

COLONIAL CORRESPONDENTS AND JOSEPH DALTON HOOKER

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(with two plates)

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Dr Joseph Dalton Hooker of Kew Gardens in London built his reputation as a botanist, to a large extent, on his publication of the floras of the southern ocean, namely his *The Botany of The Antarctic Voyage of HM Discovery Ships Erebus and Terror, in the Years 1839–1843*, a set of books that contains *Flora Antarctica*, *Flora Novae Zelandiae* and *Flora Tasmaniae*. Although Hooker had visited all of these places on the voyage and collected a substantial number of botanical specimens for his research, he alone could not have assembled the comprehensive herbarium needed for such a wide-ranging set of flora. To aid him in this endeavour, Hooker relied on an enthusiastic group of colonial correspondents and collectors. He regarded the specimens, and the information about them, sent by the colonial correspondents as belonging to the metropolitan centre at Kew. However, as these correspondents gained botanical knowledge, in particular William Archer, Ronald Campbell Gunn and William Colenso, they clamoured for recognition of their expertise, something Hooker was not always willing to bestow.

Key Words: William Archer, Joseph Dalton Hooker, natural history, botany, *Flora Tasmaniae*, Ronald Campbell Gunn, William Colenso.

INTRODUCTION

During the nineteenth century, Sir William Jackson Hooker (1785–1865) and his son Joseph Dalton Hooker (1817–1911) established a network of correspondents and collectors across the British Empire. There is a clear distinction between correspondents and collectors. As Stevens succinctly put it: “Collectors’ were just that; they collected.” (Stevens 1997, p. 346), and they were usually paid to do so, while the correspondents were individuals whose interest in botany led them to send specimens and, most importantly, information about the specimens, to the Hookers without payment. Specimens of their local flora were sent to the Hookers, first to Glasgow University where William Hooker lectured in botany, and later to the Royal Botanic Gardens at Kew. These specimens would eventually make the herbarium at Kew the largest and most comprehensive in the world. Joseph Hooker established his career as one of the leading botanists of his era while having access to that vast herbarium. But was Hooker’s knowledge gained purely by the use of the physical specimens?

Joseph Hooker also used critical botanical information provided by correspondents that related to the specimens — their characteristics, behaviour, habitat, location, and their environment — in the same manner that the herbarium specimens themselves were collected and used. That information was considered as much a possession of the metropolitan centre as the physical specimens themselves. This is demonstrated by the correspondence held at Kew Gardens between Joseph Hooker and a number of these colonial correspondents. The letters of the Tasmanians William Archer (1820–1874) and Ronald Campbell Gunn (1808–1881), and New Zealander William Colenso (1811–1899) both to and from the Hookers illustrate the reasons behind his need to use their information (Archer 1847–1874, Burns & Skemp 1961, Endersby 2001, 2008a). It was to these three colonial correspondents that Hooker dedicated two of the volumes of his Antarctic research: *Flora Tasmaniae* (Hooker 1860) to Archer and Gunn) and *Flora Novae Zelandiae* (to Colenso). Although Hooker also dedicated *Flora Novae Zelandiae* (Hooker 1853) to Andrew

Sinclair (c. 1796–1861) and David Lyall (1817–1895) for their assistance, they are not included here as they were not long-term residents of the colonies.

SCIENCE IN THE VICTORIAN ERA

The eighteenth and nineteenth centuries were a period of great British scientific voyages and of rapid expansion of the British Empire. This coincided with an era that Holmes (2009) terms the “second scientific revolution”, defined as dating between Captain James Cook’s circumnavigation voyage in the *Endeavour*, begun in 1768, and that of Charles Darwin’s voyage aboard the *Beagle*, begun in 1831. Cook (1728–1779) landed in New Zealand in 1769, and then sailed on to New Holland (later Australia), claiming the east coast for England in 1770.

While the early European discovery and exploration of Australia and New Zealand was carried out by the British navy, the fauna and flora specimens collected on those expeditions were often held by private individuals — for example, Sir Joseph Banks and Charles Darwin — wealthy men who joined the expeditions in a civilian capacity in search of new and exotic natural history specimens. In Britain during this period, the study of natural history was, on the whole, only able to be practised full-time by men of independent means. However, realising the economic potential in some of the new botanical discoveries, naval officers were assigned to collect specimens on many later British expeditions of exploration. The botanical samples from official government expeditions were usually sent to Kew Gardens, and remained the property of the Admiralty. As Stevens noted: “When the Botanic Gardens at Kew were established in 1841, it was with the express understanding by the government that they should be the botanical centre of the British Empire and coordinate its botanical activities” (Stevens 1997, p. 356). It was acknowledged that the naval officers “would have the sole right, apart from the captain, to produce an Admiralty supported publication of scientific observations” (McCalman 2009, p. 86). One such naval officer wanting to publish scientific observations from a

voyage was Joseph Dalton Hooker, who had been the assistant surgeon on the 1839–1843 James Ross Clarke Antarctic expedition.

JOSEPH HOOKER AND PHILOSOPHICAL BOTANY

Joseph Dalton Hooker was the second son of William Jackson Hooker, Regius Professor of Botany at Glasgow University, and later director of Kew Gardens. From an early age Hooker had developed a passion for natural history, and his father wrote to one of his Tasmanian collectors, Ronald Campbell Gunn, "... my second son [Joseph] him being already a very respectable Botanist, has begun Entomology" (Hooker 1822). In many of his following letters Sir William asked for insect specimens for Joseph, as well as botanical specimens for his own herbarium.

As he grew, Joseph Hooker sought to make his name as a botanist. He saw it almost as his right (Bellon 2001), and he soon realised that to accomplish his aim of botanical fame, he needed to accompany one of the great voyages of discovery, to reach some areas that were relatively unexplored where hopefully interesting new plants could be found. The young Joseph Hooker was advised to study medicine to enable him to join the James Clark Ross Antarctic expedition of 1839 as few positions as naturalist were available. He was employed as assistant surgeon on the expedition, not the position he had hoped for, but, as Hooker himself noted when writing to his father regarding his necessity to look for paid work to pursue this interest, "I am not independent, and must not be too proud: if I cannot be a naturalist with a fortune, I must not be too vain to take honorable compensation for my trouble" (Huxley 1918, p. 597). Upon his return to England in 1843, Hooker desperately needed to find paid employment, and in this he was aided by his father, now Director of Kew Gardens, who lobbied his many influential friends to arrange for Joseph to be employed there as Assistant Director. This and a government grant of £1000 towards the publication of his research from the Antarctic voyage would allow him to earn his living from botany as a "professional man of science" for some time to come (Endersby 2004).

Recently there has been a number of articles and books written on the topic of the terms "professional" or "philosophical" scientist as used in Victorian Britain in the mid-nineteenth century. Endersby (2008b) and Bellon (2006) write of Joseph Hooker and his struggle to create a respected, and respectable, position for himself in the world of botany. As Endersby wrote, "the meaning of the term 'gentleman' shifted during the nineteenth century, becoming deeply ambiguous as the claims of Britain's landed aristocracy to be the country's natural rulers were disputed by the rising middle classes. Nevertheless, it retained the connotation that disinterested service rather than paid employment was the proper way to pursue science. These ideals made life complicated for those, like Hooker, who wished to live by them, but still needed to earn a living" (Endersby 2008b, pp. 163–164).

An aspect of Hooker's "philosophical botany" and his role as a "working gentleman" that was to inform his pursuit of government patronage was his belief that, as Bellon (2001, p. 53) put it, "In pursuing research, the community would also serve the nation by promoting its health, education, defence, sustenance and honor. The nation in turn owed

the scientific community for its ministrations. This emphasis on mutual obligation between science and the nation made government both the most appealing and the most obvious reservoir of patronage among available sources".

Finally, and perhaps most critically, Hooker also had to institute and enforce a belief that the metropolitan centre, and only the metropolitan centre, had the necessary means and authority to describe and name new species of plants. He believed the correspondents at the colonial periphery could only be familiar with their own environment, and did not have the global view of the metropolitan botanist. That is, they could not have the expertise of the scientist who had access to a herbarium that contained specimens from across the world; "a naturalist's access to living plants, although a valuable card to hold, was not as valuable as access to unlimited herbarium specimens—that was the trump. The metropolitan botanist was able to control the colonial and the provincial" (Stevens 1997). However, as Endersby (2008a, p. 312) commented about his recent book: "One reason this book is called *Imperial Nature* is that Britain's political and economic empire provided crucial opportunities for men like Hooker to build careers; without the empire, men like Hooker, Huxley, Darwin, and Wallace would have had very limited access to the natural world beyond Britain's shores". Hooker could only hold the "trump card" because it had been dealt to him by the colonial correspondents. Access to the natural world would not have been enough to establish a career; there also had to be the right to sole use of that natural history.

THE NETWORK OF CORRESPONDENTS: TASMANIA AND NEW ZEALAND

Joseph Hooker visited Tasmania and New Zealand during his Antarctic expedition of 1839–1843. While on these visits he met and worked with two of his father's correspondents, Ronald Campbell Gunn in Tasmania, and William Colenso in New Zealand. Through their contact with Gunn, the Hookers would also later correspond with the Tasmanian-born William Archer. These three correspondents came from vastly diverse backgrounds: Gunn was a government official, Colenso a man of the cloth, and Archer a landed gentleman. They pursued their interest in botany for very different ideological reasons, and this, as well as their social standing, was reflected in the differing interaction Hooker had with each man (Hansen 2007).

Ronald Campbell Gunn was born in Cape Town, the son of an army lieutenant. He was educated in Aberdeen and went on to work as a clerk with the Royal Engineers in Antigua. In 1830 he joined his brother in Van Diemen's Land (later Tasmania) where he obtained a position as Assistant Superintendent of Convicts in Launceston. It was while working there he met and became friends with Robert Lawrence (1807–1833), a wealthy young landholder with a keen interest in botany, who was to spark Gunn's fascination with collecting (Burns & Skemp 1961). After Lawrence sent a letter of introduction, Gunn began writing to William Hooker in 1832 (Burns & Skemp 1961). Gunn met Joseph Hooker in 1840, when the *Erebus* and *Terror* of the Clark Ross Antarctic Expedition visited the colony. At the time Gunn was working as private secretary to Sir John Franklin, then Lieutenant Governor of Van Diemen's Land. Hooker later wrote of the time spent in Tasmania, "I can recall no happier weeks of 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” (Burns & Skemp 1961, p. viii). They continued to exchange letters for more than 20 years.

Gunn’s interest in botany was associated with his desire to pursue the interests of a gentleman in the class-conscious Victorian era, and indeed, he stressed to Hooker in many of his letters that he did not wish any recompense for his specimens despite the great expense, in both time and money, he incurred in collecting them and forwarding them to England. He did, however, request that books on botany be sent for him to study, which the Hookers did happily, though not purely for altruistic reasons (Burns & Skemp 1961). They knew that the greater the botanical knowledge of the correspondents, the better the specimens sent. Gunn continued his interest in natural history for many years, becoming a Fellow of The Royal Society of Tasmania, and a Fellow of the Linnean Society of London in 1850, the first Tasmanian to do so. Gunn introduced fellow Royal Society member, William Archer, to the Hookers.

William Archer could pursue his passion for botany as a “disinterested gentleman”. Archer was born in Launceston, northern Tasmania, the second son of a wealthy landowner. As a youth Archer travelled to England, where he studied architecture and engineering, returning to Tasmania in 1842 after an absence of six years. In 1848 Archer and his young family moved to Cheshunt, near Deloraine—a property given to him by his father (Archer 1847–74). This is the “Cheshunt” that features so prominently in Hooker’s *Flora Tasmaniae*.

Archer joined The Royal Society of Tasmania in 1847, becoming a Fellow two years later. He was later elected a Fellow of the Linnean Society of London in 1857.

Archer not only sent botanical specimens to Kew, but also illustrations of some of the new plants he was encountering, especially the orchids (pl. 1).

Along with Ronald Campbell Gunn and William Archer in Tasmania, Hooker also corresponded with William Colenso in New Zealand. New Zealand was another British colony visited by the Clark Ross expedition in 1841 and Hooker and Colenso met at that time. Like Gunn in Tasmania, Hooker’s early botanising with Colenso initiated what would become a life-long exchange of letters. Colenso was born in Penzance, Cornwall. At the age of 15 he was apprenticed to a local printer. After completing his apprenticeship Colenso was employed as a missionary-printer in New Zealand. He arrived at Paihia, Bay of Islands, in 1834. In 1843 Colenso went to Te Waimate to study for ordination as a deacon, before engaging in full-time missionary work (Foster 1966b).

Colenso had been interested in all branches of natural history from an early age, and the move to New Zealand with its exotic flora refuelled that interest. He made several botanical excursions, and published memoirs of his discoveries on those journeys (Colenso 1854). He was elected a Fellow of the Royal Society in 1866, the first New Zealander to be so honoured (Foster 1966b).

THE RELATIONSHIP BETWEEN HOOKER AND THE COLONIAL CORRESPONDENTS

While the Hookers maintained a network of colonial correspondents that continued, in some cases, for several

decades, those relationships were not always without tension. The correspondence between Archer, Gunn, Colenso and the Hookers showed a developing friendship that went far beyond that of a formal working relationship. However, as the correspondents gained more experience in collecting specimens and also acquired knowledge in botany, there developed in the letters exchanged a growing dissent concerning Hooker’s disregard of their expertise. Endersby (2001, p. 343) highlighted this when he wrote: “Although Hooker was dependent upon people like Colenso [Gunn and Archer] for the specimens he needed to compile the books that made his name and reputation, he was not interested in their ideas”, and while Hooker may not have been interested in their ideas, the correspondents over time had gained skills and knowledge that surely justified expressing those opinions. The colonial correspondents worked in a concentrated area over a period of years, examining every species and all their variations, before deciding what was and was not a new species”.

In the mid-nineteenth century botanists were greatly divided on what constituted different species—divided between “lumpers” like Hooker, who looked at botany from a global perspective, interested in worldwide plant distribution, and “splitters” who worked on local environments and were inclined to examine these areas more closely—the metropolis (centre) and the province (periphery) (Endersby 2008a, Ison 2013). Those who had power, the men of the metropolis, could control what was published and who was recognised within these publications. As Endersby (2008a, p.19) wrote:

“One of Hooker’s preferred strategies for abolishing the names that had been conferred by colonial or provincial naturalists was to compare the specimens the local naturalists had relied on with the much wider range he had available at Kew. Hooker argued that a global comparison demonstrated that the apparently distinct forms to which the local botanist had given names were in fact linked by intermediate forms from around the world. The varieties of the plant could then be lumped together as a single species, a process that, not surprisingly, many local collectors objected to, since it removed “their” names from the botanical record.”

The colonial correspondents at the periphery argued that their local field experience enabled them to distinguish differences in species not able to be discerned in a dried herbarium specimen. Colenso wrote to Hooker, “I have also taken the ‘universal’ distinctive uses of the plant [*Phorium*] into consideration; and no New Zealander [that is, Maori] would (or could) ever use one sp. for the other” (Colenso 1854). However, Hooker refused to concede the usefulness of indigenous knowledge and he ignored Colenso’s proposed names. From the colonial botanist’s perspective, local knowledge was perhaps the best kind to have. Hooker matched them in craft skills and excelled them in his formal botanical education repeatedly denying the relevance or usefulness of such knowledge. Thus, he overruled it because acknowledging its validity would have tilted the trading terms too far in the colonists’ favour (Endersby 2008b).

To counter the metropolitan reluctance to publish their work (yet they could see within works published by metropolitan botanists information they had sent used in the description of new species), the colonial correspondents created their own journals within the colonies where they could publish their findings. In 1842 Gunn wrote *Observations on the Flora of Geelong*, and began a seven-year

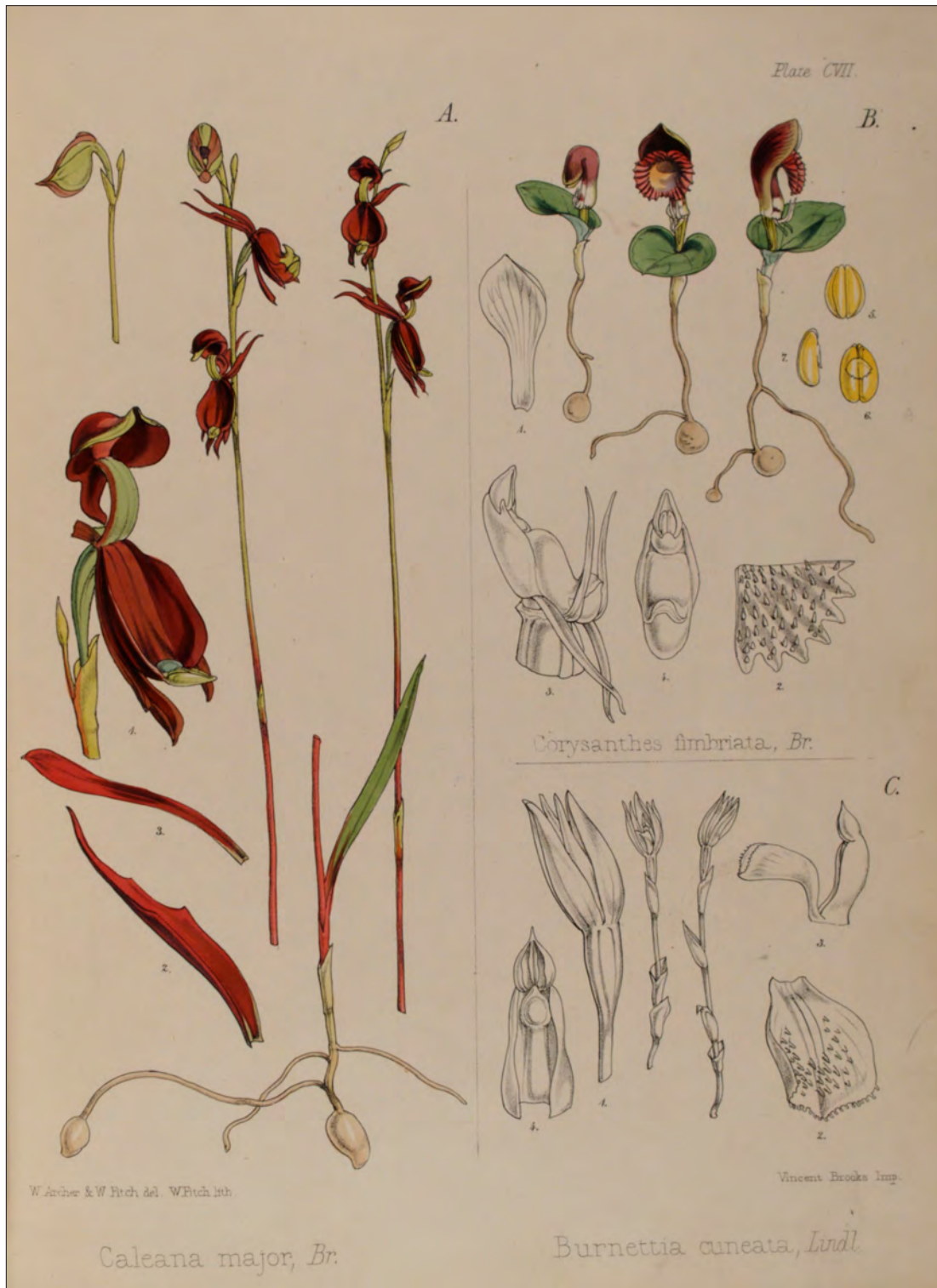


PLATE I

Plate CXIII, *Prasophyllum Archeri* (now *Corunastylis archeri* (Hook.f.) D.L.Jones & M.A.Clem.) Del. Archer, lith W Fitch. From Hooker, J.D. 1860: *Flora Tasmaniae*, Lovell Reeve, London, The Royal Society of Tasmania Library collection.

editorship of the *Tasmanian Journal of Natural Science* in which many of his articles appeared (Burns & Skemp 2006). William Colenso countered the dismissal of his right to name species by publishing in colonial journals. Colenso contributed over 100 papers on various scientific subjects, many of great value, to scientific journals, principally to the *Transactions of the New Zealand Institute*. But as Endersby (2008a, p. 201) noted, “Whenever possible, Hooker would ignore any publication in a colonial journal, such as many of the names published by the Australian naturalist Ferdinand von Mueller ... Mueller’s species concept was not the issue; his perceived ‘lack of judgement’, was a factor, but his real offense was refusing to be brought under Kew’s control—publishing in colonial journals was just a symptom of his recalcitrance”.

Hooker wanted to establish fewer journals, from fewer larger centres, preferably in Britain. Hooker and fellow botanist George Bentham (1800–1884) created what has been termed the “Kew Rule” which, in effect, saw the rejection of articles by colonial authors (Endersby 2008a).

On Hooker’s recognition of the skills of the correspondents

The relationship between Hooker and his correspondents differed between individuals. When Hooker met Gunn and Colenso as a young man in the colonies, he met them as an officer of the Imperial Power and an expert in the field of botany. Although they were to become close friends, Gunn was a government official, used to obeying and deferring to authority, and it can be seen from his letters that Gunn was perhaps the least vocal in his concerns regarding acknowledgement of his expertise. He does, however, make some veiled comments about this matter when on 3 May 1845 he wrote to Joseph Hooker:

“Many thanks for calling the Cider tree *Eucalyptus Gunnii* ... I was most amused at your quotation from Breton’s journal—which was in fact furnished by me—poor Breton never having seen the tree!! He ought in justice to have quoted me as his authority for the tree existing—as also for the manner of collecting the Sap, but he lives only on borrowed matter. Half of the source of his Journal was furnished by me over a bottle of wine at Penquite.” (Burns & Skemp 2006).

Hooker had some more heated discussions with Colenso regarding the right to name specimens. Endersby (2001, p. 343) quoted Joseph Hooker when he wrote, “From having no Herbarium you have described as new, some of the best known Ferns in the world”.

Hooker’s relationship with William Archer appears to have been very different. Archer was a disinterested gentleman in the true sense. He was also a native-born Tasmanian. It is possible the combination of these two factors was important in making the relationship so different. Archer saw himself as a botanist, not merely a collector. Indeed, he is recognised as the first Australian-born botanist and botanical illustrator (Hewson 1999). He had had training as a professional in England, as an architect and engineer (Hansen 2007), and he certainly was a social equal (if not more) to Hooker. Archer was the youngest of the correspondents and also the last of the three to join the network. By that time Tasmania was beginning to gain a degree of independence from its British rulers. The year 1855 saw the first freely elected Legislative Council in Tasmania—Archer was one of these men. Archer’s independent wealth, his belief in

himself as a botanist, and his having been born in the colonies, allowed him to interact with Joseph Hooker in a completely different manner to correspondents like Gunn and Colenso. It seems Hooker also related to him in a different manner. Of all the correspondents, Archer was the only one to extensively illustrate his work. Of the three colonial protagonists he was the only one to travel to England to work with Hooker.

Archer worked closely with Hooker on *Flora Tasmaniae* over a period of more than two years, 1857–1859, particularly on the section on orchids. His skill as a botanist and botanical illustrator can be seen in his drawing of *Corybas diemenica* Lindl.—identified as *Corysanthes fimbriatus* Br. by Archer and Hooker in *Flora Tasmaniae* (Hooker 1860). In comparing Archer’s originals and his notes concerning them, he clearly identified *Corysanthes diemenica* Lindl. as a distinct species. While in this case, Hooker overrode his suggestion, the orchidologist John Lindley (1799–1864) also suspected there to be at least two species (Hooker 1860). In his description of this orchid Hooker wrote:

“Common in various parts of the Island. Lindley distinguished this [Archer’s illustration?] doubtfully as a different species from *Corysanthes fimbriata*, from its having larger flowers and less fimbriated margins to the labellum; but I find both the flowers and leaves to be extremely variable in absolute and relative size” (Hooker 1860, p. 16). Hooker lumped all three known *Corysanthes* species together as *Corysanthes fimbriata* R.Br in *Flora Tasmaniae* (Hansen 2007) (pl. 2).

However, it can be seen by the many references to Archer throughout the book, that Hooker did not always override his suggestions and his contribution was significant. Indeed, Hooker wrote in the *Introductory Essay* regarding Archer’s contribution, “It remains only to mention my friend William Archer, Esq, FLS of Cheshunt, who, after a residence of upwards of ten years in Tasmania, during which he sedulously investigated the botany of the district surrounding his property, returned to England in 1857, with an excellent herbarium, copious notes, analyses, and drawings, and a fund of accurate information on the vegetation of his native land, which have been unreservedly placed at my disposal” (Hooker 1860).

It is interesting to note here that Hooker acknowledges the excellence of Archer’s herbarium after being so disparaging of Colenso’s colonial herbarium. Hooker then went on to say: “I am indeed very largely indebted to this gentleman, not only for the many plants described, and much of the information that 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” (Hooker 1860).

Despite Hooker’s assertion that it was only access to a global herbarium that allowed the metropolitan botanist to have the knowledge necessary to describe new species, he acknowledged that Archer’s familiarity with the living plants was beneficial. He wrote in *Flora Tasmaniae*, “On the other hand I have derived the greatest assistance from Mr Archer’s drawings, notes, and specimens, as well as from his intimate acquaintance with the living plants ... and I can only add, that for his having afforded me the benefit of his accurate knowledge of the species, I should in several cases have failed to discriminate them aright, and in other cases, where I had properly discriminated, to have selected their most important diagnostic characters.”



PLATE 2

Plate CVII, *Corysanthes fimbriata*. Del Archer, lith W Fitch. From Hooker, J.D. 1860: Flora Tasmaniae, Lovell Reeve, London, The Royal Society of Tasmania Library collection.

(Hooker 1860). Indeed, Hooker deferred to Archer's expertise on a number of occasions. During April and May 1857, Archer wrote in his diary, "Having received a letter from Dr Hooker respecting the number of species of *Thelymitra*, I commenced today a careful examination of my specimens, in order to assist him in determining the question ... Today I began to make my deductions from my observations, coming to the conclusion that there are 4 species, instead of 2, as Dr Hooker thinks ... I went to Kew to examine the Tasmanian Orchids with Dr Hooker. Dr H and I decided upon reducing all the species of *Thelymitra* to 3 & a possible 4th *T. nuda*, *ixioides*, & *augustifolia*, Br Prod." (Archer 1847–74).

Hooker's close collaboration with Archer on *Flora Tasmaniae* grew to the extent that he wrote "our" and "we" when describing their work. "I am indebted to Mr Archer for discriminating my specimens of this species, which were intermixed with *T. nuda* ... Brown's specimens in the British Museum are very small and slender, though not more so than many of ours, and we rely on the description of the lobes of the column for the identification of our plant with his" (Hooker 1860).

Archer's original illustrations of orchids and fungi were used as the source for a number of plates in *Flora Tasmaniae*. He was displeased with the inclusion of Kew Gardens' illustrator Walter Hood Fitch's (1817–1892) name on the plates. On 24 August 1857 Archer wrote to Hooker: "Mr Fitch is lithographing the drawings of orchids, and adds his name to mine as delineating 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" (Archer 1847–74). As a result Archer decided to donate a number of his original illustrations to the Linnean Society of London. The folio of 36 drawings featuring some of Archer's original illustrations used for *Flora Tasmaniae* held at the Linnean Society justifies Archer's anger at the inclusion of Fitch's name. In most cases there is very little change in Archer's drawing and that featured in *Flora Tasmaniae*. A further 33 orchid drawings, many also used as source material for *Flora Tasmaniae*, are held by the Tasmanian Museum and Art Gallery.

After his return to Tasmania from England in 1860, Archer was elected Secretary of The Royal Society of Tasmania, an office he held for two years. Archer and Hooker continued work on the *Supplement to Flora Tasmaniae* after Archer returned to Tasmania.

William Archer and Hooker maintained their correspondence until Archer's death in 1874.

The Colonial Correspondents and Patronage

Joseph Hooker's relationship with his colonial correspondents was one full of contradiction. He relied on their generosity of spirit in sending him specimens free of charge, while at times, he saw them almost as his employees. In 1847 he wrote to James Clark Ross, "Gunn and Colenso are still employed in making collections in all parts of these islands and are paid by my father and self for doing so, from our private pockets" (Huxley 1918, p.21). While the correspondents may have been sent supplies and books on botany, they were not paid for their specimens.

Not only were the correspondents not financially supported by Hooker, but in time they were to be in the position of financially supporting him. As they gained increasing expertise within their botanical pursuits, they

were also gaining some independent wealth and status. Gunn had amassed property of his own and was no longer in government service. Colenso had resigned from the ministry and, like Gunn and Archer who were politicians, was a member of the New Zealand government. Archer, of course, had always been independently wealthy. Gunn and Archer were instrumental in securing the Tasmanian government's grant of £350 towards the cost of publishing *Flora Tasmaniae*, and indeed, Archer personally provided a further £100 towards the cost of publishing *Flora Tasmaniae*. After visiting William Archer in Tasmania, William Harvey, the noted Irish botanist, wrote in a letter to Hooker: "I like him *very much*—& I need not tell you that he is a *warm friend & admirer* of yours. You have had substantial proof thereof already—the Tasmanian grant to your flora having been altogether his device, management & doing" (Ducker 1988, pp. 195–196). Archer wrote to Hooker of the grant and of his own financial contribution in a letter dated 26 July 1854: "I was very much gratified at receiving your welcome reply to my communication respecting the grant of our Council to you...therefore I authorize you (& enclose a draft) to apply to my agent in London...for £100, to meet any additional expenses that you may incur on their [the orchid drawings] account." (Archer 1854).

CONCLUDING REMARKS

Dr Joseph Dalton Hooker is regarded as one of the pre-eminent botanists of the mid-to-late nineteenth century, instrumental in establishing botany as a profession. He was one of the first researchers into global distribution patterns in plants. He was able to accomplish this only with the aid of the almost limitless herbarium specimens at Kew Gardens; many of these specimens supplied by a network of collectors and correspondents in the far-flung colonies of the British Empire. Over time, a number of these correspondents gained significant botanical expertise enabling them to send, not only specimens, but also critical scientific information regarding these specimens, to Hooker. Only by using the additional information supplied by these correspondents was Hooker able to publish as extensively as he did. When the correspondents began to publish their own findings in colonial journals, Hooker countered this by establishing the Kew Rule, thereby denying them the right to name the species they were discovering.

One colonial correspondent, the Tasmanian-born William Archer, overcame the metropolitan botanists' prejudice against local knowledge by sailing to England to collaborate with Joseph Hooker on *Flora Tasmaniae*.

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