



Fig. 1. Baron Ferdinand von Mueller, about 1890
Royal Botanic Gardens Melbourne

Educational exsiccatae: Ferdinand von Mueller's botanical lessons in colonial Victoria

by Sara Maroske

Abstract

In 1872, Ferdinand von Mueller seized a moment when the Victorian government was intensely interested in education, to put a proposal regarding his own specialty of botany. Based on the idea that the best way

to learn about plants was from plants, he sought to distribute sets of dried specimens, or exsiccatae, throughout the colony. Although hampered by his own troubled relationship with government, he was nevertheless able to place three fascicles in about 50 institutions not previously seen as repositories of this kind of material.

Introduction

In August 1872, Ferdinand von Mueller (Fig. 1), Victoria's illustrious Government Botanist and director of the Melbourne Botanic Garden, put an educational proposition to his ministerial chief, James Casey.¹ As later explained by Mueller, it was

to issue here [i.e. in Victoria,] as in many European countries[,] collections of indigenous plants for public instruction ... in connection with ... works under publication, as the best means to diffuse information on the native vegetation.²

This was a proposal that seemed certain to appeal to a member of the ministry that was about to pass legislation providing 'free, compulsory and secular schooling', the first such Act in Australia.³ Nevertheless, Mueller was not well-regarded by Casey, who had just commissioned a report into the management of the Botanic Garden.⁴ In this context, Mueller could not really be sure how anything he said would be received.

Botanical specimens

The main idea behind Mueller's educational proposal in 1872 was to use plants, or rather 'collections of plants', to impart basic information about the names of, and relationships between, plants. In the nineteenth century, such 'collections' were also known as 'exsiccatae', a term that referred to the fact that they consisted of dried specimens. Typically an exsiccata comprised multiple copies of the same set of plants, that had been collected from areas in which they were regarded as 'indigenous', or 'native', in contrast to plants that were 'introduced', or 'exotic'. Each copy usually began with a printed page, as in a book, which included a title, date and place of issue, followed by a series of specimens, each

one occupying a single page with a printed label bearing the specimen's scientific name, and information on where and when it was collected. The compilers of exsiccatae usually sold them in parts, by subscription, to private collectors, or to public institutions such as museums.⁵

Mueller believed that the educational value of exsiccatae was well known in 'many European countries'. This was a fact to which he could testify personally.⁶ As a young pharmacy-apprentice in Schleswig-Holstein in the 1840s, he was required to construct his own 'herbarium', or collection of dried plants, in order to learn how to identify the suite of plants that, at the time, was the source of most medicines.⁷ Mueller not only did this, but also formed a herbarium of most of the plants in his area. He also obtained specimens from collectors in other areas, including Lars Hansen, a teacher in northern Schleswig who, in exchange, used some of Mueller's specimens in an exsiccata.⁸ Mueller also gained knowledge of plants by visiting the herbaria of other collectors, and the one at Kiel University, which institution he attended from 1845 to 1847. The Kiel University herbarium would have contained tens of thousands of specimens, including exsiccatae.⁹

In 1848, only a year after his arrival in South Australia, Mueller attempted to introduce his knowledge of exsiccatae into his new home by advertising sets of 'mostly indigenous' plants for sale in the *South Australian Register*. This may well have been the first such advertisement in Australia. Mueller predicted his sets of plants would be 'a valuable acquisition to public institutions, or an agreeable object of private curiosity at home', and if taken up by the public would also encourage his own further scientific enquiries 'into the riches of the Botany of our adopted country'. Each set of plants was to consist of 100 specimens, arranged

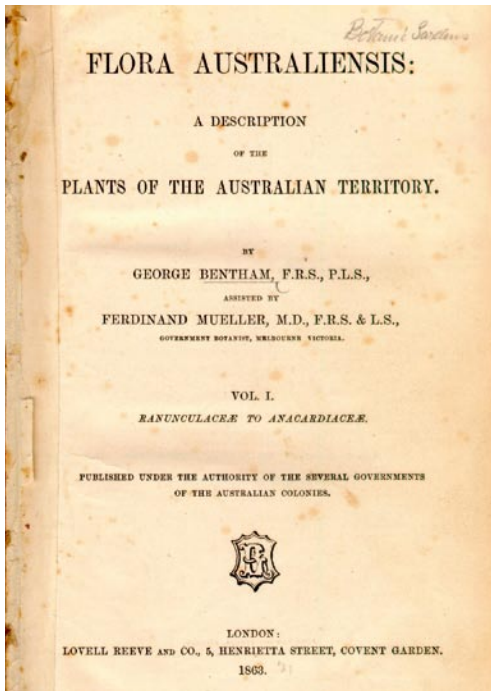


Fig. 2. Bentham's and Mueller's *Flora australiensis*, vol. 1, 1863
Royal Botanic Gardens Melbourne

in systematic order and with the seeds of each species also added.¹⁰ Unfortunately it is not known if there were any takers for this exsiccata, but the fact that no further advertisements appeared in newspapers regarding its issue suggests that South Australians were not yet ready to loosen their purse strings for such a commodity.

Botanical publications

While the focus of his educational proposal in 1872 was on an exsiccata, Mueller did not intend this to be a stand-alone source of information. As he said himself, each copy ought to be used 'in connection with the works under publication'. Almost certainly what he meant by 'works' in this context was a multi-volume flora of Australia (a definitive work on Australian plants) that he and British botanist George Bentham were in the process of producing (Fig. 2), and a flora of Victoria. Five volumes of

Flora australiensis had so far been published with at least two more expected, and two volumes of *Plants Indigenous to the Colony of Victoria* were published in the 1860s before Mueller put this work aside in favour of *Flora australiensis*.¹¹ Users of Mueller's exsiccata would be able to look up the names of individual species in these floras, and gain additional information about characters, habit, distribution, and so on.

Previous efforts at botanical education

The final claim in Mueller's proposal of 1872 was that a combination of specimens and literature was 'the best means to diffuse information on the native vegetation'. This claim was at least in part based on what he had learned in more than 20 years of trying to interest the citizens of Australia in botany, although, as his experiences in South Australia suggest, not all his attempts were successful. In Victoria, he labelled the plants in the Melbourne Botanic Garden so that visitors could find out the name and country of origin of any that caught their attention.¹² He also exhibited herbarium specimens for the instruction of visitors at a succession of international exhibitions held in Melbourne, beginning with one associated with the International Exposition of Paris in 1853,¹³ and he provided herbarium specimens to the University of Melbourne for the use of its students.¹⁴

In 1858, Mueller sought to reach an even wider audience for botanical information by lodging a herbarium at the Melbourne Public Library (now State Library of Victoria). In correspondence with his ministerial chiefs, he argued that in such a location the specimens would be 'easier consulted than either at this office [i.e. at the Botanic Garden] or at the university' and, most importantly, could also be consulted in association with 'many

valuable botanical works'.¹⁵ In 1861, however, Mueller asked for the herbarium back, in part because it appeared, after all, to have been 'little consulted', but also because he now had spacious premises himself (adjacent to the Botanic Garden) where interested members of the public were likely to seek information on local plants; it would save him much labour if he did not have to make another collection for their benefit.¹⁶

While Mueller's herbarium and library probably suited the requirements of citizens who were already enthusiastic about botany, he still wished to attract new devotees to his favourite science. At the end of the 1860s, he found another opportunity to do so through a technological and industrial museum that was being established in Melbourne.¹⁷ When this museum opened its doors to the public in 1870, botany was the subject of one of its four main sections. This meant that visitors encountered a range of botanical displays, largely contributed by Mueller, of labelled plant specimens, and plant products.¹⁸ Nevertheless, unlike at the university or at Mueller's herbarium, the museum did not provide visitors with ready access to botanical literature to augment the limited notes on labels attached to exhibits.

In a lecture delivered at the new museum in 1870, Mueller summarised his conclusions about botanical education. To him, dried collections of plants were 'the most powerful means for fostering phytologic [i.e. botanical] knowledge'; accordingly, 'no school of any great pretension' or mechanics' institute should be without a herbarium (thereby noticing manual workers for the first time as possible recipients of his efforts in botanical education). In what can be seen as a precursor to his proposal of 1872, he offered to identify any numbered, duplicate specimens sent to him from public institutions, or from individuals interested in pursuing their own education.

He also observed that botanical works on Australian plants, which were 'now extant in many volumes, can readily be attached and rendered explanatory of such collections'.¹⁹

The government's response

The response of Mueller's ministerial chief, James Casey, to his educational proposal of 1872 does not survive, although it apparently included a request for a sample of specimens, which Mueller duly sent.²⁰ Mueller proceeded to include the following item in his budget for the year ending 30 June 1874: 'Issue of Educational Collection of Dried Plants, £90'. To this document, Casey attached a curt note: '*urgent* I want full particulars that will shew the necessity for those items that I have marked' (which included the educational collection).²¹ With a hint of frustration, Mueller referred Casey to previous correspondence, the sample specimens, and to a meeting where Mueller had 'had the honor to explain to you already personally the objects of this intended small special expenditure'.²²

The protracted nature of Casey's deliberations about the educational collection was undoubtedly influenced by the fact that by now he had in his possession three antagonistic reports on Mueller's management of the Botanic Garden. These were complex documents, all tending towards the conclusion that Mueller's Garden was too 'scientific' for public requirements.²³ In May 1873, Casey abolished Mueller's position as director of the Melbourne Botanic Garden. Mueller was to retain the office of Government Botanist, under the control of another minister, James Francis. This represented a demotion for Mueller, but it was dressed up to him as a favour. He was being relieved of duties of 'minor importance', so that he could concentrate, without interruption, on 'those scientific

researches to which you have already applied yourself, and, in doing so, have displayed great ability.²⁴ Henceforth, the living plants in the Garden were regarded by the government as completely separate from the dead ones in the herbarium.

Although he tried to retain his composure, Mueller's dismay at losing the directorship is well documented in letters to friends.²⁵ To his new ministerial chief, Francis, he enumerated the projects he wished to continue as Government Botanist, including the educational collection of plants.²⁶ In ensuing negotiations with Francis about this project, however, it soon became clear that Mueller's management of the Melbourne Herbarium was under as intense scrutiny as that of the Botanic Garden. Francis required Mueller to restate his case for the educational collection and submit new samples, and then questioned details of presentation and production. Mueller swallowed the insults and complied, and was finally rewarded with grudging permission for the project to proceed, though without dedicated funds to pay for it.²⁷

Putting the first fascicle together

Despite this setback, by October 1873 Mueller had amassed most of the materials he needed for the first fascicle, or instalment, of the educational collection. When complete, there would be 100 copies of this fascicle, each comprising 50 sheets, with each sheet containing both a flowering and a fruiting specimen of one species (10,000 specimens in all). Each sheet would also bear a label containing the scientific name of the species, the botanist who named it, the publication in which it was first described, the Order (or Family) in which it was found, notes on its geographical distribution, the locality where the specimens were actually collected, and the name of the individual

who collected them (Fig. 4). Each copy of the fascicle would also be introduced with a title page and concluded with an index. Mueller hoped to have copies ready for distribution in two months.

In the end, most of the specimens included in the first fascicle were collected by Mueller himself, not especially for the educational collection, but in the course of his nearly three-decade long career in Australia. Others were collected by employees, two of whom, Georg Luehmann and Carl Groener, remained with Mueller after he lost the directorship of the Botanic Garden in July 1873, and two of whom, Carl Schlipalius and Christopher Richards, remained at the Garden. The rest of the specimens came from members of a large network of collectors that Mueller had established across Victoria, including Daniel Sullivan, a teacher at Moyston, a small town west of Melbourne, and Carl Walter, a photographer and professional collector. Without the volunteers in Mueller's network it is doubtful that he could have finished even the first fascicle of the educational collection.

In November 1873, Mueller's project suffered another blow when he lost access to a laboratory building that he had been using to prepare dried specimens. Mueller protested to Francis, arguing that drying fresh plants in the herbarium risked bringing damaging insects into its collections, that there was no space in this building for drying anyway, and that he had been under the impression that the laboratory (which like the herbarium was located outside the Botanic Garden) was to be left in his charge. He also claimed, not entirely truthfully, that the collections in the laboratory 'were formed not on the expense of the Government (no fund being left me for that purpose), but with the aid of amateur collectors on my private expenditure'.²⁸

Even when the contents of the laboratory were restored to Mueller, work on the

educational collection remained slow. His official staff now consisted of only one assistant, Luehmann, and ‘one or two orphan boys’ who were drafted from a nearby industrial school, and were rewarded for their efforts by a penny a day, deposited directly into a savings account on their behalf.²⁹ To get the first fascicle of the educational collection finished, Mueller and Luehmann were obliged to work ‘largely on Sundays & Holidays’ and ‘much in late evening hours on weekends and in evenings’, although this regime was not new for Mueller at least.³⁰

Distribution

Finally, in June 1874 (two years after his initial proposal), Mueller sent a proof-copy of the first fascicle to Francis. Although the folio-sized production was enclosed in sturdy covers, Mueller regretted that the means of his department were not such ‘that any exterior elegance’ could be employed in their preparation (Fig. 3). As to distributing the fascicles, he suggested to Francis that one copy should be sent to every mechanics’ institute in the colony, which totalled about 75, thereby confirming manual workers as a target group. He gave no explanation for this decision, but perhaps he saw it as a remedy for past omissions.³¹ ‘As several amateur collectors have aided in the issue,’ he added, ‘I would respectfully suggest that a copy be presented [to them].’

Francis left no record of what he thought of the fascicle, although his under secretary, Thomas Ware, noted: ‘It is carefully got up[,] but if not carefully handled the collection would soon fall to pieces.’ This led Francis to conclude that: ‘It would be objectionable if not impracticable to send these cumbrous packages by post but where completed they can be sent here & I can arrange delivery through the various Members of Parliament.’³² Before doing so, however, he



Fig. 3. The binding of Mueller's second educational collection, 1875

National Museum of Australia

fell ill with pleurisy, from which he almost died. Colleagues urged him to remain in office, but he declined,³³ and in a reshuffle in July 1874, Mueller and the educational collection suddenly became the responsibility of a new minister, Robert Ramsay.

Ramsay was presented with a list of 130 mechanics’ institutes, libraries, athenaeums, literary institutes and German associations, from which 46 were chosen to receive Part One of Mueller’s educational collection. It is not clear what selection process was used, or why more fascicles were not distributed. In a letter of September 1874, Thomas Ware, claimed that most of ‘the principal Libraries in the Colony’ had been given one, ‘leaving a supply on hand to meet future applications’. Metropolitan institutions did well, scoring 9 of the 46 copies (nearly 20 per cent), despite their members being better situated to visit the herbarium than rural people (Ramsay’s own seat was the urban ‘East Bourke’). In the country, Ballarat received three copies of the fascicle, but the other major goldfield city, Bendigo, only one (Eaglehawk Public Library) (see Table 1).

1	Avoca Mechanics' Institute	23	Geelong Mechanics' Institute
2	Amherst Mechanics' Institute	24	Hawthorn Free Library
3	Ararat Mechanics' Institute	25	Hamilton Mechanics' Institute
4	Ballarat Mechanics' Institute	26	Heathcote Mechanics' Institute ³⁴
5	Ballarat East Public Library	27	Kew Literary Institute
6	Ballarat German Association	28	Kyneton Mechanics' Institute
7	Benalla Mechanics' Institute	29	Mornington Athenaeum
8	Buninyong Public Library	30	Mansfield Public Library
9	Beechworth Public Library	31	Maldon Athenaeum
10	Belfast [i.e. Port Fairy] Mechanics' Institute	32	Maryborough Free Library
11	Blackwood Mechanics' Institute	33	Prahran Mechanics' Institute
12	Brighton Public Library	34	Portland Mechanics' Institute
13	Brunswick Mechanics' Institute	35	Queenscliff Public Library
14	Clunes Mechanics' Institute	36	Richmond Public Library
15	Cheltenham Mechanics' Institute	37	Stawell Mechanics' Institute
16	Creswick Mechanics' Institute	38	Sale Mechanics' Institute
17	Colac Free Library	39	Sebastopol Mechanics' Institute
18	Daylesford Mechanics' Institute	40	St Kilda Public Library
19	Dunolly Public Library	41	Talbot Free Library
20	Eaglehawk Public Library	42	Taradale Mechanics' Institute
21	Emerald Hill [i.e. South Melbourne] Mechanics' Institute	43	Warrnambool Mechanics' Institute
22	Footscray Mechanics' Institute	44	Wangarratta Athenaeum
		45	Williamstown Mechanics' Institute
		46	Echuca Free Library

Table 1: Recipients of the first fascicle of Mueller's educational collection

Each fascicle was accompanied by a form letter signed by Ware. It paraphrased words that Mueller had used to Ramsay, explaining that the educational collection was prepared 'with a view to supplying means of instruction in the first principles of Botany'. There were no conditions attached to the use of the collection, although Ware claimed that the government wanted it to be made available 'as largely as possible, consistently with its due preservation', to people who frequented the institution where it had been sent, and who 'may be supposed likely to profit by making themselves acquainted with its contents'.³⁵

The second and third fascicles

Mueller was able to issue two more fascicles of the educational collection, in 1875 and 1876 respectively, despite, once again, not being granted any special funds to do so. The 1875 fascicle was sent to the same institutions as that of 1874,³⁶ but the 1876 fascicle was distributed to only 33 institutions, some of which had not received the previous fascicles, including the Collingwood Free Library, mechanics' institutes at Camperdown, Castlemaine, Kilmore and Sandhurst (i.e. Bendigo), and the Stanley Athenaeum.³⁷ In notes

attached to a letter about the educational collection, Mueller's then minister, John MacPherson, seems to have ordered that institutions 'sh[ould] not receive this [i.e. the 1876 fascicle] unless they ask for it'.³⁸ This was a stipulation not applied to the first two distributions, and suggests a lack of sympathy for Mueller's desire to reach out to new audiences for the science of botany.

The public response

How was the collection received by the labourers and artisans for whom it was partly intended? As a group they are poorly represented in archives, although scattered references in reminiscences, letters and diaries may yet come to light in which they pass judgement on Mueller's efforts to educate them. Mueller himself seems to have been aware that it was unusual to get feedback from his target audience, and went to the trouble of sending Robert Ramsay a newspaper clipping in which the Ballarat Farmers' Club acknowledged receiving a



Fig. 4. *Melaleuca ericifolia* in Mueller's third fascicle, 1876
National Museum of Australia

copy of the second fascicle (despite not being on the official list of recipients for the first fascicle). In the clipping the club secretary is reported as saying that the collection was 'truly educational'.³⁹

In the decade following the issue of the three fascicles, a trickle of requests for copies made their way to the government, suggesting that there were always some individuals in the community who appreciated Mueller's efforts. These included staff at a secondary school (Wesley College), a tertiary institution (Ormond College), and the Education Department of Victoria's teacher training institution (Table 2). In requesting a copy for this last body, Frederick Gladman, the superintendent, wrote:

I noticed that you, in your enthusiasm for botanical science, have prepared fascicles of pressed & dried native plants, which are available at various mechanics' institutions &c. If such a collection could be obtained for use by our students, it would be of great value ... I can promise that the specimens will be highly valued, & well used.⁴⁰

Not wanting the remaining copies of the educational collection to remain idle, throughout the 1880s Mueller gradually placed them with a variety of individuals and institutions (Table 2). These included the Pharmaceutical Society in Melbourne, a reminder that he had once used a herbarium as a pharmacy apprentice in Schleswig-Holstein. Mueller also exhibited copies of the educational collection in at least two international exhibitions: the Indian and Colonial Exhibition in London in 1885, and the Jubilee International Exhibition in Adelaide in 1887. In Adelaide, a panel of experts recognised the originality and quality of the educational collection and awarded Mueller a 'first order of merit', accompanied by a handsome certificate.

No.	Year	Recipient	Solicited?
	1882	Training Institution, Education Department, Melbourne	Yes ⁴¹
	1884	Technological and Industrial Museum, Sydney	Yes ⁴²
	1885	Ormond College, Melbourne	Yes ⁴³
		Wesley College, Melbourne	Yes ⁴⁴
		Field Naturalists Club, Victoria	Yes ⁴⁵
	1885	Shepparton Mechanics' Institute	Yes ⁴⁶
		Royal Commission into Vegetable Products, Melbourne	Yes ⁴⁷
		Pharmaceutical Society, Melbourne	No ⁴⁸
		Technological and Industrial Museum, Melbourne	No ⁴⁹
		Indian and Colonial Exhibition, London	No ⁵⁰
	1887	Jubilee International Exhibition, Adelaide	No ⁵¹
	1889	School of Mines and Industries, Maryborough	Yes ⁵²
		Museum, Bombay University	No ⁵³
		Sereno Watson, Boston, USA	No ⁵⁴
		Christian Luerssen, Koenigsberg	No ⁵⁵

Table 2: Recipients of Mueller's educational collection, 1882–89

Conclusion

In his educational proposal in 1872, Mueller took a form well known to him from Europe, *exsiccatae*, and suggested it be used in a new situation. This was the unsolicited botanical instruction of a group in the community not well catered for by existing institutions and literature. At the time of his proposal, the Government of Victoria, too, was intensely interested in educating its citizens; but hostility to Mueller's directorship at the Melbourne Botanic Garden, and frequent ministerial changes, meant that the response he got was never

straightforward. Mueller's greatest lesson learned in putting his educational collection together in the 1870s was probably that getting things done required persistence, and persistence without much evidence of being appreciated. Nevertheless, it is not difficult to imagine that there were at least some young Victorians who may have discovered an interest in botany on the basis of Mueller's educational collection of dried plants. After all, this was consistent with Mueller's own history.

This paper has been independently peer-reviewed'.

Notes

- 1 Letter, F Mueller to J Casey, 16 August 1872 (E72/17489, unit 750, VPRS 44/P inward registered and unregistered correspondence, VA 538 Department of Crown Lands and Survey, Public Record Office, Victoria).
- 2 Letter, F Mueller to J Francis, 23 October 1873, in RW Home et al., *Regardsfully Yours: Selected Correspondence of Ferdinand von Mueller*, vol. 2, 1860–1875, Peter Lang, Bern, 2002, pp. 694–5.
- 3 GS Browne, 'Education, public', *The Australian Encyclopaedia*, vol. 3, Angus and Robertson, Sydney, 1958, p. 350.
- 4 H Cohn and S Maroske, 'Relief from duties of minor importance: The removal of Baron von Mueller from the Directorship of the Melbourne Botanic Garden', *Victorian Historical Journal*, vol. 67, no. 1, 1996, p. 115.
- 5 BD Jackson, *A Glossary of Botanic Terms with their Derivation and Accent*, Duckworth & Co., London, 1900, p. 97; G Sayre, 'Cryptogamae Exsiccatae — an annotated bibliography of exsiccatae of Algae,

- Lichenes, Hepaticae, and Musci', *Memoirs of the New York Botanical Garden*, vol. 19, no. 3, 1975, p. 277.
- 6 AM Lucas, S Maroske and A Brown-May 'Bringing science to the public: Ferdinand von Mueller and botanical education in Victorian Victoria', *Annals of Science*, vol. 63, no. 1, 2006, 34.
 - 7 JH Voigt and DM Sinkora, 'Ferdinand (von) Müller in Schleswig-Holstein, or: The making of a scientist and of a migrant', *Historical Records of Australian Science*, vol. 11, no. 1, 1996, 20–4.
 - 8 RW Home et al., *Regardfully Yours: Selected Correspondence of Ferdinand von Mueller*, vol. 1, 1840–1859, Peter Lang, Bern, 1998, pp. 82–6.
 - 9 *ibid.*, pp. 25–7.
 - 10 F Mueller, '[Advertisement]', *South Australian Register*, 20 September 1848, p. 2.
 - 11 G Bentham, *Flora australiensis*, 5 vols, Lovell Reeve & Co, London, 1863–70; F Mueller, *The Plants Indigenous to the Colony of Victoria*, vol. 1 Thalamiflorae, Government Printer, Melbourne, 1862; F Mueller, *The Plants Indigenous to the Colony of Victoria: Lithograms*, Government Printer, Melbourne, 1865.
 - 12 Lucas et al., 'Bringing science to the public', p. 33.
 - 13 T May and S Maroske, 'Ferdinand von Mueller, exhibitioner extraordinaire', *Victorian Naturalist*, vol. 113, no. 4, 1996, 143–5.
 - 14 F Mueller, *Annual Report of the Government Botanist and Director of the Botanic Garden*, Government Printer, Melbourne, 1858 (Parliamentary Papers).
 - 15 Letter, F Mueller to C Pasley, 1 February 1858 (F58/1857, unit 745, VPRS 1189 inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria); Letter, F Mueller to J O'Shanassy, June 1858 (F58/4898, unit 745, VPRS 1189 inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
 - 16 Letter, F Mueller to R Barry, 10 January 1861 (Unit 1, VPRS 5829 inward correspondence from government departments, VA 912 Trustees of the Public Library, Museums and National Gallery, Public Record Office, Victoria); Letter, F Mueller to J Stawell, 12 January 1861 (Unit 1, VPRS 5829 inward correspondence from government departments, VA 912 Trustees of the Public Library, Museums and National Gallery, Public Record Office, Victoria).
 - 17 Letter, F Mueller to G Bentham, 6 November 1868 (RBG Kew, Kew correspondence, Australia, Mueller, 1858–70, ff. 350–1).
 - 18 C Rasmussen, *A Museum for the People: A History of Museum Victoria and its Predecessors 1854–2000*, Scribe Publications, Melbourne, 2001, p. 83.
 - 19 F Mueller, 'The application of phytology to the industrial purposes of life', in *Industrial and Technical Museum Lectures Delivered in the Lecture Room of the Museum in the Spring Session of 1870*, Samuel Mullen, Melbourne, 1871, pp. 69–71.
 - 20 Letter, F Mueller to J Casey, 16 August 1872 (see Note 1).
 - 21 Letter, F Mueller to J Casey, 19 April 1873 (L73/7686, unit 750, VPRS 44/P inward registered and unregistered correspondence, VA 538 Department of Crown Lands and Survey, Public Record Office, Victoria).
 - 22 Letter, F Mueller to J Casey, 29 April 1873 (L73/7686, unit 750, VPRS 44/P inward registered and unregistered correspondence, VA 538 Department of Crown Lands and Survey, Public Record Office, Victoria).
 - 23 Cohn and Maroske, 'Relief from duties of minor importance', pp. 113–18.
 - 24 Letter, C Hodgkinson to F Mueller, 31 May 1873, in Home et al., *Regardfully Yours*, 2002, pp. 671–2.
 - 25 See RW Home, *Regardfully Yours*, 2002.
 - 26 Letter, F Mueller to J Francis, 10 July 1873 (D73/8945, unit 1022, VPRS 3991/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
 - 27 For example, letter, F Mueller to J Francis, 2 October 1873 (D73/12765, unit 1022, VPRS 3991/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria), also 23 October 1873 (see Note 2).
 - 28 Letter, F Mueller to J Francis, 25 November 1873, in Home et al., *Regardfully Yours*, 2002, pp. 702–3.
 - 29 Letter, F Mueller to J McCulloch, 3 January 1871 (Z71/120, unit 576, VPRS 3991/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria); Letter, F Mueller to J Francis, 23 October 1873 (see Note 2).
 - 30 Letter, F Mueller to T Ware, 20 June 1874 (E74/7989, unit 258, VPRS 3992/P inward

- registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 31 *ibid.*
- 32 *ibid.*
- 33 G Bartlett, 'Francis, James Goodall (1819–1884)', *Australian Dictionary of Biography*, vol. 4, Melbourne University Press, Melbourne, p. 212.
- 34 The three-volume set sent to the Heathcote Mechanics' Institute is a rare surviving example. It is now part of the National Museum of Australia's collection: see figs 3 and 4.
- 35 Form letter from T Ware, 16 September 1874 (Library, Royal Botanic Gardens Melbourne).
- 36 Letter, F Mueller to R Ramsay, 31 May 1875 (H75/5970, unit 258, VPRS 3992/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 37 Letter, W Odgers to F Mueller, November 1876 (Unit 43, p. 1129, VPRS 1187/P outward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 38 Letter, F Mueller to J MacPherson, July 1876 (K76/7467, unit 879, VPRS 3991/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 39 Letter, F Mueller to W Odgers, 13 July 1875 (H75/8120, unit 813, VPRS 3991/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 40 Letter, F Gladman to F Mueller, 13 June 1882 in Home et al., *Regardsfully Yours: Selected Correspondence of Ferdinand von Mueller*, vol. 3, 1876–1896, Peter Lang, Bern, 2006, p. 272.
- 41 *ibid.*
- 42 Letter, J Maiden to F Mueller, 7 August 1884 (MRS 7/1 minor outward correspondence, p. 349, Powerhouse Museum, Ultimo, NSW).
- 43 Letter, JH Macfarland to G Berry, 15 May 1885 (C85/5048, unit 258, VPRS 3992 inwards registered correspondence, VA 860 Chief Secretary's Office).
- 44 Letter, AHS Lucas to G Berry, 20 July 1885 (C85/7269, unit 258, VPRS 3992/P, PROV).
- 45 Letter, F Mueller to Barnard, 5 August 1885 (FNCV 002-019 Archives, Field Naturalists Club of Victoria, Melbourne).
- 46 Letter, G Graham to G Berry, 26 January 1886 (F86/790, unit 258, VPRS 3992/P, PROV).
- 47 Letter, J Shillinglaw to G Berry, 10 February 1886 (E86/1376, unit 258, VPRS 3992/P, PROV).
- 48 Letter, F Mueller to T Wilson, 9 June 1885 (D85/5786, unit 258, VPRS 3992/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 49 *ibid.*
- 50 *ibid.*
- 51 Letter, F Mueller to A Deakin, 12 February 1889 (M89/916, unit 401, VPRS 3992/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 52 Letter, F Mueller to T Wilson, 23 February 1889 (N89/2407, unit 408, VPRS 3992/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 53 Letter, F Mueller to T Wilson, 19 January 1889 (M89/916, unit 401, VPRS 3992/P inward registered correspondence, VA 475 Chief Secretary's Department, Public Record Office, Victoria).
- 54 Letter, F Mueller to A Deakin, 12 February 1889 (see Note 59).
- 55 *ibid.*

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