrasting white-backed leaves of *Banksia marginata*, and the feathered silver foliage of *Acacia dealbata*. Archer went further, describing the scarlet spidery flowers of the native waratah *Telopea truncata*, and they admired ferns and orchids closer to the ground and stopped to pick the white native cherry, *Exocarpos strictus*. Harvey enjoyed this introduction to the Tasmanian vascular flora that contrasted with his previous excursions that he had conducted alone.37

Where Gunn had provided conversation of publications and people, Archer gave companionship for walks and collecting. They made trips out from ‘Cheshunt’ to various creeks to collect moss, up nearby Garret’s Sugarloaf and made an overnight trip over Cummings’s Head onto the Central Plateau, sleeping

36 As he described to his sister: ‘The rest of the outside was over crowded by a very rough set of customers…Some were half-drunk & some more than half gone & yet at every ‘publick’ at which we drew up more liquor was called for’. W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, *Contented Botanist*, p. 189.
37 W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, *Contented Botanist*, pp. 188-9.
on beds of cut *Leptospermum sericeum*. Harvey delighted in finally experiencing a fern valley:

hundreds of tree ferns of all sizes, single or in clumps, tall or short, all crowned with their glorious leaves…The trunks of the old ones were often completely clothed with delicate pale green ferns of small size…or equally pale green mosses, & when the sunbeams struck through the crown of large leaves & lit up the little ones beneath the effect was very beautiful.38

He saw pools and trickling waterfalls, and everywhere Harvey plucked berries and saved seed to send back to Dublin.39

On their return from Cumming’s Head, Archer and Harvey found the hillside ablaze, ignited from one of the small smoky signal fires Archer had set the day before so they could find their way home. The ground was burnt bare and all that remained were charred tree trunks, destroying any marked trees on their path and obscuring their track back to ‘Cheshunt’. After some wandering around, they made their way home, Harvey pleased to be back and to have ‘a regular wash’ and remove all the dirt and soot. During that night the fires spread into the surrounding mountains, cloaking the estate in thick smoke. The casual manner in which Archer lit fires in the driest and hottest month of the year demonstrated his relaxed attitude towards the volatile nature of the native flora.40

38 W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, *Contented Botanist*, p. 191.
39 He noted in the evening on the mountain that they made a bed of freshly cut myrtle tops and other nearby shrubs, spreading them over a springy cushion of the low-growing *Gleichenia alpina*. That night Archer’s ‘men’ kept a large fire burning whilst Harvey shared an ‘Opossum rug big enough to shelter Mr. Archer & myself as we lay close together for greater warmth’. W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, *Contented Botanist*, p. 194.
40 Archer was genuinely surprised to find the fire spreading so quickly, writing in his diary it was ‘burning furiously and spreading over the North face of the mountain’. He did not mention it again, except for three days later when he rode out to check his fences were not burnt. At that time he did not associate his fire lighting in earlier days as being responsible for the bigger blaze. W. Archer diary, 20, 23, 24 Feb 1855, UTA A7/2. Harvey was far more alarmed by the experience, describing the fire to his sister: ‘We came across the fire we had lighted on going up & found it had spread on all sides and was still spreading widely having burned some hundred acres of bush (& when I left Cheshunt 3 days after it was still burning & had spread enormously)…The
When Harvey returned to Deloraine, he left Archer in the midst of preparing his property in readiness for an extended trip to England. It was not a trip fuelled purely by science, but rather an opportunity for Archer to educate his children, and seek medical advice for his ongoing health problems.41

The periphery meets the centre: First impressions

Ninety-six days after departing Melbourne, William Archer stepped off the crowded confines of his ship at Ramsgate on 22 August 1856, and into Morely’s Hotel on Trafalgar Square. He was not unhindered, ‘hav[ing] brought with me, not only the members of my own family, but some individuals of other families – of plant’.42 Along with the plants – both dried and alive – he had brought his wife, five children, their governess and their nurse. Although Archer announced his arrival in London to Hooker the very day he had arrived, botany was not the main reason for his visit. Instead, he was seeking to immerse his family in the pleasures of British life and culture, and enjoy socialising with old friends. This included other eminent Tasmanians such as Richard Dry and his wife who were also in London as part of an extended visit to England and Europe.43

undergrowth was completely cleared off and many of the smaller trees burned down & even some of the larger, while some old giants injured by previous fires were undermined & overturned…Next morning there were so many bush fires all round us that their smoke obscured the air & completely hid the mountains from our view as much so as a dense London fog.’ W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, Contented Botanist, pp. 194-5.
41 W.H. Harvey to M.C. Harvey, 12 Feb 1855, Ducker, Contented Botanist, pp. 190-5; W. Archer diary, 15-23 Feb 1855, UTA A7/2.
42 W. Archer to W.J. Hooker, 22 Aug 1856, Kew DC 74.
43 Whilst in England Richard Dry was knighted by Queen Victoria, one of the first Australians so honoured, and the first Tasmanian-born. Dry was an old friend of Archer, a passionate anti-transportationist, and following his return to Tasmania became the first Tasmanian-born premier.
Nevertheless, Archer intended to make the most of his opportunity to engage with London’s scientific elite while he stayed in the city. To sweeten his first meeting with the Hookers, he had spent many months in Tasmania preparing his herbarium, completing illustrations, and collecting and packaging live plants for the journey. On arrival he arranged to house his five herbarium cabinets and two Wardian Cases at Kew. Archer’s live plants numbered near 150, including conifers and other rare high-altitude temperate plants. The Hookers were amply repaid for their storage space – Archer added that he had selected and procured every plant ‘expressly for you’, and after settling his family in more permanent accommodation headed up the Thames to Kew Gardens.44 His first impression of the Hookers remains a mystery, Archer only noting in his diary that both William and Joseph were ‘very kind & attentive to me’ and provided some introductions into society.45

Those first months were a whirl of activity for the Archers, meeting old friends from his previous visit, riding in Hyde Park – seeing the Queen do the same – and visiting the Crystal Palace.46 After the Hookers, Archer’s first scientific introduction was to the aged and irascible Robert Brown, who was over...
eighty years old, but remained active in his control of the Banksian collection. Brown had proven himself in the field both near and far, revealed his taxonomic credentials with the *Prodromus* and had proven his skill at microscopy discovering the cell nucleus and the particle phenomenon known as Brownian motion.\(^{47}\) In his later years his monopoly over botanical specimens was only topped by his insatiable hunger to add to his collection, unashamedly using his position to ‘inspire’ collectors to assist him\(^{48}\)

Joseph Hooker had known Brown since boyhood, but their familial relationship did not translate into free access to Brown’s material. Three years before Archer arrived in London, Hooker had complained to Gunn when he learnt that Brown had purposely not mentioned a named set of specimens from the *Prodromus*, despite Hooker visiting the British Museum frequently over the preceding twelve years in order to compare specimens and identify difficult species. The barbs continued: ‘when Brown dies Botanists will be puzzled to say – whether he has advanced Botany more by his career or retarded it by his policy to his friends & the Botanical public.’ Despite these sentiments, Hooker was not against Brown, viewing his taxonomic work on genera as ‘wonderfully good’, and defending him against John Lindley who had publicly rallied against Brown’s secrecy and hoarding tendencies.\(^{49}\)

Brown was at the top of the botanical hierarchy, and Archer’s introduction to him was a great day for the colonial naturalist. Archer noted that Brown showed his age but remained ‘shrewd and wise’ on botanical matters, and

\(^{48}\) For example see Brown’s request to Gunn for tree ferns in 1842, chapter 2.
\(^{49}\) J.D. Hooker to R.C. Gunn, 23 Jul 1853, ML GC 8.
continued to request collected material. As if meeting Brown was not enough, the ‘great botanist’ then took Archer to the British Museum and showed him Ferdinand and Franz Bauer’s plant drawings, including those of orchids. Archer was especially interested to see Franz Bauer’s sketches, but although he found them ‘beautiful’, was critical that their beauty was more manufacture than truth, obscuring scientific accuracy.⁵⁰

After a few months living in various rented houses in London, Archer sought out a country estate where he could indulge in healthful walks, go riding, and generally tour about the county. He followed this residential pattern for the duration of his stay in Britain, spending a few frenzied months in London followed by larger blocks of time travelling or renting fully furnished estates around England. In this manner he could maintain semi-regular contact with his friends in the city, retreating to a more relaxed environment before his health was compromised.

During his first two months in London, Archer was elected a Fellow of the Linnean Society, paying £36 outright for life membership. He was formally admitted by the President, and by regularly attending meetings when in town received introductions to many of the scientific elite. Aside from expanding his social sphere, the society provided a forum where Archer could contribute his own research.⁵¹

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⁵⁰ W. Archer diary, 22 Aug 1856, UTL 61/1.
⁵¹ For example a paper on the use of hairs as a species delimiter in the Asteraceae was received after Archer’s departure in November 1859. W. Archer, ‘On the Value of Hairs, as a Character, in Determining the Limits of Subordinate Groups of Species…genera Eurybia (Cass) and Olearia (Möuch) of Compositae’, LSL M04146.
Shortly after this Archer began to immerse himself in the botanical world he had so longed to be a part of. He met his first ‘teacher’ John Lindley and took his orchid illustrations to show him. As mentioned in earlier chapters, Lindley was not the model correspondent, constantly juggling botanical and horticultural projects to make ends meet. His habit of speaking his mind with little regard to its affect on him or others did not ingratiate him to many, although his skill – when fully applied – was great. As with his examination of Bauer’s art, Archer found his first meeting with Lindley full of contradictions, describing him as having ‘great application’ with ‘sound botanical knowledge’, but also that he was ‘not generally liked’ with a ‘certain abruptness and air of importance’. Furthermore, Lindley apparently announced to guests that he would only spare them his time if they had something of extreme importance to discuss. With this in mind, Archer’s proffering of orchid paintings could ensure an audience, and by loaning them he was able to secure another when returning to retrieve them.52

On his return Archer got a taste of the realities and vagaries of systematics first hand, Lindley having taken it upon himself to name Archer’s illustrations, but not always correctly.53 His concept of species limits was much looser than Joseph Hooker’s, and although Archer believed him ‘well worth knowing’, found Lindley would all too easily declare a variety to be a distinct species, basing his assertions upon unreliable characters. Archer was surprised to see that ‘the great botanists of the day’ did not recall all the necessary details of speciation from memory or some innate knowledge, but relied heavily upon herbarium specimens

53 Lindley annotated at least seventeen illustrations, these are among 33 original Archer orchid illustrations held by the Tasmanian Museum and Art Gallery. Hansen, ‘Illustrations and Work of William Archer’, p. 85.
and reference books. Archer could see the advantages of this, ‘the access to which means of information enables them to divest their memories of those points of detail which are so hindersome to the minds of those who are destitute to such means.’ He saw himself as one such destitute botanist, and in the following years sought to compile as complete a collection of verified Tasmanian plants as possible, building upon the specimens he had brought with him to London.

Archer recognised the restrictions upon far-flung botanists from fully engaging in botanical systematics. Conversely, having a highly trained botanical memory did have its advantages, making work quicker and more efficient. For collectors in the field it was impractical to carry reference books with them. They had to rely upon their memory alone when selecting which plants to take and which to leave. Lindley’s reliance on reference material may have contributed to some of his inaccuracies when naming Archer’s orchids, as Archer described ‘his knowledge of species was not accurate or extensive’.

From the mixed pleasures of meeting Lindley and Brown, Archer travelled on to Kew to become better acquainted with the Hookers and look over his herbarium cabinets stored at the ‘King of Hanover’s’, the building in which the herbarium was housed. Over the next three years Archer and his family became

54 See also Endersby, ‘“From Having no Herbarium”’, pp. 352-3.
55 This is another area where historical practice remains the same today. It is the memory of the botanist that is most essential when making selections of new specimens to collect. Alex Buchanan wrote of collecting in ‘poorly known’ regions of Tasmania, particularly in the south west, during the 1980s. His experiences were similar to those faced by collectors in the nineteenth century. A. Buchanan, ‘The rare endemic moss Ambuchanania leucobryoides – a tale of discovery’, Australasian Bryological Newsletter 55 (Hobart, 2008).
57 Officially ‘Hunter House’, it was the Duke of Cumberland’s home when he ascended to the throne of Hanover in 1837. It was retained as his residence until his death in 1851. From 1852 William Hooker was permitted to use the building to store his herbarium and the colloquial name ‘King of Hanover’s’ stuck. A three-storey galleried wing was added in 1877 with ornate iron spiral
close friends with the Hookers, sometimes staying overnight with Sir William and Lady Hooker.⁵⁸ He took great joy in walking with William Hooker around the gardens examining exotic orchids in the hot houses, although his greatest excitement always came when he saw live Tasmanian plants.

In the Spring of 1857 Archer was delighted to see the magnificent waxy white flowers of native laurel, *Anopterus glandulosus*, in flower in the ‘Australian house’, as he had only ever seen it as a dried specimen, despite it growing relatively near to ‘Cheshunt’.⁵⁹ On his visits to Kew, Sir William and Lady Hooker provided a social role for Archer by sharing meals, showing him new developments in the gardens, and introducing him to other guests. It was Joseph who shared the scientific interest that pulled Archer into the herbarium.

Joseph had recommenced working steadily on the Tasmanian flora from 1853, and by the time Archer arrived in England had already published sections encompassing the Rutaceae, Fabaceae, Asteraceae, Cunoniaceae, Myrtaceae, Pittosporaceae and of course the Tremandraceae.⁶⁰ Archer could not have arrived at a better time, as Hooker was beginning on the conifers, epacrids and orchids that Archer was so passionate about. Together they worked to untangle the nomenclatural knots surrounding the Tasmanian pines, discussed in chapter 6.

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⁵⁸ Lady Maria Hooker was the daughter of British botanist Dawson Turner, and knew much about botany and other branches of natural history in her own right.
⁵⁹ W. Archer diary, 8 Apr 1857, UTL 61/6.

staircases to house the growing collections, and since then a further five wings have been added, the latest completed in 2010. Royal Botanic Gardens, Kew, ‘Heritage places’, accessed 9 Dec 2010, http://www.kew.org/heritage/places/herbarium.html.
Archer’s artistic talents were invaluable as he worked at Kew and at home, sketching pollen and other flower parts using his microscope.

Archer’s careful eye and experience with the live plants made him an ideal discussion partner for Hooker when he was preparing difficult genera. He did not spend days on end at Kew, rather he would spend one day with Hooker discussing the latest task, then work at home using his personal specimens. Archer’s confidence in his skills as a systematist remained from his _Microcachrys_ days, making him an invaluable sounding board. For example, working at Hooker’s request on _Thelymitra_ (the sun orchids), Archer concluded there were four distinct species rather than Hooker’s two. A fortnight later Archer returned to Kew where he and Hooker reviewed the speciation, deciding on reducing the whole of _Thelymitra_ to three species with a possible fourth.\(^6^1\) When Archer was not determining new species or genera, he endeavoured to sort his own herbarium to be in accord with the most recently published section of the _Flora_.

When it came to preparing the second part of the _Flora_, Hooker faced a myriad of problems he had not encountered in the first. As well as the conifers, it contained what were (and still are) traditionally the more difficult plants to classify. Grasses all appeared at least superficially similar, many requiring hours of dissection under a microscope to detect differences. Bryophytes needed a similar level of microscopic attention, and fungi and algae were groups where only a handful of specialists possessed the required depth of knowledge to be of assistance.

\(^6^1\) Archer’s diary, Apr-May 1857, UTL 61/6.
The Orchidaceae were a similarly troublesome group to identify and differentiate because as well as being a large group of plants, they show an extremely high level of differentiation. The flowers are striking but short-lived, and when in a vegetative state, the plants remain as a tuber beneath the soil. They often flower outside of the normal collecting months, requiring special trips to be made to collect certain species. Marking the location of orchids was a common method for field collectors with the luxury of returning the next season, but the plants do not necessarily flower each year in succession, proving elusive to find.62

Orchids had always been desired by nurserymen and gardeners, but proved extremely trying for a generalist botanist, due to their transience in the field, high levels of differentiation and the complexity of their flower structures. As Lindley described, ‘in an order like this, so peculiarly intricate in the structure of the organs of fructification, collections of dried plants would be of little value, in the absence of that kind of knowledge which can only be obtained from the study of living species’.63 A herbarium specimen could only reveal so much to the taxonomist. To find a true classification, familiarity with the live plants was essential.

When it came to amassing material for the Flora on orchids, Hooker found that he had few specimens to draw upon in London collections. Only two major works had been published concerning Australian orchids, Brown’s Prodomus of 1810, and Lindley’s more recent Genera and Species of Orchidaceous Plants. Brown’s was by far the lesser of the two: the Prodomus contained descriptions of

62 For more details on Tasmanian orchids see D. Jones, H. Wapstra, P. Tonelli and S. Harris, The Orchids of Tasmania (Melbourne, 1999).
sixteen Australian orchids. His collection at the British Museum was sparse, but his initial work was substantially reinforced by Lindley. Lindley, who possessed specimens sent by Gunn, held the best collection of Tasmanian orchids in London. Hooker found these to be a ‘splendid series’, but with ‘fewer remarks than usual’ accompanying them. It was a rare moment when Hooker wished his colonial collector to have been more verbose in his notations.

With Archer alongside, Hooker could increase the accuracy of his classification, Archer working on orchid genera including *Thelymitra*, *Prasophyllum* and *Microtis*. He worked on *Prasophyllum* for two weeks, disentangling the genus from *Genoplesium* and correcting errors made by Brown that misattributed some species into the incorrect genus. Hooker’s preamble for *Prasophyllum* recognised Archer’s singular work:

> Mr Archer has made a detailed study of the Tasmanian species, and I have gladly availed myself of his arrangement and characters of the species; these appear to me good, though I must own it is not possible to find in all the dried specimens of any species all the characters we agree in considering to be the diagnostics of the species: still the difficulties are not nearly so great in this genus as in *Microtis* and *Thelymitra*.

Such sentiment from Hooker showed he was willing to accept and acknowledge work from people who had specialised knowledge and skills. Even if Archer had only worked on the one genus, he saved Hooker two weeks of work by completing it. Hooker clearly trusted Archer’s taxonomic judgement as well as his artistic talents. For other genera Hooker noted that alongside the published

64 In Lindley’s *Genera and Species of Orchidaceous Plants* he thanked Gunn ‘most especially [for] a very large quantity of Tasmanian specimens, most liberally furnished’. He nonetheless finished his acknowledgements: ‘There are still, however, many species from the East and North Coast, with which he [Lindley] has no acquaintance’, p. ix.

work of Brown and Lindley, he had referred to Archer’s ‘notes and drawings’ to
denote differences between species, particularly when Hooker only had access to
dried material.66

These plaudits reveal that Hooker valued Archer for more than just his
ability to procure funding for the Flora, Archer’s botanical opinions and
deductions carrying weight in the systematic process. The importance of his role
in assisting with the Flora has been somewhat overlooked by historians, but he
earned his place on the dedication page, being recognised after Gunn as a botanist
in his own right, not merely as an illustrator or benefactor.67

Hooker valued Archer’s ‘notes and drawings’ to assist in the identification
of Tasmanian orchids, but it was only after receiving Archer’s £100 grant that he
could be assured of publishing them. Hooker employed the Kew artist and
lithographer Walter Hood Fitch to translate the images onto litho stone.68 As
mentioned previously, Archer did not always approve of Fitch’s work, and was
dismayed when he found Fitch adding his name to Archer’s as the delineator, and
sometimes adding extra flowers and leaves or deleting extra dissections. The
Flora contained twenty-eight plates of orchids depicting fifty-six separate species.

66 For example see Hooker’s notes for the genus Microtis, Hooker, Flora Tasmaniae 2, p. 24.
67 Archer’s absence from historical discussion about the Flora, Hooker, or the history of
Tasmanian botany is difficult to account for, particularly when compared to the attention paid to
Gunn. The only recent author to push the importance of Archer’s work has been Hansen in her
MA dissertation, although her argument was based more upon his artistic contributions than the
combination of his artistic, systematic, and financial assistance. See Hansen, ‘Illustrations and
Work of William Archer’.
illustrated discussion of the different ways Australian plants were illustrated in eighteenth and
nineteenth century botanical publications (including lithography) can be found in Hewson, 300
Years of Botanical Illustration, pp. 3-14
Of these plates two bore Archer’s name alone, and only one was solely attributed to Fitch. The remainder were all recorded as collaborations.

Despite this, after close comparison with the originals, Hansen found that the illustrations were essentially Archer’s, with small changes made by Fitch that compromised the drawing’s accuracy more often than adding to it. To maximise the number of species illustrated, many of Archer’s finer details – particularly dissections – were cut for space, allowing two species to be illustrated per plate. As Fitch worked from Archer’s sketches he often tweaked the viewing angle of the plant, or occasionally combined two or more of Archer’s drawings to depict one species, with the inevitable possibility that the final illustration was more an amalgamation of two species rather than one or the other.69

If any disagreement did arise between the two men Archer put it aside, wanting most of all to see good illustrations published rather than risking them being left out over artistic differences. When he received his originals and their matching specimens back from Kew eight months later, Archer’s displeasure resurfaced, finding the originals ‘soiled by spots of colour etc, no doubt through the carelessness of Mr Fitch.’70 As well as the lack of care this showed, Archer was anxious because it was these illustrations he planned to present to the Linnean Society later that year. Over the next two and a half months, Archer worked to tidy the drawings up, inking in anthers and other extra details.71

69 An example is the illustration of Pterostylis mutica. Hooker, Flora Tasmaniae 2, plate CXVII. For more discussion and in-depth comparison of Archer’s original illustrations with those published in the Flora see Hansen, ‘Illustrations and Work of William Archer’, pp. 87-106.
70 W. Archer diary, 14 Apr 1858, UTL 61/6.
71 W. Archer diary, 28 Apr; 30 Apr; 1 May; and 31 May 1858, UTL 61/1.
Archer uses the Kew herbarium

Aside from his work on specific taxonomic cases, Archer made good use of the chance to work amongst the collection in the Kew Herbarium. At first he worked primarily upon the specimens he had brought with him, checking names, selecting specimens to give to the Hookers, and ordering his cabinets. As a result, he assembled the most scientifically up to date collection of Tasmanian plants outside of Kew, reviewed parts of the *Flora* before they were printed, and following publication quickly obtained his own copy.72

Archer also took the opportunity to attend to other natural history items he had brought to England from home – specifically the skins from Tasmanian marsupials. He had his 902 platypus pelts, originally from a large mat resewn into two rugs, and a scarf. He also had a child’s size muff, boa and cuffs made from the skins of native cats and possums.73 Throughout the winter of 1858 Archer worked each day into the afternoon on sorting and cataloguing his herbarium. He was still in contact with friends in Australia, receiving a packet of specimens from gardener Charles Stuart in February. Stuart took advantage of Archer’s proximity to the Hookers and Kew to have his identifications verified and any novelties noted.74

As spring rolled on, Archer continued to reorganise his herbarium, one genus at a time. As he worked he began to notice gaps, which led to a new collecting behaviour: taking specimens from the Kew herbarium. Managing

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72 For example Joseph Hooker gave Archer the fifth section from the first part seventeen days after it was printed. W. Archer diary, 18 Dec 1857, UTA A7/2.
73 The original platypus mat was arranged in a rectangle Archer presented one of the resulting two platypus rugs to the Linnean Society. W. Archer diary, 19 Dec 1857, UTA A7/2; W. Archer diary, 19 May 1858, UTL 61/1.
74 W. Archer diary, 27 Mar 1858, UTL 61/1.
duplicates in such an enormous collection had always been a problem, so it seemed a sensible solution to thin out the bulk by allowing Archer to take the ‘spares’. Of course to allow this to occur Archer must have had permission from Hooker to do so. It is indeed possible that it was Hooker’s own idea.

On his first trip Archer noted with disappointment that amongst the duplicates ‘there were few rare ones’, nevertheless taking a parcel away with him in the afternoon. For the next six weeks Archer’s visits to Kew were nearly always combined with him taking duplicates of Tasmanian plants from the Herbarium. He took specimens from Epacridaceae and Proteaceae. He gathered specimens collected by Augustus Oldfield and by Gunn, noting that ‘It is astonishing how many utterly unnecessary specimens Gunn collected & forwarded to England’. By May the novelty of each trip blurred into the next, Archer repeatedly noting ‘selected specimens from the duplicates of the Tasmanian Flora’. When the warmer months arrived, Archer would take his family around the countryside and became occupied by other matters. But by November he returned to Kew, taking duplicates of grasses, orchids and lilies.

Archer’s removal of so many specimens went beyond helping the Hookers to tidy the overstocked shelves at Kew. Clearly he wished to possess as complete a collection of the Tasmanian Flora as possible, second only to Kew in representation. It seems peculiar that Archer would travel across the globe to collect plants from his own neighbourhood, but taking specimens did save Archer a lot of time, effort and expense not having to traipse across the Tasmanian

75 W. Archer diary, 3 Apr 1858, UTL 61/6.
76 W. Archer diary, 20 Mar–31 May 1858, UTL 61/1; also W. Archer diary, 12 Nov–31 Dec 1858, UTA A7/2.
landscape himself. This was a further benefit for Archer who continued to suffer from frequent debilitating bouts of illness.77

Gunn would have been unimpressed by Archer’s behaviour. He had not gone to so much trouble just to have another, younger man, sweep in and diminish his work. But by taking specimens from Kew, Archer was not only bypassing the time-consuming process of collecting, pressing, mounting and identifying; he was stocking his herbarium with Hooker-verified specimens. When Gunn sent his numbered and self-identified specimens to Kew, he retained a set of numbered duplicates, awaiting verification from the Hookers (or Lindley, or Brown), for each specimen sent. There is no denying there was value in Gunn’s’ self-labelled herbarium, but the real certainty came once it had been verified by the experts in London. For Archer it was not important if he had personally collected each item in his herbarium, rather that he had as complete a collection as possible, each item verified by botanical experts.

During the colder months of 1858 and 1859 Archer mentioned twenty-six trips to Kew where he took specimens for his personal herbarium. When he departed Britain he went equipped with a set of Kew-verified specimens that was incomparable to any other. Archer’s herbarium did not remain in Tasmania after his death, as neither the Royal Society nor the Tasmanian Government could stump up the necessary cash to purchase it. Ironically, Archer had amassed a

77 The exact nature of Archer’s illness is unknown. Anita Hansen suggested he suffered from tuberculosis, although her evidence for this diagnosis is unclear. Archer noted being bedridden or unwell several times in his diaries, interrupting planned collecting trips such as when William Harvey was due to visit in 1855. Many of Archer’s travels were motivated by his illness, either by consulting distant physicians in England or sampling the different climates of Sydney and Melbourne.
collection so valuable that no one in the colony could afford to buy it.\textsuperscript{78} Instead Joseph Hooker bought the collection, including all the specimens and cabinets. As a result, many of these specimens made their third transglobal voyage, and were sorted and distributed for a second time amongst the shelves at Kew.\textsuperscript{79}

Today the value of Archer’s herbarium is not measured by how many of his specimens bear an official stamp from the Hookers. Looking at digitised specimens held by Kew, or comparing specimens in Hobart reveal similarities within the collection, and some striking contrasts with other herbarium sheets. Archer’s sheets may all have been of a uniform size, but the plant fragments were not. Often Archer’s specimens were small, short pieces clustered together, the multiple pieces intended to give the overall idea of character or habit. Instead of one piece of \textit{Richea sprengelioides} he had four. Or with \textit{R. acerosa} he had six pieces, each small enough to fit altogether upon a single specimen sheet.\textsuperscript{80}

Archer would have learnt how to select a specimen from Lindley’s \textit{Elements of Botany}, in its fourth edition by 1847. In his description of what made a good specimen Lindley did not mention size, only that it should ‘exhibit the

\textsuperscript{78} Archer’s plans for his herbarium once he returned to Tasmania were not clear, but it appears he was primarily motivated by a desire to personally own one of every known native plant. He recognised its importance for Tasmania and would have allowed other colonists to visit and consult his collection, but despite his close association with the Royal Society of Tasmania following his return in 1860, he made no indication of an intention for it to become a public or state collection, at least not from donation. This is supported by the fact his herbarium was sold after his death, although this arrangement also reflected Archer’s decreased finances in his later years.

\textsuperscript{79} Joseph Hooker and Tasmanian naturalist William Spicer both wrote to the Royal Society of Tasmania describing the value of the collection, ‘in splendid order and condition, all accurately named and arranged in six cabinets. These are all packed in tin, and then again in wooden cases: the specimens most beautifully selected and placed on sheets of white paper of uniform size and then again in covers.’ J.D. Hooker to A. Kennerly, 23 Dec 1875, UTA RSA E12. The purchase is also mentioned in A.C. Rozefelds, ‘A four-year Antipodean Odyssey: the Reverend William Spicer M.A. in Tasmania, 1874-1878’, \textit{Kamunah} 1 (2005), pp. 33-46.

\textsuperscript{80} Kew online herbarium catalogue, \textit{Richea sprengelioides}, K000349928; \textit{R. acerosa}, K000349940.
usual character of the species’, and that ‘a single shoot, comprehending leaves, flowers, and fruit, is a representation of the largest tree in the forest, and will give as distinct an idea of the individual as if a huge limb were before the Botanist’.81 Archer’s fragments did deliver fruiting and flowering bodies, but often upon stubby branches.

Another area where Archer’s herbarium fails is in the labelling. It is not unusual to see attached to a sheet a label that along with the plant name simply reads ‘Tasmania. Archer.’ Occasionally more detail is retained if the small slip Archer attached to each specimen remains with the specimen sheet, reading for example: ‘W Mts Jan 48’.82 This limited notation looks clean and confident on the specimens, but is unhelpful for modern-day botanists.

That Archer did not usually record either the date or the collecting localities is a double blow, making it difficult for scientists to continue using his specimens as part of larger botanical studies. This vagueness is reflected in the present-day appearance of Archer’s specimens at Kew. Where a Gunn specimen sheet may sport notes, stamps and annotations from botanists into the twenty-first century, Archer’s usually bear no marks of use beyond Hooker’s Flora Tasmaniae and Bentham’s Flora Australiensis, when both authors could talk or write to Archer and reconfirm any locations or dating that they required.

The extent to which Archer did not adequately label his specimens can be seen by analysing the Archer collection held by the Tasmanian Herbarium. Of a total 748 William Archer specimens, only 28, or four per cent, are dated.

82 Archer’s ‘W Mts’ are the ‘Western Mountains’ near ‘Cheshunt’. Kew online herbarium catalogue, Richea sprengeliiotes, K000349928. For more limited annotations see Leucopogon collinus, K000348430 and Archeria hirtella, K000355490.
Approximately the same number contain specific references to location (figs. 31 and 32).

Figure 31 *Richea acerosa*, a typical Archer herbarium sheet from Kew, with several small plant fragments, and limited notation. In bottom right is Archer’s collecting note ‘Tasmania. Archer’. K000349940.
Chapter 7: Collaboration

Prasophyllum archerii Hook.f.

Figure 32 Richea milliganii, a specimen sheet prepared by Gunn and held by Kew. Here Gunn has accompanied his specimens with detailed pencil sketches, and extended notation. There are extra stamps and notes affixed to the sheet by botanists who have later used this specimen to inform their own research. K000349931.

What Archer lacked in his labels he occasionally compensated for with pencil sketches. His specimen of Viola cunninghamii included four delicate plants, three in flower. The date they were collected was not noted, but they came
from ‘near Cumming’s Head’. Adhered to the sheet along with the plants was a sheet with nine pencil sketches by Archer, including the full plant in flower, a leaf study, and seven angles of the flower and dissected organs. The value of such detail was immeasurable for botanists working from the herbarium sheets alone without ever having seen the live plant. To determine how many sheets of sketches Archer attached to his plants would require a manual search of the Kew herbarium shelves, and the number is currently unknown.83

Archer fully embraced the scientific world during his stays in London, and took full advantage of the knowledge of others right up until his departure in November 1859. In the last six weeks, aside from arranging the packing and transport for his household and family, Archer continued to arrange ferns, grasses and sedges in his herbarium. He sent and received mosses for verification from Mitten, discussed the impact of thistles in Tasmanian agriculture with Lindley, and completed a paper on the extent to which hairs in Eurybia were a reliable species characteristic.84 Thinking to the future, Archer enquired about the value of

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83 Kew online herbarium catalogue, Viola cunninghamii, K000370172. The illustration on the Viola is by no means unique for Archer, it was similar to his voluminous sketches of orchids. Another of his sketches has been photographed and published as part of Brummitt et al.’s paper on the Tasmanian taxonomic tangle about the alpine conifers. The authors attributed the sketch of the male and female parts of Microcachrys to ‘unknown’, but close inspection shows it is Archer’s work. This is determined by a faint pencil note in Archer’s hand, ‘Phaerosphaera Hookeriana’ (the name erroneously attributed in this case), and by a small series of markings on the picture’s middle left-hand margin. Those markings constitute a code that Archer often employed in his diaries when writing about personal matters such as the birth of another child, or an argument with his wife. Usually the encoded segments are short and to the modern reader they reveal little about Archer that would ever suggest the need for a code. In this instance – which is a perfect example of the seeming pointlessness of the exercise – Archer had written ‘leaves rather large’, in reference to a sketch of a conifer branch. The only conceivable uses for such cryptic behaviour was to conceal that detail from others in the herbarium, or because writing in the small square symbols was neater and used less space than normal handwriting. See Brummit et al., ‘The significance of ‘it’’, fig. 5, p. 537.

84 William Mitten (1819-1906) was a pharmaceutical chemist and a skilled bryologist. He was good friends with the Hookers and met Archer at Kew. W.E. Nicholson, ‘William Mitten: A Sketch with Bibliography’, The Bryologist 10 (1907) pp. 1-5.
various Tasmanian hardwoods in the London market, and while having books bound at Lovell Reeve’s discussed which Tasmanian shells would be most desirable to English collectors.85

Archer’s final trip to Kew at the start of November was conducted amidst the whirlwind of packing and other farewell visits. He attended his final Linnean Society meeting on November 4 where Wallace gave a paper on the geographical distribution of plants. Eight days later Archer was on the ship making final purchases before sailing for Melbourne.

‘It is gratifying to have one’s memory embalmed in flowers in a book that will always be famous’.

On St. Valentine’s Day 1860, two days after he had disembarked in Tasmania, Archer wrote to Joseph Hooker to let him know of his safe arrival, energised by his return home and keen to reengage with colonial life. Nine days after arriving in Launceston he travelled to Hobart to dine with the council of the Royal Society of Tasmania, proposing the creation of a new custom-built museum to house the collection. He had been ‘marked out’ as Archer put it, to take over the role as Secretary to the Royal Society, and was also expected to return to politics, being nominated to fill the vacant Legislative Council seat in the northern county of Devon before he had even set foot in the colony.86

Archer explained to Hooker that he would be devoting his time to politics and not science, but two days after the dinner Archer was appointed for two years

85 W. Archer diary, 1-26 Oct 1859, UTA A7/2.
86 W. Archer to J.D. Hooker, 14 Feb 1860, Kew DC 218.
as secretary to the Royal Society at £250 per year, replacing Joseph Milligan who took leave to return to England. Furthermore, Archer continued lobbying for a new museum. This was not only approved, but Archer was appointed as the preliminary architect. He worked tirelessly at the plans, drawing inspiration from the museum of economic botany at Kew, having the design finished and drawn up just fifteen days after stepping off the boat in Launceston.\(^{87}\) Despite his hard work, Archer did not see his building realised, as Museum was put out to a public competition, which was won by the celebrated colonial architect Henry Hunter.\(^{88}\) Despite his loss, this incident demonstrated how directly Archer’s Kew experiences impacted upon his colonial life. The museum at Kew was new when Archer was there, prompting him not only to propose an independent building for the Tasmanian collections, but also to model it upon the Kew museum itself.

Archer’s involvement in colonial science and correspondence networks did not wane following his return home. Although distracted by politics, family and business, he continued writing to the Hookers and maintained contact with the Linnean Society. He became a correspondent of Ferdinand Mueller and through him became involved in aspects of George Bentham’s *Flora Australiensis*. Soon after arriving in Hobart, Archer received a copy of Darwin’s newly published *Origin of Species* promising himself ‘a great treat in reading it’. Despite his strong

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\(^{87}\) W. Archer diary, 12 Feb-27 Feb 1860, UTA A7/2; W. Archer to J.D. Hooker, 12 Mar 1860, Kew DC 218.

religious commitment, Archer seemed open to examining the merits of the theory, to the extent that he intended to put some ‘facts’ together himself on the subject.\(^89\)

Archer’s interest in Darwin would have been heightened when he saw how the theory was discussed in the *Flora Tasmaniae*. Joseph Hooker’s great essay ‘On the Flora of Australia’ formed the final part of the work. This was published only one month after *Origin of Species* in December 1859. In the essay, Hooker used the Tasmanian and Australian flora as a case study to support natural selection. He had found the Australian flora was particularly suited to such a study, due to its floristic variety and high species endemism, coupled with the country’s relatively uniform physical features. With this evidence, Hooker asserted that ‘species are derivative and mutable’, acknowledging that he was contradicting his earlier doctrine that species were immutable.\(^90\) He was open about his change in thought, explaining than anyone of a ‘candid mind’ would have to revise their opinions on the topic due to the ‘ingenious and original reasonings of Mr. Darwin and Mr. Wallace’.\(^91\) Indeed, Hooker believed he would continue to revise his opinions on the topic, as ‘matured conclusions on these subjects are very slowly developed’.\(^92\)

Hooker did not quote directly from the *Origin* in his essay, explaining in a postscript that his work had gone to the printer before Darwin’s book was released. Nevertheless, Darwin had heavily informed Hooker’s writing, with both

\(^89\) W. Archer to J.D. Hooker, 12 Mar 1860, Kew DC 218.

\(^90\) His earlier opinions were published in his introductory essays for the *Flora Novae-Zealandiae* (1853) and the *Flora Indica* (1855).

\(^91\) Hooker, ‘introductory essay’, p. ii.

\(^92\) Hooker was referring especially to certain matters where he and Darwin differed. Hooker, ‘introductory essay’, p. xxvi.
men exchanging their drafted manuscripts for critical comment before printing.\textsuperscript{93}

It is important to add that Hooker’s support was not boundless. He said he was indebted to Darwin and the theory of natural selection, but that ‘it does not positively establish the doctrine of creation by variation’. Hooker explained that more evidence along the lines assembled in the \textit{Flora Tasmaniae} was required to strengthen the hypothesis.\textsuperscript{94} He never fully embraced Darwinism, remaining ambiguous in his writings on the topic. Endersby has argued that it is more constructive to question what parts of the theory were useful to Hooker rather than if he supported it or not.\textsuperscript{95} Hooker was most interested in how natural selection could assist his work on classification, voicing this in his 1859 essay, where he called for more supporting evidence as it would ‘materially assist in developing the principles of classification and distribution’.\textsuperscript{96}

In Tasmania, William Archer avoided sharing his first impressions of the \textit{Origin} with Joseph, instead focusing with disapproval on the ungentlemanly behaviour of other scientists towards it. He wrote that that Owen was a ‘\textit{h}animal’ in his behaviour towards Darwin, and regretted that he and Darwin had not met at the Linnean Society when they had the chance.\textsuperscript{97} Archer was a little more expansive in his communications with William Hooker, as their correspondence.

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\textsuperscript{93}Hooker, ‘introductory essay’, p. cxxviii. Darwin thought Hooker’s essay ‘\textit{e}xtremely interesting’ and ‘the most valuable ever published’ on topic. C. Darwin to J.D. Hooker, 1 Sep [1859]. He gave further critical praise in several other letters during 1859. Darwin Correspondence Database, accessed 14 Sep 2011, http://www.darwinproject.as.uk/entry2485. Endersby has described the forty years of correspondence between Darwin and Hooker as ‘one of the most important scientific friendships of the nineteenth century’. Endersby, \textit{Imperial Nature}, p. 316.
\textsuperscript{94}Hooker, ‘introductory essay’, p. xxvi.
\textsuperscript{96}Hooker, ‘introductory essay’, p. xxvi.
\textsuperscript{97}W. Archer to J.D. Hooker, 20 Jul 1860, Kew DC 218.
\end{flushright}
tended to range more broadly across natural history, family and local news, and allowed more room for discussion. Archer admitted he found Darwin’s idea ‘extremely valuable’, particularly when applied to widely separated varieties and species. He added that ‘much may be said against it, – or rather against people’s interpretation of [Darwin’s] theory’, indicating Archer’s recognition of how delicate a topic it remained.98

Ten years after first hearing the paper at the Linnean Society, Archer was willing to venture that he was ‘not a convert to Darwin’s theory altogether’ but he ‘value[d], of course, most highly his inimitable research into the true nature of plants, & his admirable deductions therefrom’.99 This reservation matched the mixed reception of Darwin’s theory in the colony generally. Local newspapers printed London reviews from the Athenaeum and the British Association for the Advancement of Science, but there was little local engagement with the topic. After a reproduction of the Duke of Argyle’s speech to the Highland Agricultural Society in Scotland, the Hobart Mercury only added the vague editorialisation, ‘we do not go all the way with Mr. Darwin in his theory’.100

There were only two other comments made about the Origin, each raising specific practical rather than theoretical questions. One mentioned Darwin in relation to the issue of seed transportation by birds. The other, a letter from an ‘observer’, expanded upon Darwin’s pollination theory by pointing out that red

98 W. Archer to W.J. Hooker, 23 Nov 1860, Kew DC 75.
99 W. Archer to J.D. Hooker, 2 Dec 1868, Kew DC 172.
clover had never prospered in the colony for want of an appropriate pollinator. Archer was similarly interested to engage with the practical implications of Darwin’s work rather than broader discussion that could lead to questioning faith and God. As both items appeared in the northern paper, the *Launceston Examiner*, it is likely that one – if not both – were from Archer’s pen.

The colonial reception of Hooker’s *Flora Tasmaniae* was similarly quiet. By the time Archer arrived in Hobart Town in 1860, the eleventh and final part had been printed in London, containing Hooker’s meaty introductory essay, and his dedication to Gunn and Archer. It was five months more before Archer saw it, writing to accept the complement:

Many thanks, for the kind & courteous thoughtfulness which induced you to couple my name with Gunn’s in the dedication. Certainly you have given me vastly more credit for my labours than I should ever have thought of laying claim to. Well! it is gratifying to have one’s memory embalmed in flowers in a book that will always be famous.

He was clearly pleased with the honour, not just as recognition of his work, but also seeing that Hooker rated Archer’s assistance second only to Gunn’s. If Gunn was the most able botanist in the island, Archer was the next in line. On looking at Archer’s initial private reaction, however, it seems his surprise and delight at the dedication was less spontaneous, ‘Looking through last two parts of Dr Hooker’s Flora Tasmaniae I find that he has dedicated the work to Gunn & myself, & makes ample acknowledgement of the assistance which I gave

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102 Archer had shown particular interest in how Darwin’s work related to the mechanics of pollination and the physical characteristics of flowers. W. Archer to J.D. Hooker, 2 Dec 1868, Kew DC 172.
103 W. Archer to J.D. Hooker, 20 Jul 1860, Kew DC 218.
him.’ Nevertheless, Archer had contributed a great amount of time, energy and money towards the *Flora*, so it is not altogether surprising that he expected some gentlemanly nod of thanks.

Aside from the dedication, Hooker acknowledged the contribution of each major contributor to Australian botany to 1860 in the final section of his essay, ‘Outlines of the Progress of Botanical Discovery in Australia’. After discussing voyages, land expeditions and official botanical postings undertaken by the British and colonial governments, Hooker spent several pages chronologically discussing the contributions of what he called ‘private individuals’, from surgeon John White in 1788 to the ongoing work of Ferdinand Mueller. Whilst presenting an impressive roll-call of colonial scientific endeavour, it is informative that Hooker’s three paragraphs on Gunn were positioned as part of the history of plant collecting and written as a remembrance of their relationship. In contrast, Hooker’s discussion on Archer began ‘It remains only to mention my friend William Archer’. The active tone Hooker used to describe his friendship with the Tasmanian and the positioning of the paragraph right at the end of the essay, demonstrated that in Hooker’s mind Gunn’s worthy contributions were ended, but his relationship with Archer was ongoing.

Archer’s pleasure at the dedication was not short-lived, either. He took great pride in it, reminiscing to Hooker of his happy days in the herbarium at Kew, and how the published thanks was evidence of his involvement in a greater botanical project:

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104 W. Archer diary, 16 July 1860, UTL 61/1.
105 Hooker, ‘introductory essay’, pp. cxii-cxxviii
I used to enjoy those visits to the King of Hanover’s, though I did not often work very hard; but still you have immortalised me in the beautiful Flora of Tasmania, & Bentham has paid me a compliment in his famous Flora Australiensis…so that there remain to me mementoes, untainted by bovine or ovine ideas, of pleasant days gone by for ever.\textsuperscript{107}

In contrast to Archer’s pleasure in having his ‘memory embalmed in flowers’, Gunn’s response to the final section of the \textit{Flora} and the dedication is difficult to gauge. Indeed, it is hard to know what Gunn thought of any of the segments, beginning with the first part containing \textit{Tetratheca} in 1855, as Gunn’s correspondence with the Hookers had ceased.\textsuperscript{108} While Archer was in London collating segments to present to the Queen, Gunn remained silent, not revealing his feelings towards the work to anyone.

There was only one instance when he mentioned the \textit{Flora} to Joseph Hooker at all. In a brief resumption of correspondence in 1859 prior to the final section and dedication being printed, Gunn wrote: ‘From time to time I had intended to resume my Communications to you when the first part of the Flora Tasmaniae came out – but it was postponed.’\textsuperscript{109} The only time Gunn mentioned the great twenty-year project was in a regretful aside about not picking up his pen to write.

The public response to the \textit{Flora}, both locally and in Britain, is also surprisingly difficult to ascertain. The first two parts of the \textit{Botany of the

\textsuperscript{107} W. Archer to J.D. Hooker, 8 Sep 1871, Kew DC 172.
\textsuperscript{108} During the 1850s and 60s the only link between Gunn and Kew was through Archer. Occasionally Archer would mention his old political opponent, but not in a particularly complimentary manner: ‘Gunn I see now & then looking always intensely unscientific, - as though he had either achieved the end of his ambition, or is incessantly occupied with official affairs, or personal matters of business.’ W. Archer to J.D. Hooker, 23 May 1867, Kew DC 172.
\textsuperscript{109} R.C. Gunn to J.D. Hooker, 13 Jun 1859, Kew DC 218.
Antarctic Voyage were well reviewed in London, but apparently not the third part. In private, Hooker received feedback about his essay from Charles Darwin, who described it as ‘by far the grandest & most interesting Essay on subjects of the nature discussed I have ever read’, adding ‘How superior your essay is to the famous one of Brown’.110

Locally, the Flora must have been highly anticipated by the Tasmanian Government who wanted to see a return for their £350 investment, and from the Royal Society members who had keenly awaited the work from the outset. Unfortunately no book review was published, as the Royal Society’s Papers and Proceedings for 1860 and 1861 were suspended while Archer worked to make sense of the paperwork left by Milligan, the outgoing secretary. In fact, during this period the Society was so focussed upon the prospect of funding and building a new museum, the arrival of the final section of the Flora was not even minuted.111 The only mention of the Flora arriving in the colony at all was in newspapers that published new acquisitions to the libraries of scientific societies, such as the Royal Society in Hobart, and the Mechanics’ Institute in Launceston.112 Those copies were the return agreed upon as part of the government’s grant six years earlier.

110 C. Darwin to J.D. Hooker, 3 Jan 1860, University of Cambridge, Darwin Correspondence Project, last modified 2011, http://www.darwinproject.ac.uk.
111 Council Meeting Minutes of the Royal Society of Tasmania, 1 Jun 1853-23 Jul 1863, UTA RSA/A/3.
112 The addition to the library of the Mechanics’ Institute was noted at their annual meeting, the Flora being ‘donated’ by the Colonial Secretary. The Launceston Examiner, 13 Oct 1859. The Royal Society similarly noted ‘Flora of Tasmania, part 9’ received from the Colonial Secretary, ‘in accordance with the vote of the Legislature of the Colony’, referring to the arrangement made for the distribution of copies received in return for the £350 grant. The Hobart Town Daily Mercury, 28 Apr 1860.
The lack of a magnificent reception, dinner, or public proclamation following the completion of the *Flora* is a little puzzling when the preceding twenty years of involvement and investment by Tasmanian naturalists is taken into account. Perhaps it had been so long in the making that it was seen as closing the cover on a great book, rather than the means to open a new one.

**Conclusion**

Archer’s contribution to the *Flora* complemented the work of earlier colonial correspondents, as he was able to assist Joseph Hooker in the final stages of the work. He was heavily influenced by his time at Kew, returning to Tasmania not only with ideas of how to improve the colonial scientific scene, but literally with parts of the Kew plant collection.

Whilst Archer’s herbarium was sold and redistributed at Kew, Gunn donated his to the Royal Society of Tasmania in order to provide what he had wanted as a young man: a publicly accessible reference herbarium.¹¹³ Unlike Archer’s collection, Gunn’s specimens are still frequently used in Australian taxonomy as his specimens make up such a large proportion of the Tasmanian type material. His careful recording of dates and collecting localities is

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¹¹³ Gunn made the donation in 1876, five years before his death, recognising that he was never going to be well enough to return his crumbling collection to its former glory. It is currently housed at the Sydney Herbarium, where it was moved in 1904 after Joseph Maiden offered to clean and rearrange it as appropriate. Since its removal to Sydney there has been no comprehensive analysis of the entirety of the Gunn collection. Today the Tasmanian Herbarium is fully equipped to house the complete collection and is arguably better able to curate it, as Gunn’s herbarium of Tasmanian plants makes most sense when viewed in context with other Tasmanian collections. As yet only some fragments and duplicates from the original collection have been returned, and the circumstances of the collection’s removal is a topic of current research. *The Mercury* 18 May 1876; Buchanan, *Collecting Localities*, p. 10; and Somerville, *The Royal Society of Tasmania*, p. 212.
particularly important in assessing environmental impact over time, using his historic data as a benchmark for modern plant population studies.

Archer’s herbarium may be of less use today, but it remains an important record of Victorian science and collecting practices. It was during the 1850s that Tasmanian botany came of age, with the career heights of Archer and Gunn, and the publication of the *Flora*. Together Gunn and Archer made a big impression on Tasmanian botany – Gunn provided the physical evidence with his unsurpassed collection of new species, while Archer followed his effort by refining contemporary knowledge and providing immediate counsel to Hooker as he needed it whilst compiling the *Flora*. Although they did not recognise their contributions as a joint effort by resident Tasmanians, their work was indeed collaborative, as is reflected in the *Flora*. 
CONCLUSION

Nothofagus gunnii (Hook.f.) Oerst.

Figure 33 Nothofagus gunnii, the only native winter-deciduous tree or shrub in Australia, first collected by Gunn on his last major field trip to Mt. Olympus. Originally known as Fagus gunnii, its name was determined by Joseph Hooker in the 1847 London Journal of Botany based upon Gunn’s account alone. It was later fully described and illustrated by William Hooker in the Icones Plantarum 9 (1852), t. 881. Photograph courtesy of James Horne.
‘Almost at the summit…and at the base of the perpendicular basaltic cliffs constituting the Summit of Olympus, I found a New Fagus!’

Ronald Gunn to Joseph Hooker, 21 Jan 1847, Kew DC 218.

‘I have some doubts as to the existence of a veritable deciduous beech, or deciduous anything, in Tasmania; and I would advise your son to be very cautious how he adopts the species.’

William Archer to William Hooker, 27 Jul 1854, Kew DC 74.

In the interval between Robert Lawrence’s first letter to William Hooker and the publication of the final section of the *Flora*, a lot had changed in the colony. In many ways the Van Diemen’s Land that Lawrence and Gunn had known as young men no longer existed. Convict transportation had ceased in 1853, with Archer and his fellow anti-transportationists triumphant in their cause. Reflecting the new era, the colony moved into self-government, shedding its old name to transform from ‘Van Diemen’s Land’ to ‘Tasmania’. The government that had granted Archer’s funding for the *Flora* has also changed, operating as a representative body, with elected Premiers and members rather than consisting of Crown appointments. ¹

The three decades of collecting that went into the *Flora Tasmaniae* captured shifts in botanical practice too. A naturalist starting out in 1860 now had access to a wealth of published information. They could also engage with a colonial scientific community in the shape of the Royal Society of Tasmania. But this increased knowledge also meant that collectors could no longer simply head

¹ For more detail of the changes in Tasmanian government in the mid-nineteenth century, see L. Robson, *A History of Tasmania Volume II: Colony and State from 1856 to the 1980s* (Melbourne, 1991), pp. 31-54.
into the hills behind their houses in order to find new plants. Between them, Lawrence, Gunn, Archer, Hooker and their colleagues had collected nearly fifty per cent of the species of the island’s vascular plants.²

Where Lawrence and Gunn could amass hundreds of new species in a single season, those following them would have to content themselves with decreasing numbers of plants new to science. In order to maximise their chance of collecting new species, collectors in the second half of the nineteenth century targeted new locations, as evidenced by William Harvey’s expedition to Port Davey, or specialise in particular plant groups, like Archer and his orchids.

The completion of the Flora marked the end of a phase of colonial botany driven by intensive collecting expeditions. Although the finding and recording of new species remained important, the level of interest in Tasmanian botany changed after 1860.³ Many residents were of the view that Hooker had published a complete catalogue, while others turned their attention to other less-studied branches of natural history. It was another forty years before any significant addition to Hooker’s work, by which time botany had become a truly specialised science.⁴ Botanists turned their attention to refining the classification of the

² The number of recognised vascular species has increased markedly since Hooker’s Flora. He estimated the island housed 1,063 different species. In 1989 this figure had increased to 1,627. Today the current estimate is 2,498. Hooker, ‘introductory essay’, p. lxxxiv; Hill and Orchard, ‘Composition and Endemism of Vascular Plants’, p. 89; current figures from Tasmanian Government Department of Primary Industries, Parks, Water and Environment, ‘About Tasmania’s Native Plant Species’, last updated 18 May 2011, http://www.dpiw.tas.gov.au/.

³ McClellan found a similar pattern in Saint Domingue, where the first missionary collectors catalogued and classified, creating what he called ‘passive’ compendiums to communicate knowledge. This work was built upon when the French government became actively involved, applying this new knowledge for colonial economic benefit. McClellan, Colonialism and Science, p. 115.

⁴ L. Rodway, The Tasmanian Flora (Hobart, 1903). Between 1860 and 1903 a few other works on the Tasmanian flora were published, such as R.M. Johnston’s Field Memoranda for Tasmanian Botanists (Launceston, 1874) and W.W. Spicer’s A Handbook of the Plants of Tasmania (Hobart Town, 1878), but these smaller works drew their content largely from Hooker’s Flora Tasmaniae.
known flora, studying one plant group or genus, or to producing specialised texts on subjects such as economically useful plants. After 1860, if a generalist, untrained plant collector like Gunn wished to make a contribution, he had to be somewhere far outside of the settled districts in a place more remote than Launceston or Hobart.

Although botanical pursuits were less popular in the colony after 1860, Gunn and Archer continued their work in whatever way they could. At fifty-two, Gunn was still physically capable of getting out in the field each spring and summer to collect specimens, but lacked his old enthusiasm. At the time when Archer had been filling his herbarium with specimens from Kew to take home, Gunn had been surveying his herbarium, not with joy but despair. Over the preceding decade dirt, dust, mildew and insects had obscured or ingested many delicate specimens. Plants lay in unsorted heaps, and labels were divorced from their twigs and branches. Gunn struggled to find a way to recommence writing to his friend after many years of neglecting their correspondence:

My dear Hooker,
It is not easy to give all the reasons which from time to time led to delay in writing and ultimately to an other cessation on my part of our correspondences. – Having once dropped it – it was painful to resume and so for many years I pretty well abandoned Botany and my Correspondence together. I have regretted it on many accounts because I had many [novelties] lying on my shelves – now about wholly destroyed by insects – and I had not hope or rather leisure to assort & send them Home.5

Rodway’s work was the first publication to offer significant new botanical information. This in turn was not substantially revised until W.M. Curtis and D.I. Morris’s *The Student’s Flora of Tasmania* (Hobart, 1956–1994).

5 R.C. Gunn to J.D. Hooker, 13 Jun 1859, Kew DC 218. One month later Gunn attempted to clear out his collection and begin afresh, sending an orchid specimen to Hooker along with the note, ‘God knows how many more I may have for I really forget the when & the where I picked up any & most of them are totally destroyed by insects.’ With such sentiments Hooker could not have held out much hope for receiving many more treasures from Gunn’s collection. The impact of insects upon Gunn’s herbarium was mentioned a third time by William Archer in 1869,
Instead of dwelling too much on his failings, Gunn turned to the easier subject of future work, in the form of a supplement to the *Flora*. He noted that there were still major parts of the island unexplored by botanists, and large genera unrevised. He recognised Archer’s efforts with the orchids, but that more needed to be done – Gunn was worried that the species were still ‘muddled’. He added there was more work wanting on algae and fungi, but that collecting and preserving the latter group as high quality diagnostic specimens was difficult.

Although he intended to provide new material for the supplement, his collections in the 1850s and 1860s were limited. With fewer plants to discuss, Gunn raised other botanical questions about common species found in Tasmania and Victoria, and the role of fire in the regeneration of Australian plants. Despite his other occupations, Gunn remained connected with contemporary scientific thought through the Societies he had helped to establish, and was willing to join in debates that interested him. For example in 1870 he criticised Ferdinand Mueller’s taxonomic methodology, claiming the Victorian government botanist was too reliant on herbarium specimens without using fresh material gathered from the field.

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6 When he did have the chance to go out, he had little success. He told Hooker he had gone ‘ranging’, but only across familiar ground at the Surrey Hills, and at a time when the season was ‘unfavourable’. R.C. Gunn to J.D. Hooker, 13 Jul 1859, Kew DC 218; W. Archer to J.D. Hooker, 29 May 1869, Kew DC 172.

7 These were not new topics of interest for Gunn – he had questioned the relationship between fire and vegetation on his trip to the Huon River in 1839, and discussed at the similarities and differences between Port Phillip and Vandemonian plants in the *Tasmanian Journal* in 1842.
In the years following the publication of the *Flora*, Archer and Gunn maintained some contact, but it was Archer alone who passed news along to Hooker. He included asides in his letters such as ‘Gunn told me…’ or ‘Gunn, in a letter to me…’ hinting at some kind of semi-regular communication. Archer also noticed that Gunn had never fully overcome his financial difficulties that arose following the visit of Thomas Short in 1835, adding

Gunn I fancy, must be tolerably hard up…or he would not suffer himself to be the occupier of so many inferior offices. He is Deputy Commissioner of Crown Lands, Deputy Clerk of the Peace, & Deputy two or three other things besides, – and he looks as though he felt the queerness of his position. – I don’t think he botanises much now – if at all.8

There is a parallel between Archer and Gunn’s correspondence to the Hookers as they got older, both men including details more about expeditions they intended to make rather than completed projects. This reflected their lack of time, and their loss of physical fitness. Archer’s debilitating chest infections limited his activities at a much younger age than Gunn, but his drive to keep collecting was stronger. He made the effort to collect something – anything – each season, even if it was only seeds from the native trees surrounding his house. Gunn enjoyed many more years of good health than Archer, but was consumed with other employment until his retirement.

Peeling back the layers of the *Flora Tasmaniae* has shown it was more than just a book expressing imperial science at work. Chapter one demonstrated that the Vandemonian flora was of interest to Victorian botanists due to its high

8 Archer’s reports on Gunn’s activities reinforced how many other responsibilities the former collector had taken on, later commenting: ‘Gunn I see now & then looking always intensely unscientific, - as though he had either achieved the end of his ambition, or is incessantly occupied with official affairs, or personal matters of business.’ W. Archer to J.D. Hooker, 22 Oct 1862 and 23 May 1867, Kew DC 218.
level of species endemism. By 1810 two significant botanical texts had been 
published using examples from the flora of Van Diemen’s Land. These books 
became the foundation reference texts for colonial and metropolitan naturalists for 
the next fifty years.

Chapter two showed that the *Flora* was not solely Joseph Hooker’s effort, 
as he built upon his father William’s established correspondence with collectors at 
the colonial periphery. It was William who opened the correspondence with 
Robert Lawrence, and it was Lawrence who introduced Ronald Gunn to the world 
of botany. As Hooker moulded and refined the practices of his two collectors, 
Lawrence and Gunn independently created their own intra-colonial scientific 
connections. They supplemented their letters from Hooker by examining other 
books and comparing and identifying specimens between themselves.

Examining the exertions of Lawrence and Gunn in chapter three, it was 
clear that they relied upon the assistance of others when making collections, 
benefiting from the cheap and readily available convict labour in the island. The 
shame associated with living in a penal colony was offset by the opportunities for 
employment, and the prospect of utilising highly skilled assigned servants, that in 
other societies would have been beyond their means to retain. In addition to men 
like George Morand, William Buelow Gould and James Lee, Gunn enjoyed the 
assistance of women and other gentlemen who shared his interest in natural 
history. Indeed, convicts like Morand were critical in training the early scientific 
practices of Lawrence and Gunn, further blurring the traditional view of the types 
of people involved in science at a colonial level, and the quality of their 
contribution. This layered colonial scientific community highlighted how the
reality of living in Van Diemen's Land presented obstacles and benefits to the pursuit of science. Gunn may have rued the distance between him and his British correspondents, but it was this very distance from the metropolis that attracted and maintained Hooker’s interest.

Gunn’s maturation as a collector and as a correspondent with Hooker was discussed in chapter four. Their relationship was nuanced and complex, each benefitting from the exchange of ideas, specimens and knowledge. Through Hooker, Gunn’s scientific network expanded, including more correspondents and encouraging his extension into broader natural history collecting. This expansion did not always deliver positive outcomes. Gunn learnt from his experience with Thomas Short that he had to be wary of newcomers in the network, and check every introduction, regardless of where it came from.

As Gunn’s confidence grew in his ability to make a real and valued contribution to the scientific elite, so too did his opportunities for involvement in colonial science. It was Gunn who was a founding member of the Tasmanian Society, who attended every meeting, and who maintained the integrity of the group in difficult times. It was also Gunn who spearheaded the efforts behind the *Tasmanian Journal*, which for a time was the premier journal publishing on Australian science.

Even with Gunn’s scientific prowess, it was not until he met Joseph Hooker in Hobart in 1840 that the *Flora* project really got underway. As chapter five demonstrated, William Hooker may have established the connection and moulded the collectors, but it was Joseph who harnessed the idea of a large-scale flora of the Southern Ocean, and saw the value of a concentrated study of
Vandemonian plants. The Flora spurred Gunn on in his collecting, but it also put pressure on his botanical methodology. He had collected plants since 1831, and needed to adapt to the changing needs of the project.

This is not to say that Gunn was resistant to developing his skills beyond basic collecting. Rather, his discussion of plant distribution and persistent taxonomic struggles with Tetratheca demonstrated his ability to work on specific areas of botanical science. Indeed, it was Gunn’s interest in plant distribution that caused his generation of so many duplicate specimens, indicating the variety of locations the same species could inhabit. Regardless of Gunn’s aptitude in these areas, they did not fit into Hooker’s requirements for the Flora, and so the scientific centre continued to push for broad scale collecting rather than encouraging this colonially based philosophical botany.

Gunn’s struggle to meet this challenge was accentuated by the manner in which William Archer embraced botanical specialisation. This enabled the latter to engage with the British scientific community unhindered by the rules, expectations and behaviours that Gunn had acquired over the course of his long correspondence with the Hookers. Archer represented a new generation of colonial naturalists: he was a proud, Tasmanian-born landowner, who injected a youthful vigour into the Flora project. As chapter six demonstrated it was through Archer that the periphery asserted itself, correcting work that had gone before. He was not beholden to metropolitan experts, and was proud of his colonial identity. Archer did not go on vast field trips like Lawrence or Gunn, nor did he contribute the same wealth of specimens to Kew. Instead he completed
detailed studies, happy to concentrate upon difficult plant groups, and make a
difference in a corner of the discipline where he had particular expertise.

Chapter seven encompassed the career highs of Gunn and Archer, and the
coming of age of Tasmanian botany in the 1850s. Gunn’s appointment as FRS
demonstrated that the metropolis recognised and valued his contribution to
botanical science. During the same period Archer’s enthusiasm for natural history
carried him into the heart of botanical science at Kew. In the space of twenty-five
years, botanical endeavour in Van Diemen’s Land had developed from
Lawrence’s first plant collection in 1829, to Archer’s contribution to species
descriptions for the Flora. Finally, it was in the opening pages of the Flora
Tasmaniae that Hooker became the first man of science to publicly embrace
Darwinism, based upon his case study of the Australian flora.

This thesis has shown that the Flora was more than just an expression of
imperial science at work. Flora Tasmaniae was a product of collaboration
between the metropolitan elite and a complex colonial scientific community.
Focussing upon the periphery and how it related to the scientific centre (rather
than vice versa), has provided fresh insight into how these people negotiated the
geographical – and sometimes intellectual – differences between them. By
increasing our understanding of the full range of scientific relationships in the
nineteenth century, demonstrates that intra-colonial scientific communication was
an integral part of developing a colonial community, deserving to be recognised
as an important area of study in its own right. This supports Ballantyne’s notion of
empire as a web, revealing a complex network of people involved in colonial
science, and the myriad ways they engaged with natural history. Linking the plant
specimens at the centre of the *Flora Tasmaniae* into this thesis has added further strands to this web, showing a new way to study the circulation of knowledge through historic objects.

This thesis also addresses one aspect of James Secord’s goal of reconstituting a ‘global community of naturalists’. The detailed analysis of correspondence conducted in tandem with a reading of historical documents has shed light upon some of individuals who to a greater or lesser extent have been overlooked in broader scientific histories. These were independent, intellectually engaged collaborators of a large scientific project. Whilst the usefulness of the terms ‘centre and periphery’ have their limits, the example of nineteenth century plant collectors in Van Diemen's Land supports the idea that those terms do not reflect a static dipole cause and effect, but rather a dynamic relationship of exchange, compromise and negotiation.

The intellectual framework for the *Flora Tasmaniae* was produced in Britain, but colonial plant collectors largely produced the objects that fit within it. We have seen that these colonists were more than just workers collecting a list of items sent to them from the Hookers in Britain. They engaged and expanded their botanical efforts over thirty years, encompassing detailed correspondence, geographical exploration, and demonstrated deep involvement in local colonial scientific societies and publications. They were able to make ever more effective use of field observations, helping them to contribute to and critically assess metropolitan classificatory decision-making. Finally, by travelling to Kew, colonial botanists directly influenced the descriptions and illustrations in the *Flora* itself.
Avenues for future research

This thesis has highlighted several areas that would benefit further research. Of primary importance is the need to locate and document historic Tasmanian plant collections. Modern scientific institutions have often overlooked historic specimens because they are thought to be of little use to current botanical research projects. They can be fragile, poorly made, and undiagnostic, but they still yield information about plant distribution, and illustrate nineteenth century scientific practices. In fact, our knowledge of the collections of men such as Gunn is currently so poor that we do not know how many of his specimens remain in Australia, let alone how many are overseas.

The construction of a database of plant collections would yield important information beyond the quantity of material amassed by an individual, revealing details of what plants were (or were not) gathered, and where they came from. This could provide the details necessary to map historic plant distribution, which is useful for studies of human environmental impact over time from building development, changing land uses, pollution, and climate change. Some of the specific documents and plant lists used in this thesis have applications in this area – such as Charles Stuart’s list of naturalised plants from 1843. This is now believed to be the earliest attempt at recording invasive species in Tasmania. Records like this can make a significant contribution to our understanding of how human settlement and plant introductions have impacted on our environment over time.
My research has also demonstrated the possibilities of enriching current herbarium databases by linking specimens, notes, lists and other collecting paraphernalia together. The use of the Kew herbarium in this study, for example, has highlighted the wealth of written and visual information that Gunn and Archer attached to their specimens. A detailed examination of this material in conjunction with the *Flora* and its illustrations would demonstrate just how much Hooker and Fitch relied upon the notes and sketches of the colonial collectors dealing directly with live material.

Due to Gunn’s meticulous notation and numbering system, his collections would provide the most meaningful information. It would be possible to recreate several of his shipments of specimens, such as the enormous 1837 dispatch to the Hookers and Lindley. In this way we could establish how much work a colonist put into each shipment, examine changes in scientific practice and understanding over time, and compare the different types of notation the collector made for each recipient and kept for himself. As Alex Buchanan has demonstrated, this sort of collecting detail could then be mapped, providing an opportunity not only to see the overall effort of a single collector over time, but even to recreate the experience of individual field trips.  

Beyond work with herbarium specimens, there is a need for further research of colonial collectors in nineteenth-century Australia, examining the differences between the colonies, and creating a fuller idea of how interconnected the Australian scientific community really was. By demonstrating how many gaps there are in knowledge relating to colonial botanical collectors in nineteenth-century...
Conclusion

Nothofagus gunnii (Hook.f.) Oerst.

This thesis has examined the changing relationships between five contributors to Tasmanian botany. The *Flora Tasmaniae* was emblematic of the new Tasmania, encompassing the flora of an island that had changed socially, generationally, politically and scientifically during the thirty years of its formation. It was a book that supported Darwinism, and became a model upon which other geographical floras was based. Although a product of imperial science, the *Flora Tasmaniae* was a testament to the collaboration between centre and periphery, colony and metropole.
APPENDIX 1

Transcription of Lawrence’s letter to Gunn, and of his annotated notes


This transcription is felt to be necessary as the original item is in a private collection and is not accessible by the public. The book has a single-page letter inserted in the front of the book, and fifteen notes on small slips of paper inserted throughout. Each of these smaller notes is numbered to match the page numbers of the book, drawing attention to particular details on that page. The title and following pages have the very top margin cut off – it is possible an owner’s name was inscribed here and subsequently cut off.

For clarity, all comments by the transcriber are placed within brackets [thus]. Over time some of the notes have fallen from their original place and amassed in a group together. Here they have been placed back in their original order according to page number.

[At the top right hand corner of the facing endpaper is the name ‘Rd. R. Priest’. Under that in R.W. Lawrence’s hand reads]
To R.C. Gunn with R.W. Lawrence’s comp’ts 18th Sep’ 1833.

[On the dedication page, top left hand corner reads]
Rd. R. Priest, St. Thomas’s Hwy’s Hospital, London.

[A letter in R.W. Lawrence’s hand has been tucked into the binding following the dedication]
Formosa 18th Sept –

Dear Gunn

I send you a good edition of Lavoisier which I hope will please you – If you have read them, send back, Hodgskins’s travels for bearer – Remember me to M” G. and believe me yours &c &c

RW Lawrence

R.C. Gunn Esqr.

[Lawrence’s annotations follow throughout]

XXXIV.

“Three different states of saturation”. is perhaps, not a correct term. – Three different states of Chemical combination would be more correct.

80 –

“the one fit for Respiration; the other unfit to be respired.

Nitrogen is certainly capable of being respired; but by such respiration, extinguishes life. ‘the other incapable of supporting respiration might be a preferable term to either–

114.

Modern chemistry shows that there are other acidifying principles besides Oxygen. – Hydrogen in combination with clorine [sic] forms the muriatic acid. &c. &c. &c. &c. – Ure.1 Consequently combustion is not necessary to the formation of all acids –

121.

Muriatic acid is composed of Hydrogen and Clorine [sic] –

124.

Chlorine, see under muriatic acid in Ure’s Dictionary.

140.

The learned Translator here, appears to draw rather nice distinctions. His conviction of the expression “thirteen times lighter” is undoubtedly an improvement, though at the same time I can perfectly understand it, and though he says he cannot yet he evidently does or he could not improve upon it. – Gravity is a relative property of matter, and if one species of matter be taken as a standard, all other species of matter must be, with regard to that standard either heavier, of equal weight or gravity, or lighter – Atmospheric air is [word obscured by folded page margin] the standard of gravity.

_________________________

165. 
Ammonia is now used as the name for the volatile alkali; the term ammoniae, is 
given to a gum-resin used in medicine – This substance is obtained by incision 
from the Heracleum gummiferum 
same page. Here is a deviation from the writer’s own System, which is now 
corrected; the terms Carburetted hydrogen gas, sulphuretted, & Phosphuretted 
hydrogen gases, are proper –

176
See numerous other vegetable acids in Ure’s Dictionary –
177. Acids of animal origin see Do. –

190. Camphor –
Mr. Backhouse told me that he had seen an Eucalyptus which bore a true 
Camphor. Do you know any thing about it –? If there be such it might eventually 
turn out useful–

247.
The two fixed alkalies [sic] soda, & Potash are found to be metallic oxides. What 
amonia [sic] is I do not know, unless it might be called Hydroguretted Nitrogen. 
This is however quite sufficient to show the propriety of removing these 
substances from the class of salt, which they certainly are not.

251 –
With regard to potash see that article in Ure’s Dict. Also of soda.

[Between pages 254-5]
These earths were all demonstrated to be metallic oxydes [sic] by Sir Humphrey 
Davy. See Calcium, Magnesium, Barium, Aluminium, Strontium, Zirconium, 
Glucinum, Yttrium, &c. Ure’s Dict’. – Augustine, of Trommsdorff does not exist; 
what he called by that name is a compound of 1 atom of quadri – silicate of 
glucineum + 2 atoms of bi-silicate of alumina – according to Berzelius –

p.p. 263 & 264 
The translator appears to have a sort of passion for nomenclature, and finds fault 
every now and then with other writers – What can we say to the following, 
“Carbonate of Chalk”! and “metallic oxyde [sic] combined with oxygen”!
The correction to the former, might be, carbonate of Lime and to the latter 
’metallic bases combined with oxygen’ –

[the number is written in the top left hand corner of a narrow slip of paper, 
Lawrence has turned the paper anticlockwise by ninety degrees to allow room for 
his notation]
277
With regard to the third phenomenon it will be desirable to refer to the article 
There are two Acids whose bases are of Arsenic. That with the least dose of Oxygen is called Arsenious Acid, and that with the maximum dose the Arsenic Acid. According to the Lavoisian nomenclature – Several of the acids here mentioned do not exist – They are some of them merely oxydes; not possessing the necessary characters of the true acids.
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AOT Correspondence: Correspondence file held on R.C. Gunn.
AOT CSO 1: Colonial secretary’s office, general correspondence, 1 Jan 1825-31 Dec 1856.
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AOT departures index: Index to Departures from Tasmania, 1817-1867.
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AOT POL 459: Register of Special Licences issued to Persons about to Depart from Launceston on Various Boats, 12 Jan 1841-31 Jul 1848.

BM: British Museum.
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HO: Tasmanian Herbarium, Tasmanian Museum and Art Gallery, Hobart.
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QVMAG CHS 53 33/2: Lawrence, Robert William. Diary.
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