



Women in the first three centuries of formal botany in southern Africa

E. Figueiredo^{1,*}, G.F. Smith¹

Key words

gender
herbarium
institutional development
research
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Abstract Southern Africa is globally known for its considerable floristic diversity and for the past several centuries the region has attracted the research attention of both foreign and southern African botanists. While the majority of the plant scientists, including taxonomists, working on the regional flora was male, women have made significant contributions to the botany of southern Africa. We provide a comprehensive review of the role women played in botany in the region, from the earliest days of recorded botanical endeavour (c. mid-17th century) and for the ensuing c. 300 years. The women are exhaustively catalogued and the parts they played in advancing botany, and where appropriate some related plant-based activities, such as horticulture, are noted and assessed. It is shown that women played an important but generally underappreciated role in botanical research, fieldwork, and specimen collecting, as well as in herbarium management and institutional development.

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INTRODUCTION

“... backwards and in high heels.” (Thaves 1982)

Background

Southern Africa, here defined as the region covered by the Flora of Southern Africa (FSA) project, i.e., Namibia, Botswana, Eswatini (formerly Swaziland), Lesotho, and South Africa, is host to the richest temperate vascular plant flora globally. About 21 100 vascular plant species are indigenous to the region (Steenkamp & Smith 2006: iv), with some 13 100 (c. 62 %) of these being endemics (Steenkamp et al. 2005, Van Wyk et al. 2005).

Southern Africa has attracted the attention of plant taxonomists ever since early maritime explorers from Portugal first rounded the Cape in 1488 (Axelson 1998). Thereafter botanical explorers from the Netherlands, especially through the Dutch East India Company, Great Britain, and other European nations regularly visited the subcontinent. During the successive periods of Dutch and British colonial influence over what was then known as the Cape Colony, stretched without interruption from 1652 to 1910, when the Union of South Africa was established, and then to 1961 when the Republic of South Africa came into being, plant material sourced from especially South Africa, but also from Botswana, Eswatini, and Lesotho, was largely shipped to institutional and private collections (herbaria and botanical gardens) in Europe. This was also the case in other British colonies such as Australia and New Zealand (see for example May 2001: 332 on the mycota of Australasia). Namibia, on the other hand, as Deutsch-Südwestafrika (German South West Africa), was a German overseas territory from 1884 until 1919, soon after World War I; thereafter it was administered by South Africa until 1990. Material collected in Namibia was usually

shipped to Germany and enhanced herbarium and other collections in that country through the work of researchers such as Moritz Kurt Dinter (1868–1945), a prolific author and the ‘Father of Namibian Botany’ (e.g., Dinter 1923, Figueiredo et al. 2020: 128).

It was only during the 20th century that South African-born plant scientists increasingly played a prominent and decisive role in the taxonomy of the vascular plant flora of the region. Even then the first two Directors of the National Botanic Gardens of South Africa, one of the forerunners of the South African National Biodiversity Institute (SANBI), which was established early in the 21st century, were both British-born (H.H.W. Pearson, 1870–1916 and R.H. Compton, 1886–1979). The same applied to the Botanical Research Institute (BRI), at the time, in 1903 and in 1913, as the Division of Botany and the Division of Botany and Plant Pathology, respectively, where the first officers-in-charge were the British-born Joseph Burt Davy (1870–1940; Fig. 1) and Iltyd Buller Pole Evans (1879–1968) (Gunn 1971). Interestingly, the wives of Burt Davy and Pole Evans, i.e., Alice Bolton Davy (1863–1953), a botanical artist, and Mary Ross Hall Thomson (1896–1975), respectively, are both credited as having assisted their husbands botanically. In the case of I.B. Pole Evans, it is recorded that the ‘untiring devotion’ of Mary R.H. Thomson (later Pole Evans) greatly facilitated the many accomplishments of I.B. Pole Evans (Gunn 1971: 134). Nevertheless, since early on South African-born plant scientists did play a role in botany in South Africa and beyond, the celebrated Christiaan Hendrik Persoon (1762–1836) being such an example (Gunn & Codd 1981: 279). He is *inter alia* commemorated in the title of the mycological journal *Persoonia* (<https://www.ingentaconnect.com/content/nhn/pimj>).

From as early as the end of the 17th century women are recorded as having played a role in the taxonomy of the vascular plants of southern Africa. However, from that early starting date, their activities were often hampered by rules imposed by their

¹ Department of Botany, Nelson Mandela University, P.O. Box 77000, Gqeberha [Port Elizabeth], 6031 South Africa;
corresponding author e-mail: epnfigueiredo@gmail.com.

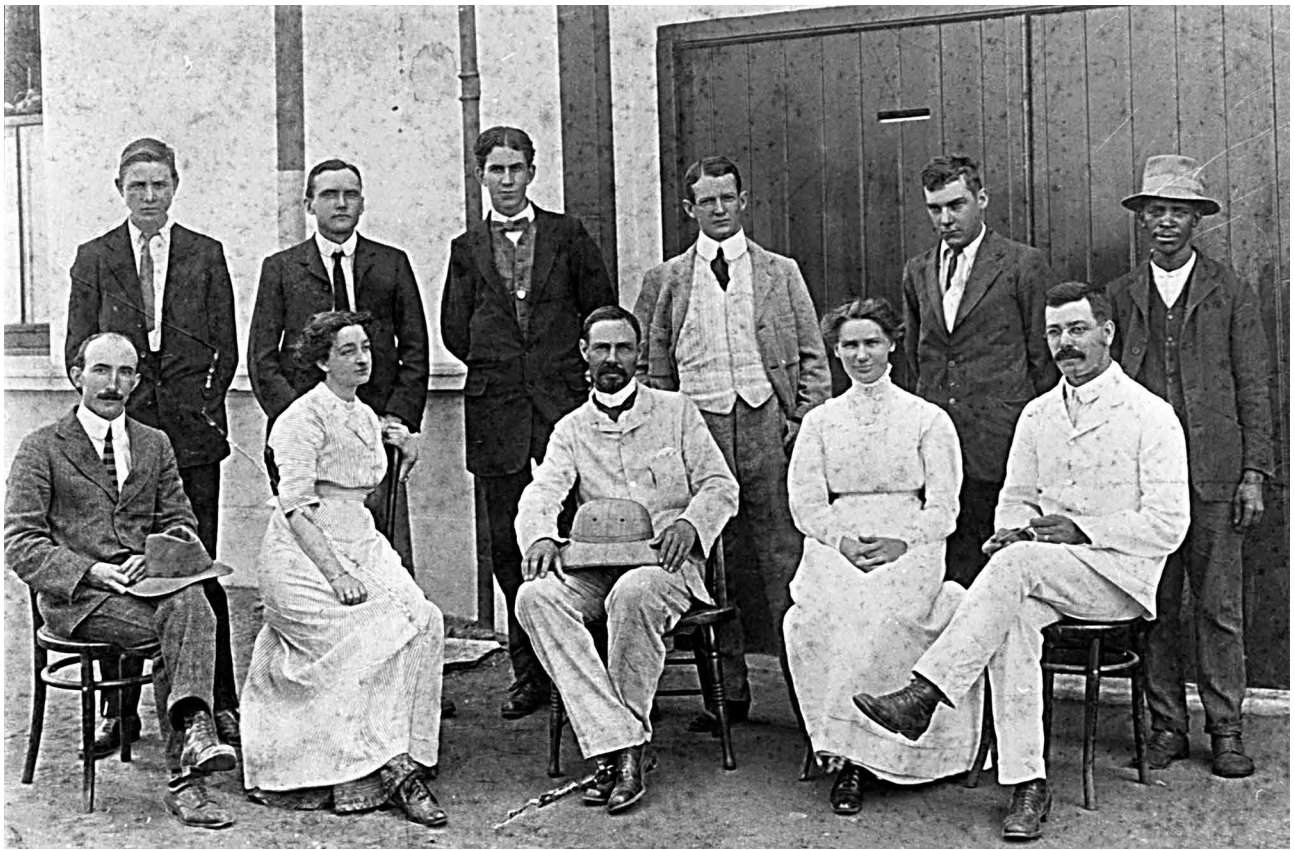


Fig. 1 Joseph Burrtt Davy (seated in the middle) with his staff c. 1912. Sydney Stent is sitting to his right. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

husbands or by the prevailing codes of conduct of the societies they lived in. Over the next several hundred years, the role of women in southern African plant taxonomy had considerably strengthened, particularly in the second half of the 20th century. By the end of the 1990s, three hundred years after the first woman collector was active in South Africa, women accounted for 40 % of South Africa's plant taxonomy expertise (Mössmer & Willis 2000). However, women's involvement and role in botanical matters in South and southern Africa have been underappreciated in literature. We here address this situation and provide information on the role of women in, especially, the taxonomy of the flora of southern Africa, with emphasis on the vascular plants, in a period of c. three centuries. Reference is also made to the roles of women in other plant-based activities, such as in landscape design and horticulture.

Women and botany

In the mid-1800s, in the rather incongruously titled work, 'Ladies' botany [...]', John Lindley (1799–1865), Professor of Botany at the University College, London, from 1829 to 1860, stated: "This little book (although a two-volume, 580-page book can hardly be described as 'little') has been written in the hope that it may be found useful as an elementary introduction to the modern method of studying systematic Botany. There are many works, of a similar description, to explain or illustrate the artificial system of Linnaeus, the simplicity of which might have rendered such labours superfluous; but no one has, as yet, attempted to render the unscientific reader familiar with what is called the Natural System [of Antoine Laurent de Jussieu], to which the method of Linnaeus has universally given way among Botanists." (Lindley 1848: iii). One implication of the patronising title of Lindley's work was that for women to understand (natural) plant classification (as opposed to the artificial Linnaean

system), it needed to be presented in an uncomplicated way and simplified for the sake of the unscientific reader – mostly women. But this is an oversimplification of what Lindley, the Father of Modern Orchidology, wanted to achieve. As noted by Shteir (1997: 33), Lindley *inter alia* deliberately wanted to separate the polite botany practiced by women from rigorous botanical science, evidently the domain of men. Similar views were held in France, where, when the Comte de Buffon's 'Histoire Naturelle, Générale et Particulière', which was written in a 'flowery and ornate style' for the 'cultured public', started appearing in 1749 and attracted a lot of attention, his academic detractors *inter alia* noted rather misogynistically that "women [will] attach importance to it" and therefore, by implication, not men (Knapp 2019: 124). Even by the late-1880s, Adams (1887: 116) still saw a need to encourage young men to study botany and that it was not "...merely one of the ornamental branches, suitable enough for young ladies and effeminate youths, but not adapted for able-bodied and vigorous-brained young men who wish to make the best use of their powers".

This then was the prevalent and general interpretation of the scientific ability of women in the Victorian age, a time when several women in southern Africa were firmly establishing themselves as botanists and not merely as convenient sources of specimens from the colonies for wealthy collectors and the scientifically inclined in Europe.

By the 1950s it had been about 100 years since the first botanist, Carl Wilhelm Pappe (1803–1862), was officially appointed in South Africa, the Cape Colony in fact, in 1858, and some 50 years since the appointment of Reino Leendertz (1869–1965) as the first botanist at the Transvaal Museum in 1898. Rourke (1999) similarly covered the period (from 1753) to the 1950s in his historical overview of plant systematics in South Africa.

MATERIAL & METHODS

The study area consisted of the FSA region (Namibia, Botswana, Eswatini (formerly Swaziland), Lesotho, and South Africa). The names of women who contributed to the botanical exploration of southern Africa were extracted from Gunn & Codd (1981), as later expanded by Glen & Germishuizen (2010), and complemented with names obtained from Lanjouw & Stafleu (1954), Holmgren et al. (1990), Smith & Willis (1999), S2A3 (Southern Africa Association for the Advancement of Science) (2021), and JSTOR Global Plants (2021). Other online resources, such as British 1820 Settlers to South Africa (2021), were accessed to verify some information. Names for which information in Glen & Germishuizen (2010) is scant were further researched. Names included in Glen & Germishuizen (2010) referring to collectors in other African countries (i.e., Angola, Malawi, Mozambique, Zambia, and Zimbabwe) were excluded from this analysis.

For the purposes of this paper, 'botany' is regarded as that component of plant science that deals with the collecting of plant specimens, the studying of plant morphology, and the casting of the identified or named taxa into hierarchical classification systems, i.e., what would today be widely regarded as plant taxonomy. However, where appropriate, we also reference the role of women in plant and biodiversity science in general in southern Africa. The period studied is from c. 1650 to 1950, which corresponds to 250 years that followed the activity of the first woman collector on record and about 300 years since Governor Jan van Riebeeck, on the instruction of the then powerful Dutch East India Company, established a victualing station at the Cape, which initiated the occupation of southern Africa by Europeans. A further reason for selecting 1950 as the cut-off date for investigating the contributions of women botanists to botany, including the expansion of natural history collections in southern Africa, is that the last half of the 20th century – post-World War II essentially – saw an unprecedented surge in progress in systematic biology, for example through the development of quantitative methodologies for assembling biological classifications and for reconstructing phylogenies (Rourke 1999, Marhold et al. 2013, Stuessy 2020). Before the 1950s, considerable effort was expended on (macro-)morphological studies and accumulating specimens for deposition in herbaria (see Victor et al. 2016: 197, f. 4), a trend that accelerated during the last half of the 1900s. These materials are, of course, essential for constructing predictive classifications, and for what are now exciting new initiatives to deliver a connected ecosystem of digital aggregations that are intended to provide convenience and value to the public at large, not only the biodiversity science community.

The names of woman botanists were compiled in a list that includes women for whom the birth date is known, or could be inferred as having been before 1 January 1950. In addition to botanists, i.e., plant taxonomists, the names compiled include other scientists whose activities related to plant taxonomy or who collected plants for herbaria. Further, herbarium assistants and technicians, botanical artists, dedicated collectors, and foreign taxonomists and visitors, who participated in short-term collecting expeditions, are included. Phycologists and mycologists are also included.

Herbarium codes follow Thiers (continuously updated).

RESULTS & DISCUSSION

Overall results

The list compiled of southern African woman botanists includes 303 names (Appendix), of which 209 refer to women who were active before 1950. The actual number of active women is undoubtedly higher than this figure, taking into account that

Table 1 General biographical information about 209 women active in southern African botany from 1699 to 1950.

Residency	Born or resident in southern Africa	184
	Visitors	14
	Unknown	11
Born in	Southern Africa	105
	UK	38
	Other	28
	Unknown	38
Education	Attended University or obtained a degree	102
	PhD or DSc (highest degree)*	36
	MSc or MA (highest degree)	22
Activity**	Botanists, mycologists, or algologists	76
	Botanical assistants or technicians	15
	Teachers or librarians	21
	Professionals in other fields (biology, pharmacology, horticulture, ecology, medicine)	14
	Collectors or naturalists, including amateur botanists	72
	Artists	23
Authors of plant names***	60	

* One honorary doctorate was not accepted (see p. 286); two women obtained two doctoral degrees.

** Some women are recorded with more than one activity or occupation. For those with university degrees, the date of the conferring of the first degree is considered to have been the start of their active botanical careers.

*** Includes some that have an author abbreviation in IPNI (2021) but for whom no ascribed names have been found.

Table 2 General biographical information about 94 women born before 1950 but only active after 1950.

Residency	Born in or resident in South Africa	84
	Visitors	5
	Unknown	5
Born in	Southern Africa	45
	UK	8
	Other	23
	Unknown	18
Education	Attended University or obtained a degree	66
	PhD or DSc (highest degree)	20
	MSc or MA (highest degree)	21
Activity*	Botanists, mycologists, or algologists	53
	Botanical assistants or technicians	9
	Teachers or librarians	4
	Professionals in other fields (biology, pharmacology, horticulture, ecology, medicine)	10
	Collectors or naturalists, including amateur botanists	17
	Artists	10
Authors of plant names**	33	

* Some women are recorded with more than one activity or occupation. For those with university degrees, the date of the conferring of the first degree is considered the start of their active botanical careers.

** Includes some that have an author abbreviation in IPNI (2021) but for whom no ascribed names have been found.

numerous plant collectors were active in the region in the late 19th and 20th centuries. In many databases and on labels attached to specimens, only initials are given for collectors, which does not facilitate the determination of the gender of the collector. During the period studied numerous women obtained a degree in Botany but did not develop any activity in that field. These were not included. A synopsis of the results is given in Table 1 and 2.

Overview of the women botanists in South Africa from the 17th century to World War II

17th century

After Jan van Riebeeck established a settlement at the Cape in 1652, interest in the flora of southern Africa increased in Europe and several collectors became active in the region. One of the early major figures in botanical exploration of the region at that time was the German botanist Henrik Bernard Oldenland (or Hendrik Barend(t) Oldenland(t) (Robertson undated),

or Heinrich Bernhard Oldenland (Gunn & Codd 1981: 265)). He was the superintendent of the Company's Garden in Cape Town and particularly relevant for making Cape flora known to European botanists and for compiling a valuable herbarium of "13 or 14 volumes of folio" (Valentijn as cited by Gunn & Codd 1981: 265). Until his untimely death at the age of 34 in 1697, Oldenland sent plants to Europe, including to James Petiver (1658–1718) in London. Petiver's collection was later acquired by Hans Sloane (1660–1753) to integrate into his herbarium, which became the basis of the Herbarium of the Natural History Museum (Brittain 2006: 50, 164, Huxley 2019: 101, Carine 2020).

From 1693 to 1697 Oldenland was married to the Dutch settler Margaretha Hendrina van Otteren (c. 1665–date of death unknown). She is the first woman recorded in the literature in connection with a botanical activity in southern Africa, and the only one active in the 17th century. After Oldenland died, Van Otteren continued dispatching Cape plants to Petiver (Britten 1921, Gunn & Codd 1981), at least in 1699. In that year she promised Petiver to continue sending "whatever plants that fertile promontory [the Cape Colony] produces" (Britten 1921: 35), but that was a promise she could not fulfil. Van Otteren ceased sending specimens to Petiver in 1700 after marrying her third husband Hendrik Donker (or Doncker) on 30 May 1700 (Robertson undated). Donker was a man who, according to his contemporary and also a collector, Johannes Starrenburgh, would not "trouble his head with these foelerys" (Britten 1921: 36; Gunn & Codd 1981: 268). In the same letter, dated 1701, that Starrenburgh addressed to Petiver, Starrenburgh also described Van Otteren as "a woman of a covetous temper" and that for that reason, one would have to 'sufficiently pay' to get the remaining Oldenland collections (Britten 1921: 36). However, it must be noted that Starrenburgh had the intention of replacing the deceased Oldenland (and his widow) as the supplier of plant material and therefore to serve "other curious gentlemen's natural ingenuity" (letter cited in Britten 1921: 36). Oldenland's heir was, in fact, Van Otteren's third husband, Donker. Despite considering these endeavours as 'foelerys', it was Donker who asked 'some Englishmen' too much money for Oldenland's herbarium (Valentijn as cited by Gunn & Codd 1981: 266). He disposed of the herbarium in the Netherlands and eventually it ended up in Genève in Switzerland (Gunn & Codd 1981: 266).

18th century

Several male collectors were active in southern Africa, with nearly 50 names recorded by Gunn & Codd (1981) for the second half of the 18th century. Two are noted here, for their connection with the only woman recorded as having collected at the time. Those are the Swedish physician and botanist Carl Pehr Thunberg (1743–1828) and the Scottish gardener and traveller Francis Masson (1741–1805).

Lady Anne Vane Monson (c. 1727–1776) is the only woman known to have actively collected specimens in the Cape during this period. At the time she was married to Col. George Monson, an army officer in India, and in 1774 she accompanied him on a visit to the Cape (Gunn & Codd 1981, British Museum 2020). She had some knowledge of Latin and an interest in natural history. Thunberg, who met her in the Cape, noted that she was accompanied by a contracted draughtsman to help collect and illustrate plants (Thunberg 1795: 132). Both Thunberg and Masson accompanied her on trips to farms in the Cape Colony, and Thunberg contributed to her plant collection. Lady Monson sent plants to Carl Linnaeus in Sweden (S2A3 2021) and nine years before she died he commemorated her in the genus name *Monsonia* L.

Another woman, Lady Anna Maria (née Truter) Barrow (1777–1857), is also recorded by Gunn & Codd (1981) as having been active during this period but only as an artist. She may be the first South African-born botanical artist of whom paintings are extant.

1800–1890

During this period the foundation for plant taxonomy in southern Africa was laid. Several collections were created, with these being donated to and forming the basis of the main herbaria of the region (Table 3).

For these 90 years (1800–1890), 24 women were recorded as becoming active in botany. The great majority were collectors (18); the others were naturalists (2), a teacher (1), a missionary (1), an author (1), and a botanist/geologist (1). Five of them were also artists. They were born in South Africa (9), the UK (8), other European countries (3), or undetermined (4). Three were visitors.

Table 3 Significant events that influenced botanical activities in southern Africa in the 19th century.

1822/1823	The botanists Christian Friedrich Ecklon (1795–1868) and Karl Ludwig Philipp Zeyher (1799–1858) started collecting in the Cape.
1825	The South African Museum was founded and Ecklon deposited some of his collections there. These would form the foundation of its Herbarium.
1829	The South African College, later to become the University of Cape Town, was established, initially as a high school for boys.
1848	A Botanic Garden was founded in Cape Town, as part of the Company's Garden.
1851	A Botanic Garden was founded in Durban.
1855	The Albany Museum was established in Grahamstown.
1858	The first botanist, Carl Wilhelm Ludwig Pappe (1803–1862), was officially appointed in South Africa. He built up a personal collection that was later acquired by the state and became known as the Cape Government Herbarium.
1860	A Herbarium was established at the Albany Museum (Herb. GRA).
1861	The English botanist Peter MacOwan (1830–1909) settled in Grahamstown and started his personal Herbarium that would later (1904) be provided to the Herbarium of the Albany Museum.
1865	The English businessman and amateur botanist Harry Bolus (1834–1911) started his personal Herbarium in Cape Town. It would later become the Bolus Herbarium at what is today the University of Cape Town (Herb. BOL).
1873	Foundation of the University of the Cape of Good Hope (UCGH), a university that did not require physical attendance as it did not provide tuition, only examinations. In 1916 it was renamed the University of South Africa, a distance-tuition institution.
1881	MacOwan (see the year 1861, above) appointed as the director of the Botanic Garden and Curator of the Cape Government Herbarium in Cape Town.
1882	The English botanist John Medley Wood (1827–1915) accepted the position of Curator of the Botanic Garden in Durban, and established a new Herbarium, later known as the Natal, now the KwaZulu-Natal, Herbarium (Herb. NH).
1883	The German (later naturalised South African) botanist and chemist Hermann Wilhelm Rudolf Marloth (1855–1931) arrived at the Cape and started collecting for his Herbarium that would eventually become part of the National Herbarium in 1927.
1889	The German botanist Selmar Schonland (1860–1940) accepted the position of Curator (later Director) of the Albany Museum.



Fig. 2 Mary Elizabeth (Bowker) Barber. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

Early in the 19th century the first South African-born woman plant collector, Hester Susanna Joubert (later Reitz) (1797–1884) was active in the Western Cape. She was the first of many women who collected during the century. Joubert collected in the 1820s mainly at the farm 'Zoetendalsvlei' (Soetendalsvlei), south of Bredasdorp, and her specimens were included in Ecklon's herbarium (Gunn & Codd 1981). The labels of her collections do not indicate her name, nor the dates on which the collections were made. However, for instance, *Agathosma joubertiana* Schtdl., based on one of her collections, was published in a paper submitted in 1829, which indicates the collection date was earlier, likely in 1827 or 1828. The latter date was the year Ecklon left South Africa after his first sojourn in the country came to an end. At this time he took his collections to Europe for further study.

During this period, a particularly remarkable collector and naturalist stands out, Mary Elizabeth (née Bowker) Barber (1818–1899; Fig. 2). Although she was born in England, her family went to South Africa when she was only two years old. She began to collect natural history specimens and studying them at an early age (Gunn & Codd 1981). After marrying F.W. Barber, a farmer and later diamond prospector, she settled near Grahamstown. There she began to correspond with scientists in various fields of natural history, such as William Henry Harvey (1811–1866), sending them her collections. She was acknowledged in Volume 1 of the 'Flora capensis' (Harvey & Sonder 1859–1865). Barber published scientific papers on various natural history subjects and became the first South Africa-resident botanical observer to publish in an overseas journal (Barber 1870a, 1871). She was also the first woman to publish on southern African prehistory and one of the first persons in South Africa to recognise the prehistoric significance of stone tools (Cohen 1999, Weedman 2001); the

first female member of the Ornithologischer Verein in Vienna (S2A3 2021); the first female corresponding member of the South African Philosophical Society (Cohen 1999); and the first South Africa-resident woman to publish a plant name (Barber 1870b, Figueiredo & Smith 2020).

In addition to Joubert and Barber, the other women recorded as first-time collectors during the 19th century were visitors: the Scottish Countess of Dalhousie, born Christian Broun (1786–1839), who visited the Cape in 1829 when travelling with her husband and made some collections; the English Miss M.C. Owen (1802–1854), who accompanied her brother, a missionary, to Africa, and collected in 1839 and 1840, her collections being cited in 'Flora capensis'; and Rachel Jameson (date of birth unknown–1893) who visited the Cape in 1841 with her husband, a ship's surgeon, and made some collections (Gunn & Codd 1981).

From then on collecting activity flourished with a further 17 women collectors recorded up to 1890. Many of them were acknowledged by Harvey, in 'Flora capensis' (Harvey & Sonder 1859–1865) or in the 'Thesaurus' (Harvey 1859–1863).

Turn of the 19th century

The end of the 19th century brought new developments to South Africa, particularly in the Transvaal (now the North-West, Gauteng, Limpopo, and Mpumalanga provinces of South Africa) in the then independent Zuid-Afrikaansche Republiek (South African Republic), before hostilities broke out in the Second Anglo-Boer War with its consequences for botanical endeavours (Table 4).

In the 10 years from 1892 to 1902, the number of women who became active in botany in southern Africa more or less equalled the number that operated in regional botany during the preceding 90 years: a total of 23 women. Again the majority were collectors (8), the others were botanists (4), herbarium staff (4), teachers (3), naturalists (2), a phycologist (1), and an author (1). Five of them were also artists. They were born in South Africa (9), the UK (3), elsewhere in Europe (4), the USA (2), or undetermined (5). Four were visitors.

A change in women's contribution to botany took place during these years with the arrival of the first women with university qualifications and the appointment of women to official positions in Museums or Herbaria all over South Africa, from Cape Town to Pretoria, Grahamstown, and Durban, and in smaller places such as Wellington and Kimberley. The first of these two appointments seems to have taken place in 1895 in Cape Town and also in Durban. In Cape Town, Charlotte Annie Snowden Treleaven (birth date unknown–1953) was appointed then as (the only) assistant to MacOwan at the Cape Government Herbarium. Up until then, MacOwan had been operating the Herbarium by himself. Treleaven's appointment freed MacOwan to undertake collecting trips and attend to his other numerous occupations. When MacOwan retired, in 1905, the Herbarium was transferred to the South African Museum and Pearson

Table 4 Significant events that influenced botanical activities in the Transvaal (northern South Africa) at the turn of the 19th century.

1892	The Staatsmuseum was created in Pretoria. It would later become the Transvaal Museum.
1896	Foundation of the Transvaal University College, later to become the University of Pretoria.
1897	The Staatsmuseum acquired collections of the German botanist F.R. Rudolf Schlechter (1872–1925) that would become the basis of its Herbarium (Herb. TRV).
1898	The first female civil servant is appointed to the South African Republic.
1899–1902	Second Anglo-Boer War.

(see Table 5) became its honorary curator. Treleven continued working there probably as an acting curator until 1907, when she was replaced by E. Percy Phillips (see Table 5). She transferred back to the Department of Agriculture in 1907 and left its employment in 1912.

The other appointment took place in Durban, when the 16 year-old English-born Wanda Marie Frieda Lauth (later Floyd) (1879–1949) was appointed as assistant to Medley Wood in the Natal Herbarium. She collected and produced illustrations for 'Natal Plants' (Wood 1898–1912) but left in 1903 when she got married. A few years after Lauth's appointment, in 1901 the 15 year-old Millicent Franks (later Flanders) (1888–1961) became botanical artist and assistant to Medley Wood. In 1903 she replaced Lauth as contributing artist to 'Natal Plants'. She also became a plant name author in 1911, before she emigrated to England in 1914.

In Cape Town, around 1897, the South African Maria Wilman (1867–1957; Fig. 3) started collecting natural history specimens for the South African Museum. She had returned from England, where she had attended the University of Cambridge and completed the Natural Science Tripos in geology, mineralogy, and chemistry in 1888, after which she had studied botany. She received a certificate, not a degree as these were not awarded to women at that University until much later. After some years working as a volunteer at the Museum, in 1902, Wilman was appointed assistant in its Department of Geology and Mineralogy. In 1907 the Alexander McGregor Memorial Museum (later McGregor Museum) was founded in Kimberley and Wilman was appointed as director, a position she held for 39 years until her retirement at the age of 79. Afterwards, she remained at the Museum for another five years. At the time, many scientists worked on a broad range of subjects. Wilman focused on stone artefacts, rock paintings and prehistoric rock engravings, but she was also a botanist, exploring the flora of the region and collecting material for both the Museum herbarium she had created and for other institutions such as



Fig. 3 Maria Wilman. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

the Bolus Herbarium. Her botanical investigations culminated in the publication of the 'Preliminary check list of the flowering plants & ferns of Griqualand West' (Wilman 1946). She was also active in horticulture, exchanging plant material with other countries, and created the Museum's garden as well as a 400 m long rock garden in the town's public garden. In 1931 a Master of Arts (MA) degree was finally and duly conferred on her by the University of Cambridge, and eight years later in 1939 she was awarded an honorary doctorate (LLD) by the University of the Witwatersrand.

In 1897, as Wilman was starting her scientific career, and not far from Cape Town, in Wellington, Bertha Stoneman (1866–1943; Fig. 4), who emigrated from the USA, arrived in South Africa to take up an appointment at the then Huguenot College for women to be in charge of the Botany Department and to teach botany. In 1894 Stoneman had already been awarded a doctorate (Doctor of Science, DSc) by Cornell University and was one of the first women to obtain a DSc in Botany. She published the results of her work (Stoneman 1898) and was an author of plant names. Later, in 1921, she became principal of the Huguenot University College. Although she did not publish much, she created the College Herbarium and was influential in attracting students to botany. Some women who were her students at the College followed successful careers in botany, particularly in mycology (see p. 283).

In the Transvaal, in northern South Africa, the Dutch-born and -educated, Reino Leendertz (later Pott) (1869–1965; Fig. 5, 17) was appointed as botanical assistant to the Staatsmuseum in Pretoria in 1898. Her appointment was an exception to the Museum's rule of employing only male scientists (S2A3 2021) and she became the first female civil servant appointed to the South African Republic. Later, Leendertz was the first government botanist after the establishment of the Union of



Fig. 4 Bertha Stoneman. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.



Fig. 5 Reino Leendertz. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

South Africa in 1910. Under her supervision, the Museum's Herbarium that initially consisted of a collection bought from Schlechter, became a large collection of 23 000 specimens. She was a vigorous collector and amassed nearly 6 000 numbers. After marrying N.W. Pott in 1909 she continued working and publishing, then using the surname Pott-Leendertz. However, as an author of plant names, her abbreviation is R.Pott. She retired in 1925. One of her major publications, co-authored with Burt Davy (see 'Introduction', above), was 'A first checklist of the flowering plants and ferns of the Transvaal and Swaziland' (now Eswatini) (Burt Davy & Pott-Leendertz 1912).

At the same time, on the south-eastern side of South Africa, the appointment of adolescent women as assistants continued. In 1898, in Grahamstown, the 17-year old South African Mary Florence Daly (later Heny) (1881–1960), was appointed as assistant in the Albany Museum Herbarium. She left in 1913 after getting married.

During the last years of the 19th century about ten more women are recorded as collectors. Among these the French missionary Anna (née Busch) Dieterlen (1859–1945) is noteworthy. She actively collected in Leribe, Lesotho; her collection numbers reach 1 380, corresponding to likely over 2 000 gatherings (different gatherings are grouped under the same number).

From the early-20th century to the end of World War I

After the end of the Second Anglo-Boer War, several herbaria were initiated. The creation of the new state, the Union of South Africa, also resulted in several changes in the organisation of the country's then fledgling civil service (Table 5).

From 1902 to 1918, the number of women who became active in botany in southern Africa increased to 46. They were botanists (15), collectors (11), botanical assistants (5), teachers (5), mycologists (2), naturalists (2), missionaries (2), a phycologist (1), and ethnologist (1), a librarian (1), and an author (1). Five of them were also artists. They were born in South Africa (19),

Table 5 Significant events that influenced botanical activities in southern Africa in the early-20th century until the end of World War I.

1902	– End of the Second Anglo-Boer War and the South African Republic. The Transvaal is referred to as the Transvaal Colony until 1910. – Augusta Duthie (see p. 283) established two Herbaria at the Victoria College in Stellenbosch. These were to become Herb. STE and Herb. STEU.
1903	– The English botanist Joseph Burt Davy (1870–1940) was appointed head of the new Division of Botany of the Department of Agriculture of the Transvaal Colony in Pretoria, where he starts a Herbarium (Herb. PRE). – The English botanist Henry Harold Welch Pearson (1870–1916) accepted the Chair of Botany at the South African College in Cape Town.
1904	– Rhodes University was established in Grahamstown.
1905	– The Government Herbarium was transferred to the Herbarium of the South African Museum in Cape Town (Herb. SAM), and Pearson became its honorary curator. – The Welsh botanist and mycologist Illyd Buller Pole Evans (1879–1968) was appointed to the Department of Agriculture of the Transvaal Colony. – Pole Evans started the collections that would be the basis of the Mycological Herbarium in Pretoria (Herb. PREM). – The English botanist George Potts (1877–1948) became a lecturer at Grey University College, in Bloemfontein (later the University College of the Orange Free State, now the University of the Free State) and started its Herbarium, the Geo.Potts Herbarium (Herb. BLFU).
1907	– The Alexander McGregor Memorial Museum (later the McGregor Museum) was founded in Kimberley.
1910	– Creation of the Union of South Africa. – The Natal University College was founded. – Separation of the campuses (Johannesburg and Pretoria) of the Transvaal University College.
1911	– Edwin Percy Phillips (1884–1967) became Curator of the Herbarium of the South African Museum (Herb. SAM) in Cape Town.
1912	– Burt Davy was appointed Head of the Division of Botany and Pole Evans was appointed Head of the new Division of Mycology and Plant Pathology.
1913	– The two abovementioned Divisions were amalgamated as the Division of Botany (later the Botanical Research Institute, still later the National Botanical Institute, now the South African National Biodiversity Institute) under the directorship of Pole Evans. The (KwaZulu-)Natal Herbarium (Herb. NH) was placed under the Division of Botany.
1914	– Onset of World War I.
1916	– The Huguenot College became the Huguenot University College. – The South African Native College was established (in 1951 it became the University College of Fort Hare, and in 1970 the University of Fort Hare).
1917	– Charles Edward Moss (1870–1930) was appointed as professor of botany at the South African School of Mines and Technology (later the University of the Witwatersrand) and started a Herbarium, the Moss Herbarium (Herb. J).
1918	– The Herbarium of the Department of Agriculture (Herb. PRE) became the National Herbarium. E. Percy Phillips was appointed as its Curator. – World War I Armistice (11 November).



Fig. 6 Sydney Margaret Stent. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

the UK (9), elsewhere in Europe (5), elsewhere in Africa (2), the USA (1), or undetermined (10). One was a visitor.

In the first years of the 20th century several women obtained degrees and started careers as botanists or teachers with an active interest in botany. In their joint publication on the flora of northern South Africa (see p. 281), Burt Davy and Leendertz (1912: 120) acknowledged two of the first professional, South African-born woman botanists: 'Miss S.M. Stent' for "valuable assistance in the determination of some of the records based on [Burt Davy's] collections" and 'Miss L. Kensit'.

Sydney Margaret Stent (1875–1942; Fig. 1, 6) was born in the Eastern Cape and obtained her tertiary qualification at the Bedford College for Women, in London. In 1904 she was employed as botanical assistant to Leendertz at the Transvaal Museum Herbarium. She published several papers, particularly on grasses, and became the agrostologist of the Division of Botany and Plant Pathology of the Department of Agriculture. After retiring in 1930 she took a position in the Department of Agriculture in Southern Rhodesia (now Zimbabwe).

'Miss L. Kensit' was the botanist who would later be well-known as Louisa Bolus. Harriet Margaret Louisa ('Lulu') Kensit (later Bolus) (1877–1970; Fig. 7) was one of the most productive South African botanists. During her 54 years-long plant name-publishing career (a career duration in which she was only surpassed by the extraordinary Inez Verdoorn, see p. 287), Bolus published over 2500 plant names. After graduating with a BA from the University of the Cape of Good Hope in 1902, she started assisting her great-uncle (later father-in-law) Harry Bolus in his private herbarium. When Harry Bolus died in 1911 his Herbarium was bequeathed to the South African College (that



Fig. 7 Harriet Margaret Louisa Kensit (Bolus) (seated in the middle) with Ruth Glover (seated to her right). H.H.W. Pearson stands on the right. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

became the University of Cape Town in 1918) with the condition that Louisa Bolus remained its curator for life. Altogether she worked at the Herbarium for 52 years, and occupied the position of curator for 44 years. She was an authority on the mesembs (*Aizoaceae*). She was also active in initiatives to educate lay people and children in botany, and an active member of numerous scientific societies. In 1936 she was awarded an honorary DSc degree by the University of Stellenbosch. Bolus had apparently rather strict views about what constituted botanical research and did not attract many co-workers. Throughout her career a few women were active for a while in the Bolus Herbarium but none continued their careers there. For instance, Ruth Mildred Glover (later Wordsworth) (1889–1961; Fig. 7), who qualified with a BA, also from the University of the Cape of Good Hope, was appointed assistant at Bolus Herbarium in 1911. She published some papers and plant names over the next few years. Apparently, she left to get married in 1917.

Elsewhere in South Africa, the appointment of (often adolescent) women assistants continued. At the Albany Museum, in Grahamstown, the 17 year-old Ellen ('Nellie') M. Cherry (1888–1967) was appointed as the second assistant in botany in 1905. She left ten years later when she became insane; she finally died in a mental hospital. In Pretoria in 1907 Maria ('Min') Carolina Collins (later Holden) was appointed as assistant to Leendertz at the Transvaal Museum. She left in 1913 to get married.

During the early 20th century, about 20 women, out of those recorded as active either as botanists or as relevant collectors, attended university or obtained a degree through examinations. As Bolus and Glover did, several other women obtained their qualifications at the University of the Cape of Good Hope. In this



Fig. 8 Augusta Vera Duthie. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

group of women, six botanists who would be active in Pretoria, Cape Town, Grahamstown, and Stellenbosch are prominent. Three of them had been educated at the Huguenot College, under Bertha Stoneman: Augusta Duthie (she obtained her degree in 1901), Ethel Doidge (1907), and Averil Bottomley (1911).

The South African Augusta Vera Duthie (1881–1963; Fig. 8) obtained a BA from the University of the Cape of Good Hope in 1901 and in the next year she was appointed lecturer at the Victoria College in Stellenbosch. The College had started admitting women in the 1890s, and in 1918 it became the Stellenbosch University. Duthie was likely the first university lecturer who was trained entirely in South Africa (S2A3 2021). In the Victoria College, around 1902, she founded the Department of Botany and what became known as the 'General Herbarium'. Later she also started a Herbarium that focussed more on the flora of the Stellenbosch District. These two herbaria were split in 1960 (Tölken 1971), as the (by then) University of Stellenbosch did not have the funds to administer Duthie's herbaria. The 'General Herbarium' was handed to the State and became known as the 'Government Herbarium' with the code STE. The District Herbarium was kept as a largely teaching Herbarium for the University, and adopted the code STEU. Duthie obtained an MA in 1910 and a DSc from the University of South Africa in 1929. She acted as head of the Botany Department until 1921. In that year a Professorship opened and one of her former students, who had obtained a doctorate in Berlin, was invited for that position and he became Head of Department. Duthie retired in 1939, having published mostly on the flora of the Stellenbosch District. She was active in scientific societies and elected as a Fellow of the Royal Society of South Africa.

Ethel Mary Doidge (1887–1965; Fig. 9), "of whom [Pretoria] may justly be proud" (Pole Evans 1916: 106) was a mycologist, and the first woman to be awarded a doctorate in science in



Fig. 9 Ethel Mary Doidge. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

South Africa. She was born in England, but her family emigrated to South Africa when she was a child. After graduating at the University of the Cape of Good Hope in 1907 she accepted a position as assistant to Pole Evans in the Division of Botany of the Transvaal Department of Agriculture in Pretoria. Doidge received an MA degree in 1909, and she became a professional assistant in the Division of Botany and Mycology of the new Union of South Africa. She obtained a DSc degree from the University of the Cape of Good Hope in 1914. In 1919 she became chief assistant of the Division of Botany and Plant Pathology and 10 years later she was appointed principal plant pathologist to the mycological section of the Division of Plant Industry. She retired in 1945 but continued working to finish her magnum opus, 'The South African fungi and lichens' to the end of 1945 (Doidge 1950). She made extensive collections of fungi, building up the National Collection of Fungi (Herb. PREM), now at the Plant Protection Research Institute, Pretoria. In addition to her scientific output that consisted of numerous publications, Doidge was also active in scientific societies and as an educator, with about 100 semi-scientific publications for farmers. She was an advocate of fundamental research, stating that only such research would result in a thorough knowledge of organisms and allow the optimal utilisation of resources (Rong & Baxter 2005).

In 1913 Averil Maud Bottomley (1889–1984; Fig. 10), also a mycologist, was appointed to the newly created Division of Plant Pathology and Mycology headed by Pole Evans in Pretoria (Bottomley 1929). She worked at the Mycological Herbarium until 1947 when she retired. She published several papers.

The other three main female botanists that at the time graduated from the University of the Cape of Good Hope were all South African-born: Edith Stephens (graduated in 1906), Lilian Britten (1910) and Margaret Levyns (1911).



Fig. 10 Averil Maud Bottomley. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

Edith Layard Stephens (1884–1966; Fig. 11) was the first South African-born woman to publish a plant name, in 1910. After studying at the South African College, and graduating from the University of the Cape of Good Hope in 1906, she received a scholarship to study at Newnham College, University of Cambridge. In 1911 she returned to South Africa, without a degree as the University of Cambridge did not award degrees to women at that time. She was appointed temporary lecturer in botany at the South African College and later lecturer. From 1916 to 1919, she was acting head of the Department. She continued in the Department of Botany until her retirement in 1940, and afterwards was attached to the Bolus Herbarium until her death. She laid the foundations for cryptogamic botany in South Africa, and published several papers, mostly on aquatic plants and fungi. Stephens was also an active member of scientific societies, a fellow of the Royal Society of South Africa, and a member of the council of the South African Biological Society. She was well-known for her knowledge of mushrooms, having published popular books on edible and poisonous mushrooms (Stephens 1953, Stephens & Kidd 1953), and for her interest in the conservation of the Cape Flats. The Edith Stephens Nature Reserve is a four-hectare area of wetlands near Phillipi, in Cape Town, that she acquired and donated to the National Botanic Gardens, Kirstenbosch, now part of the South African National Biodiversity Institute.

One year after Stephens graduated, Lilian Louisa Britten (1886–1952) obtained her BA from the University of the Cape of Good Hope. She had studied at Rhodes University College in Grahamstown, where she had been a student of Selmar Schonland. After a few years teaching, including at Oudtshoorn in the Western Cape in 1910, she continued her studies in the UK, at Oxford, Cambridge, and London. In 1918 she returned to Grahamstown to assume the position of lecturer in botany at the Rhodes University College. Later she became a senior



Fig. 11 Edith Layard Stephens. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.



Fig. 12 Margaret Rutherford Bryan Michell (Levyns). Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

lecturer, working at the College until her retirement in 1941. She collected c. 7 000 numbers.

Margaret Rutherford Bryan Michell (later Levyns) (1890–1975; Fig. 12) followed in the footsteps of Edith Stephens, studying at the South African College and graduating from the University of the Cape of Good Hope in 1911. In 1912 she continued her studies at Newnham College, University of Cambridge. After a brief stay back at the South African College she returned to England, to study at the John Innes Institute shortly before WWI started. During the first years of the war she did ‘munition work’ (Ritchie 1918: 650), i.e., war work connected to the Ministry of Munitions (she worked at an ammunition factory according to S2A3 2021) but returned to South Africa in 1916. She then joined the South African College staff, under Edith Stephens, and became a lecturer in 1919. Levyns was the first woman to obtain a DSc degree at the University of Cape Town, in 1932 (Rourke 1999: 186; 1933 according to Gunn & Codd 1981). She retired in 1945 but continued lecturing actively and remained attached to the Bolus Herbarium. She collected c. 12 000 numbers and was active in scientific societies and in educating the public on botany. Her publications on the taxonomy and phytogeography of the Cape flora would become classic references (Bennett 2015). Even before she obtained her doctorate she published a ‘Guide to the Flora of the Cape Peninsula’ (Levyns 1929) that at the time supplanted at least some of the early volumes of the ‘Flora capensis’, which had already been over 60 years out of date. She retired from the University of Cape Town at the age of 55, which, at the time, was a policy for women employed by the University. Despite her remarkable contributions to South African botany, she was never promoted and at retirement was at the same rank she had been given 30 years earlier (JEP Levyns 1977: xi). Levyns was one of the few South African botanists to have recorded her memoirs, which were published posthumously (MRB Levyns 1977).



Fig. 13 Alice Marguerite Pegler. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

Among several women who were active as collectors or amateur botanists during this period, Alice Marguerite Pegler (1861–1929; Fig. 13) is particularly relevant. She was a teacher who moved to Kentani in the Eastern Cape in 1890. She made numerous collections of plants, algae, fungi, insects, and other terrestrial invertebrates, which she sent to several specialists but also studied herself. Her personal herbarium had over 2 000 specimens and it was donated to the National Herbarium. According to Pole Evans (1916: 206) she “probably made a more exhausting collection of the flora of her district than [had] yet been attempted in any other part of South Africa”; afterwards she published the results of her study of the collections (Pegler 1918). Her fungi collections were studied by Averil Bottomley (Pole Evans & Bottomley 1918). Pegler was elected an associate (ALS) of the Linnean Society of London in 1912, the first woman to receive that title (S2A3 2021).

Among temporary residents, a neglected figure, not listed by Gunn & Codd (1981) nor by Glen & Germishuizen (2010), is Eleanor Muriel Margaret (‘Margot’) Hume (1887–1968), a pioneer English botanist in nutrition research (Forrester & Cameron 2017). Like Stephens and Levyns, she attended Newnham College in Cambridge, completing the Natural Sciences Tripos in 1910. In 1913 she travelled to South Africa to assume the position of senior lecturer in botany at the South African College (Ritchie 1918). In 1916 she returned to England on leave and took up ‘munition work’ (Ritchie 1918: 650), war work at the Ministry of Munitions, and sent out Miss J.E. Smith to the South African College as a substitute lecturer. As a con-

sequence, Stephens was then put in the position of temporary Head of Department, with Levyns who had just returned from England, and the aforementioned J.E. Smith as assistants. It appears that Hume did not return to South Africa. She joined the Lister Institute of Preventive Medicine in 1919 (Forrester & Cameron 2017).

The South African anthropologist and linguist Dorothea Frances Bleek (1873–1948) deserves to be mentioned. She studied at the University of Berlin and the School for Oriental and African Languages in London, and returned to South Africa in 1904. She undertook numerous expeditions to study San art and languages, the first of which was with Maria Wilman. Bleek did her field work not only in South Africa but also in Namibia, Botswana, Angola, and Tanzania. She collected plants on some of these expeditions, namely in the 1920/1921 expedition to Namibia with the staff of the South African Museum. In 1924/1925 Bleek and Mary Pocock (see p. 289) undertook their famous expedition across Angola. Bleek's work was ground-breaking and she was awarded an honorary doctorate from the University of Cape Town, which, out of modesty, she did not accept.

During the war, in 1916, a significant appointment was made. The young Scottish-born, South African-educated Mary Davidson Gunn (1899–1989; Fig. 14) had just finished school and was appointed as a clerk with the Division of Botany of the Department of Agriculture in Pretoria, under Pole Evans. Soon she was put in charge of building up a library. She became a librarian and botanical historian. She retired in 1954 but continued working until 1973. Due to her extraordinary persistence in fundraising and knowledge of botanical literature, the library (now part of the South African National Biodiversity Institute and formally named the Mary Gunn Library) became one of the best



Fig. 14 Mary Davidson Gunn. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

Table 6 Significant events that influenced botanical activities in southern Africa during the interwar period.

1919	Het Potchefstroom Universiteitskollege voor Christelik Hoger Onderwijs established (at present the North-West University Potchefstroom Campus). The A.P. Goossens Herbarium was founded in the Departement Plantkunde (Department of Botany) in 1932.
1922	The Johannesburg campus of the Transvaal University College became the University of the Witwatersrand.
1924	Foundation of a Herbarium at the Transvaal University College in Pretoria, the Schweickerdt Herbarium (Herb. PRU).
1930	The Pretoria campus of the Transvaal University College became the University of Pretoria.
1937	Foundation of a Herbarium at Kirstenbosch in Cape Town, the Compton Herbarium (Herb. NBG).
1939	Onset of World War II.

botanical libraries with a focus on Africa globally (Killick 1978, Potgieter 1997, Fourie undated, Smith et al. 2019). A list of Mary Gunn's publications is provided in Fourie (undated: 22).

As the war ended, in 1918, more women assistants joined the staff of the main centres of botanical activity: Isobel Agnes Arbuthnot (1870–1963), who worked at the Bolus Herbarium in Cape Town until she retired in 1939 and then continued at the Compton Herbarium (Herb. NBG) until 1945; Isobel Mary Stuart McCallum (later Ringer) (1899–1979), who joined the Division of Botany and Plant Pathology in Pretoria; Olga Gertrude Hilner (later Dreyer) (1898–date of death unknown), who was employed in the Albany Museum in Grahamstown, working for Schonland.

The interwar period

After the disruption caused by WWI, the development of herbaria continued (Table 6). The interwar years were arguably the richest for the progress of women in this field. More women became active during the 1920s than in any of the other decades of the period covered in this study. During the interwar period 79 women became active in botany. They include botanists (28), collectors (16), botanical assistants (10), teachers (7), other scientists (5), naturalists/conservationists (4), mycologists (3), authors (3), phycologists (2), and a missionary (1); 9 were also artists. They were born in South Africa (38), the UK (16), elsewhere in Europe (5), the USA (3), Australia (1), or undetermined (12). Four were visitors. Here we treat only a fraction, focusing on those that occupied positions in herbaria or universities.

The decade following WWI was particularly significant concerning the appointment of women to herbarium positions, to university lecturerships, or to other, related professional positions. Several appointments were made shortly after the armistice, in 1919.

The English-born Margaret Heatley (later Moss) (1885–1953), who was educated in the USA and had graduated with a BA in 1908 and an MA in 1910 at Wellesley College, Massachusetts, emigrated to South Africa in 1919 to take up a lecturer position at the Huguenot University College in Wellington. Two years later she took a position at the Botany Department, which was headed by C.E. Moss, of the University College of Johannesburg (soon to be the University of the Witwatersrand). They married in 1922. When C.E. Moss died, in 1930, Margaret Moss became curator of the Moss Herbarium. She held the position until 1950.

The Scottish-born Helena Madelain Lamond Forbes (1900–1959; Fig. 15), became a junior assistant at the Natal Herbarium (Herb. NH), also in 1919. Later, from 1936 to 1937, she spent some time at Kew, and afterwards at the National Herbarium



Fig. 15 Helena Madelain Lamond Forbes. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

in Pretoria (1938–1940). In 1940 she returned to the Natal Herbarium to be its curator until she had to retire in 1955. She was an authority on the flora of (KwaZulu-)Natal.

Still in 1919, the Scottish-born Mary Ross Hall Thomson (later Pole Evans) (1896–1975) was appointed by Pole Evans as a mycologist at the Department of Agriculture in Pretoria. She had graduated in 1915 with a BA from the South African College in Cape Town and continued involvement with the College until 1919 when she left to work for Pole Evans. They married three years later. She published a few papers, afterwards authored with the surname Evans (e.g., Thomson 1918, Evans & Evans 1922). Pole Evans also appointed the South African Amy Gertrude Corbishley (1889–1977) as ‘Assistant for South Africa’ at Kew (Gunn & Codd 1981) in the same year. She became the first South African Botanical Liaison Officer (SABLO). Corbishley was a BA graduate from the University College of Natal, which provided tuition but not examinations, and was then affiliated with the University of the Cape of Good Hope (Plug 2010, Guest 2016), and the Trinity College in Cambridge. At the end of her appointment, in 1921, she returned to Durban.

Other women that occupied the position of SABLO, up to 1950, were Inez Verdoorn from 1925 to 1927 and Pauline Kies from 1948 to 1950. In 1919 the South African Inez Clare Verdoorn (1896–1989; Fig. 16, 17) was 23 years old when she was appointed as herbarium assistant at the National Herbarium in Pretoria at the Division of Botany and Plant Pathology. Remarkably, already in that year she published a paper describing two new species (Verdoorn 1919). Later, Verdoorn spent two years, 1925 to 1927, at Kew as SABLO. She returned to Pretoria and became Senior Professional Officer in charge of the Herbarium from 1944 to 1951 when she had to retire. She continued working as a temporary staff member until 1968.



Fig. 16 Inez Clare Verdoorn. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

Afterwards, she was no longer employed but still scientifically active. In 1979 she published her last plant name, *Aloe corallina* I. Verd. that crowned a plant-name publishing career of 60 years (Verdoorn 1979: t. 1788). She was awarded an honorary PhD by the University of Natal in 1967. Verdoorn wrote one of the first Afrikaans text books on botany in South Africa (Verdoorn 1942). This early Afrikaans work of Verdoorn followed on from earlier South African botany textbooks published in English, such as those of Edmonds & Marloth (1909) and Storey & Wright (1916). Remarkably, the work of Verdoorn predated the English-Afrikaans and Afrikaans-Engels dictionaries of Goossens (1950, 1972).

Pauline Kies (later Bohnen) (1918–date of death unknown), who graduated from the Huguenot College in 1939 with an MSc, for the next ten years worked mostly at the National Herbarium in Pretoria, until she resigned in 1949 after getting married.

During the interwar years, as Margaret Moss became curator of the Moss Herbarium in Johannesburg in 1930, other women took similar positions in Cape Town and Pretoria:

Star Garabedian (1895–1978), who graduated with an MA from the University of Cape Town in 1919, was appointed as curator of the Herbarium of the South African Museum in 1920. In 1937 she travelled to Europe to work on a revision of *Aspalathus* L. but took ill and resigned. She did not return to South Africa. In 1929, the South African Anna Amelia Obermeyer (later Mauve) (1907–2001; Fig. 17), graduated with an MSc from the Transvaal University College and became Curator of the Herbarium of the Transvaal Museum in Pretoria until 1938, when she left to get married. In 1957 she returned to work at the Botanical Research Institute, until her retirement in 1972. Afterwards, she remained active until 1985. In Cape Town, in 1935, Gwendoline Joyce Lewis (1909–1967; Fig. 18) was appointed as an assistant at the Bolus Herbarium. She had



Fig. 17 Amelia Obermeyer (Mauve), on the left, with E. Percy Phillips, Reino Leendertz, and Inez Verdoorn. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.



Fig. 18 Gwendoline Joyce Lewis. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

graduated with a BA from the University of Cape Town in 1930, and later obtained a PhD. In 1938 she became the Botanist in Charge of the South African Museum Herbarium until 1956. She was a specialist on the *Iridaceae*. At the time of her early death, she left an unfinished revision of *Gladiolus* L. that was published posthumously (Lewis et al. 1972).

Not a herbarium curator, but with an interest in natural history in general, Marjorie Eileen Doris Courtenay-Latimer (1907–2004) collected specimens since she was a child and made some plant collections that are deposited in several herbaria. After qualifying as a nurse, she was appointed Curator of the East London Museum in 1931 and directed the museum for 42 years, until 1973. She became internationally known for discovering the first living coelacanth in 1938, which was then described by J.L.B. Smith and named after her as *Latimeria chalumnae* (Smith 1939: 455). Courtenay-Latimer fostered botanical work through the East London Museum with some of the material of Gerald Graham Smith (1892–1976), a specialist on *Haworthia* Duval, being held there (Gunn & Codd 1981: 326, Smith et al. 2020: 146).

South African universities also employed several women as lecturers (in botany or related subjects) during this period. In the Western Cape, in addition to Margaret Levyns (see p. 285) who was appointed as lecturer at the University of Cape Town in 1919, Erika Irene Markötter (1906–1983; Fig. 19) became a lecturer at the University of Stellenbosch in 1927. Markötter was born in South Africa and studied at the University of Stellenbosch obtaining a series of degrees in a short period of time: BSc (1925), MSc (1926), and DSc (1931). She specialised in the *Amaryllidaceae*. After a stay in Berlin from 1936 to 1938, working on a taxonomic revision that she published the following year (Markötter 1939), she continued as a lecturer until 1944. It is not known what brought an end to her career. In Wellington, following Margaret Moss (see p. 286), the US-American Adèle Gerard (née Lewis) Grant (1881–1967) was appointed as



Fig. 19 Erika Irene Markötter. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

lecturer at the Huguenot University College in 1925. She had a PhD from Washington University, in St Louis, Missouri. She stayed with the College for five years and returned to the U.S. afterwards, then accepting a position at the Missouri Botanical Garden. In the Free State, in 1922, Dorothea Margaret Gemmill (1899–1985) became a lecturer at the University of the Free State, a position she kept until she had to retire, in 1954. She was born in Scotland and went to South Africa with her family in 1903. She obtained an MSc degree at Grey University College in Bloemfontein. After retiring she continued as Curator of the Geo.Potts Herbarium and also assisted postgraduate students (Moffett 2014, Smith & Figueiredo 2019). She may have been the first woman collector of plants in the Free State province.

In 1925, in what was then the Western Transvaal that today more or less equates to South Africa's North West province, Mildred ('Millie') Mathilde Radloff (1902–1997) who had an MSc from the Victoria College in Stellenbosch, was appointed as botany lecturer at Het Potchefstroom Universiteitskollege voor Christelik Hoger Onderwijs that had been established in 1919. Radloff was a native English speaker, but at the Universiteitskollege the language of choice was Afrikaans (Jooste 2017: 91). In 1930 she married Prof. J.P. van der Merwe of the Department of Economics and because of getting married, by 1931, had to abandon her career (Jooste 2017: 91). Also in 1930, Louise ('Lulu') Latsky (1901–1980), was appointed as an assistant for botany and biology. She had studied at Stellenbosch, obtaining a BSc (1927), MSc (1928), and a DSc in zoology (1930) and was the first woman to be awarded a doctorate at Stellenbosch University (Verwey 1995), two years before Margaret Levyns became the first woman to obtain a doctorate from the neighbouring University of Cape Town (see p. 285). Due to poor health Latsky had to return to Stellenbosch shortly after she was temporarily appointed to

the Universiteitskollege in Potchefstroom and eventually the position was abolished because of the Depression Era-driven financial difficulties widely prevalent at the time, including at the University. The 'Potchefstroom Universiteitskollege voor Christelik Hoger Onderwijs' later became the Potchefstroomse Universiteit vir Christelike Hoër Onderwys, and eventually the Potchefstroom Campus of the North West University. Latsky became a well-known author of books popularising natural history and zoology for children (Verwey 1995).

In KwaZulu-Natal, in 1931 the South African Beryl Stranack Fisher (1907–1951) was appointed lecturer in botany at the Natal University College (from 1949 at the University of Natal), a position she held until her untimely death at the age of 44. She had graduated with a BSc from the University of Pretoria in 1927, then obtained an MSc at the Natal University College in 1929, and later a PhD.

Nevertheless, it was in Johannesburg, at the then new University of the Witwatersrand (Wits), that most activities took place, with seven women appointed (plus one as exchange professor) between 1922, the year that the university was established, and 1936. In 1923 Mary Agard Pocock (1886–1977) became a temporary lecturer at Wits. Pocock was born in South Africa but was educated in England. After obtaining a BSc from London University in 1908, and an equivalent degree from the University of Cape Town in 1917, she continued her studies in England, obtaining an Honours degree from the London University in 1921. Over the years she continued to take temporary lecturership positions, at the Rhodes University College in Grahamstown (where she was Acting Head of the Botany Department and where she established algology), at the University of Cape Town, and at the Huguenot University College in Wellington. She became an outstanding phycologist and was instrumental in creating the Rhodes University Herbarium (which was integrated into the Albany Museum Herbarium in 1993). She was awarded a PhD in 1932, and in 1967 she was awarded an honorary doctorate from Rhodes University (Guillarmod 1978, Dold & Kelly 2018). The year after Pocock was appointed, Maria Gerdina Breyer-Brandwijk (1899–1994) emigrated from The Netherlands to South Africa to take a position of lecturer of pharmacology at the Department



Fig. 20 Marion Emma Blenkiron (Norwood Young). Photographer unknown. Private collection of Ken Stucke. Reproduced with permission.

of Pharmacology of Wits. She had a PhD from the University of Utrecht (1923) and later obtained a DSc from Wits (1935). She was a researcher with the Department of Pharmacology until 1939. In 1943 she became a consultant with the Chamber of Mines until she retired in 1955. Her work with J.M. Watt on poisonous and medicinal plants became a classic reference (Watt & Breyer-Brandwijk 1932).

In 1927 the English Marion Emma Blenkiron (later Norwood Young) (1903–2000; Fig. 20) was appointed lecturer in botany. She did not occupy the position for long, as she met the botanist Ralph G. Norwood Young who was then a postgraduate student, and they married in 1928. They later divorced and Marion Young, who was independently wealthy, worked in several jobs, latterly as a librarian at the British Consulate in Johannesburg until 1975. She took part in numerous expeditions. In 1982, she co-authored a well-known book on wild food (Fox & Norwood Young 1982). As Marion Norwood Young was leaving the University, in 1928, Elaine Margaret Young (later Laughton) (1898–1974) took the position of lecturer in botany. She was born in South Africa, and after studying at the Transvaal University College in Pretoria, she attended Madison University in the USA where she was awarded a PhD. She was a lecturer until 1935, when she left her career to get married.

In 1928, Edna Pauline Janisch (later Plumstead) (1903–1989) became a lecturer in the Department of Geology of the University of the Witwatersrand. She had obtained a BSc in 1923 and an MSc from Wits in 1926. In 1934 she got married and left the position. However, she returned in 1946 to resume her career, lecturing in the Departments of Geology and Botany. She became internationally known in association with the discovery of the first fossil fructifications of *Glossopteris* Raf., a genus of extinct seed-ferns, and the palaeobotanical evidence for the existence of the continent of Gondwanaland prior to continental drift. Plumstead was an outstanding scientist in the fields of palaeobotany, coal geology and stratigraphy. She was awarded a DSc in 1961, and an honorary DSc in 1980 by Wits, where she worked until her retirement in 1971 (Maguire 1990).

In the same year that Plumstead graduated with an MSc, the South African Rebecca ('Becky') Leah Lurie (later Brown) (1902–1978) graduated with a BSc in Botany also from Wits. Lurie continued her studies at Newnham College, University of Cambridge, and later returned to Wits where she was an assistant in the Departments of Zoology and Botany, intermittently from 1929 to 1937 (S2A3 2021). She became a specialist in plant pathology and mycology and her work on decay in mine timbers, for an MSc that she obtained in 1931 at Wits, resulted in an invitation for a permanent job as a mycologist with the Chamber of Mines in 1934. Two years later she was in charge of the new Transvaal Timber Research Laboratory. In that same year, she got married. Not being able to continue working full-time, she was a consultant of the Laboratory from 1937 to 1942, when she resumed the directorship for three more years. Her work on fungal decay was recognised internationally. However, in 1946 she resigned, likely because her husband did not want her to work (S2A3 2021).

In 1936, the South African Ellen Miranda Radloff (date of birth unknown–1982), returned to South Africa to take up the position of lecturer at Wits. She had graduated with a BSc from the Huguenot University College, then studied at Cambridge University and Bedford College in London, obtaining an MSc. She then moved to Yale University in the USA where she graduated with a PhD. She was a lecturer at Wits from 1936 to 1943. Afterwards, she was invited to establish the Physiology Department of the South African Native College at Fort Hare in the Eastern Cape. She moved there and served as Professor until 1946, returning then to her birthplace, Kimberley in the Northern Cape.



Fig. 21 Cythna Lindenberg Letty (Forssman). Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

The South African Ethel Hadassah Cohen (later Gluckman, and later Gillon) (1917–2003), after graduating from Wits, was awarded a scholarship at Kirstenbosch in 1938, and was later appointed as lecturer at that University. She married the journalist Phillip 'Figgy' (previously Gluckman) Gillon and in 1951 the couple emigrated to Israel.

Finally, in 1925 the American (USA) Alice Maria Ottley (1882–1971), who was then Associate Professor at the Wellesley College, Massachusetts, arrived at Wits as an exchange professor and stayed for a short period. After her return to the USA she became Full Professor in 1934, but resigned in 1939.

Outside the universities, several other appointments of woman botanists were also made during the interwar period. In the early 1920s female botanical assistants were appointed for the National Herbarium (Joan Mary Hofmeyr (later Claassens), 1901–1968), for the Albany Museum Herbarium (Grace Violet Britten, 1904–1987), and for the Bolus Herbarium (Mary Gwendolene Lavis (later O'Connor-Fenton), 1903–1992). In 1927 the South African botanical artist Cythna Lindenberg Letty (later Forssman) (1895–1985; Fig. 21) joined the Division of Plant Industry under Pole Evans. She left in 1938 when she got married, but returned in 1945, after WWII, working at the Division of Botany until 1966. Her outstanding work, which includes 730 illustrations for Flowering Plants of Africa brought her awards and an honorary LLD from the University of the Witwatersrand.

Numerous other woman botanists flourished in the 1930s. In Cape Town, at Bolus Herbarium, Frances Margaret Leighton (later Isaac) (1909–date of death unknown), who obtained a BSc in 1931, worked at the Herbarium until 1947, and Rosalie du Plessis (later Gill) (birth and death dates unknown) worked from 1932 until 1955, leaving to get married. The South African botanist Winsome Fanny ('Buddy') Barker (1907–1994; Fig. 22)



Fig. 22 Winsome Fanny Barker. Photographer unknown. Private collection of Lesley Deysel. Reproduced with permission.



Fig. 23 Elsie Elizabeth Esterhuysen. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

who graduated with a BSc from Rhodes University College in 1928, joined the National Botanic Gardens in 1933. She became curator of the then new Compton Herbarium in 1939, holding that position until her retirement in 1972. The legendary Capetonian Elsie Elizabeth Esterhuysen (1912–2006; Fig. 23) worked at the McGregor Museum from 1936 to 1937, and after 1938 she was with the Bolus Herbarium. Essentially a field botanist, she had wanted to join Pole Evans' Botanical Survey team but had been turned down for being a woman (Oliver et al. 2007). She had an MA and an honorary MSc from the University of Cape Town and was an authority on Cape flora, mountain floras, and was an extraordinary collector. Finally, in Pretoria, at the Division of Botany, Amy Frances May Gordon (née Hean) Jacot Guillarmod (1911–1992) worked as a plant pathologist from 1936 to 1940; in the late 1950s she joined the Lesotho University and afterwards became a lecturer at Rhodes University until 1973.

Table 7 Significant events that influenced botanical activities in southern Africa during World War II and subsequent years.

1939	– Pole Evans retired. E. Percy Phillips became head of the Division of Botany and Plant Pathology.
	– South Africa declared war on Germany, joining WWII. Jan Smuts became prime minister.
1944	– Robert A. Dyer replaced E. Percy Phillips as head of the Division of Botany and Plant Pathology.
1945	– WWII ended.
1948	– The National Party won the national election.
1949	– University of Natal established.
1950	– University of the Orange Free State established.
	– Apartheid systematically implemented by Acts of Parliament, <i>inter alia</i> classifying South Africans based on race, prohibiting interracial marriage, and suppressing opposition to the government.

WWII and its aftermath

For South Africa, World War II had an impact that went beyond the monetary cost and aftereffects of the war effort (Table 7). At the time that hostilities escalated in Europe in 1939, South Africa was governed by a coalition of the National Party led by J.B.M. (Barry) Hertzog and the United Party led by J.C. (Jan) Smuts, who, incidentally, was an amateur botanist himself (Beukes 1996). Hertzog, who was prime minister at the time, wanted South Africa to remain neutral, while the country was constitutionally obliged to support Great Britain as it was a self-governing Dominion of the British Empire. The pro-Afrikaner Hertzog resigned as prime minister and was replaced by the pro-British Smuts, and on 6 September 1939 South Africa declared that the country was officially at war with Germany and the Axis powers (Wessels 2019: 187).

South Africa joining the War on the side of Britain did not sit comfortably with many South Africans, which strengthened the National Party and weakened the then-ruling United Party. One consequence was that, at the first (non-democratic) elections held after WWII, in 1948, Smuts and the United Party were defeated and the National Party became the new government. The National Party soon started passing laws that systematically established the apartheid system. In the context of botany, one consequence was that only a few non-white collectors or botanists were active in South Africa before the 1990s (Glen & Germishuizen 2010) in general, with very few recorded during the 20th century. In fact, historically, the earliest black people who contributed to botany studies in the region were two South Africans. The (male) Xhosa veterinary surgeon Jotello Festiri Soga (1865–1906), who studied in Scotland and worked for the Cape Department of Agriculture, had an interest in ethnobotany

and provided information to Andrew Smith (1828–1898). David Arnot (1821–1894), who studied at the South African College in 1838, sent plants to W.J. Hooker at Kew (Gunn & Codd 1981).

World War II further stalled progress in both the development of herbaria and the presence of women in science. No new herbaria were created during the period and only 30 women became active in botany. During an equivalent period after WWI, i.e., 1919–1930, the number of women that became active was c. 50. However, available data indicate that it was during the mid-20th century period that botany became associated with and unequivocally established as professional training for South African women. During and after WWII the great majority of women were professional botanists (20), other scientists (2), botanical assistants (2), teachers/librarians (4), and artists (1). Only two collectors were recorded. At least 26 of the 30 women recorded had tertiary education degrees, with five of them having had a doctorate conferred. The women were mostly born in South Africa (26), others were from the UK (1), elsewhere in Europe (2), the USA (1), and undetermined (1).

First women directors and curators of Herbaria

With a few exceptions (for example Herb. BOL that had a Keeper and a Curator, see Holmgren et al. 1990), the tradition in South, indeed southern, Africa has been to refer to the head of a herbarium (or botanical garden, for that matter) as the ‘Curator’, and not the ‘Keeper’, as is for example often the case in the United Kingdom. The ‘title’ ‘Curator’ is therefore not used

Table 8 Women curators (see text for an explanation) or founders of southern African herbaria up to 1990 (chronological order; see Appendix for details).

Up to 1950	
Reino Leendertz	Curator of Herb. TRV (1898–1918)
Bertha Stoneman	Founder of the Herbarium of the Huguenot College (likely c. 1898)
Augusta Duthie	Founder of Herb. STE (1902)
Maria Wilman	Director of the McGregor Memorial Museum and founder of Herb. KMG (1907–1946)
Louisa Bolus	Curator of Herb. BOL (1911–1955)
Dorothea Gemmill	Curator of Herb. BLFU (1922–sometime after 1954)
Star Garabedian	Curator of Herb. SAM (1929–1937)
Anna Obermeyer	Curator of Herb. TRV (1929–1938)
Margaret Moss	Curator of Herb. J (1930–1950)
Gwendoline Lewis	Botanist in Charge of Herb. SAM (1938–1956)
Winsome Barker	Curator of Herb. NBG (1939–1972)
Helena Forbes	Curator of Herb. NH (1940–1955)
Mary Pocock	Founder of Herb. RUH (1942) with E. Archibald
Eily Archibald	Founder of Herb. RUH (1942) with M. Pocock
Inez Verdoorn	Curator of Herb. PRE (1944–1951)
Anna Brueckner	Curator of Herb. KMG (1945–1948)
From 1950 to 1990	
Annette Dohse	Curator of Herb. NH (1954–1956)
Sheila Johnson	Curator of Herb. NH (1956–1963)
Amy Jacot Guillarmod	Curator of Herb. ROML (likely 1956–1957)
Marthe Schmitz	Curator of Herb. ROML (likely 1958–1982)
Annabelle Lucas	Curator of Herb. J (1958–1963)
Olive Hilliard	Curator of Herb. NU (1963–1985)
Lynette Davidson	Curator of Herb. J (1965–1982)
Maria Olivier	Curator of Herb. PEU (likely 1967–1987)
Ellen Kemp	Curator of Swaziland National Herbarium (1975–unknown)
Loretta Hugo	Curator of Herb. STE (1980–1982)
Anne Hutchings	Curator of Herb. KEI (1983–1986)
Priscilla Drewe	Curator of Herb. HER (1983–2006)
Patricia Lorber	Curator of Herb. BOL (likely 1990–1999)

for staff with curatorial duties in a herbarium collection. Such staff members are generally referred to as ‘taxonomists’, with technical herbarium staff referred to as ‘technicians’.

Thirty women (Table 8) are recorded as curators or founders of herbaria in southern Africa up to 1990.

In southern Africa it was during World War II that more women occupied the positions of Curator, or Founder or Director of Herbaria, with six taking on such positions during the War, and five carrying on from appointments made earlier. Out of the 14 Herbaria that existed in South Africa at the time, nine (64 %) were directed by women. After the War, the presence of women as Curators decreased, as those that retired were replaced with men. Inez Verdoorn, the only woman who occupied the position of Curator of the National Herbarium (Herb. PRE), in the period up to 1950, was replaced by Leslie Edward W. Codd in 1951; his most prominent staff, as listed by Lanjouw & Stafleu (1954), were men. Likewise, at the Compton Herbarium (Herb. NBG), Winsome Barker, who was the first curator when that Herbarium was established in 1939 and occupied that position for 33 years, was replaced by John P. Rourke in 1972. From then onwards, all the Curators of the Compton Herbarium were men.

In 1952, five herbaria in southern Africa (35 %) were curated by women. Elsewhere on the African continent, the percentage was much lower. In addition to South Africa’s 14 herbaria, at that time there were a further 25 herbaria in Africa (Lanjouw & Stafleu 1954). Of these 25 herbaria, only three (12 %) were directed or curated by women: two were situated in North Africa and one in West Africa. A least two of these women were European: the French Germaine Louise Alphonsine (later Pottier-)Alapetite (1894–1971), who directed the Laboratoire de Biologie Végétale and herbarium (Herb. TUN) at the University of Tunis, Tunisia, from 1947 to 1959, and was a co-author of the flora of Tunisia, and the Swede Vivi Laurent(-Täckholm, later) (1898–1978) who developed the Botanical Institute and the herbarium (Herb. CAI) of the University of Cairo, Egypt.

Out of the total of 21 names listed as staff members of Herbaria in southern Africa by Lanjouw & Stafleu (1954), nine (42 %) were women. Around four decades later, the number of herbaria had tripled, and the figures in Holmgren et al. (1990) were: 36 herbaria, of which eight were curated by women (22 %). The staff listed had increased to 106 people, of which 39 were women (c. 36 %, for five names the gender is undetermined). At the time, Herb. PREM had the distinction of having an all-female staff complement. A decade later (Smith & Willis 1999), the number of herbaria (with a herbarium code) in the region had increased to 49 herbaria, of which 23 were curated by women (47 %). Increasingly in recent years women played important and prominent roles in southern African Herbaria with several having either acted as Curator, or having held tenured appointments as Curator.

Horticulturalists and landscape designers

In several parts of the world, women had an early presence in the fields of domestic and industrial-scale horticulture, as well as in landscape design, endeavours that were, and remain, directly linked with botanical sciences.

For a long time, it had been common practice for horticulturalists based in Europe and the USA to receive material from Africa and other parts of the world that they would then propagate and trade without acknowledgement of the sources. An early example of a woman who supplied plant material to Europe is the South African Hildagonda (or Hillegonda) Johanna Duckitt (1840–1905). Her maternal grandmother was the sister of the South African-born botanist Christian Hendrik Persoon, and her paternal grandfather was William Duckitt (1768–1825), an agronomist known for implementing new farming methods

at the Cape. Hildagonda popularised the Cape endemic *Ornithogalum thyrsoides* Jacq. known as 'Chincherinchee', by sending blooms to London, which led to the propagation and trade of the species (Gunn & Codd 1981: 140). She also sent seed of species of the South African genus *Nemesia* Vent. to the seed traders Sutton's, in Reading, England. They developed their trade without acknowledgement and *Nemesia* hybrids and cultivars are today of significant commercial importance. Hildagonda became well-known as a writer, *inter alia* authoring a very popular cookery book.

In southern Africa, the use of indigenous plants in gardens became popular much later than in the UK, USA, and other parts of the world. The reason is simple: botanists in especially the UK and continental Europe were overwhelmed by the preserved exsiccata and living specimens of the strange flora that reached them from the Cape (and other 'colonies', for that matter). Conversely, early gardeners in the Cape, who mostly arrived from Europe, were familiar with plants that were then commonly cultivated in the 'north', and while they were enamoured of the rich and diverse flora of southern Africa, were unfamiliar with how to domesticate, cultivate, and propagate the new material. Their preference was to revert to growing plants imported from Europe, and to send batches of the South African curiosities to Europe for study and description. As Smuts (1950: x) put it in his Foreword to Mary Matham Kidd's *Wild flowers of the Cape Peninsula*: "...when the European botanists came to the Cape in the seventeenth and eighteenth centuries they found here an unrecognizable plant life, quite unlike that of Europe. New names had to be invented for whole families, not to mention numerous genera and species".

Inevitably, gardening practice in South Africa was initially centered in and around Cape Town, where the Dutch East India Company established a victualing station in 1652. The Company's Garden was started soon after the Dutch landed at the Cape (Karsten 1951), but English-style gardens, with ornamental roses being a big favourite, predominated for a long time. It was only in 1928 that the Englishwoman Kate Canova Stanford (date of birth unknown–1952), who had emigrated to the Cape as a governess, started a nursery business called Bloem Erf Nurseries in Stellenbosch "where she was one of the first to specialise in indigenous plants" (Gunn & Codd 1981: 331). She focused on the propagation and sale of indigenous bulbs overseas and was a pioneer grower of *Protea* L. (Middelmann 2012). However, it was through the collecting activities of the American economic botanist and specialist on *Agave* L., Howard Scott Gentry (1903–1993), in South Africa in the early-1960s that the establishment of a prosperous cut-flower business based on proteas was eventually made possible in southern California (Cunningham 1994: 369). Simultaneously, the South African Marie Murray (Neethling) Vogts (1908–1998), who would later obtain a PhD with a thesis on *Protea*, pioneered *Protea* growing in the (then) Transvaal (northern South Africa) (Attwell 1998). She authored the first popular book on the subject in c. 1960 (Vogts 1982).

Also during the 1920s, but likely before Stanford's nursery venture was started, the South African horticulturalist Gladys Ivy Blackbeard (1891–1975) was active near Grahamstown, where she and her sisters created a nursery, specialising in the propagation of succulents and *Amaryllidaceae*, particularly *Clivia* Lindl. (Gunn & Codd 1981, Codd & Gunn 1985, JSTOR Global Plants 2021). Blackbeard also supplied material to scientists such as [J.] Karl [L.A.] von Poellnitz in Germany.

Several women played a leading role in landscaping and garden design in South Africa during the 20th century. Through their well-illustrated books and engaging writing, Joane Pim (1904–1974) (Pim 1971, Taylor 2015: 118), Hester Fourie



Fig. 24 Sima Eliovson. Photographer unknown. South African National Biodiversity Institute. Reproduced with permission.

(date of birth unknown) (Fourie 1984), Sima Eliovson (1919–1990; Fig. 24) (Eliovson 1991), Una van der Spuy (date of birth unknown–2012) (Van der Spuy 1954, 1955, 1971), and Nancy Gardiner (c. 1923–) (Gardiner 1988), among others, popularised horticulture and concomitantly botany, and inspired generations of home gardeners to use indigenous South African plants. Pim was additionally instrumental in establishing the first course in landscape architecture at the University of Pretoria in 1971 and was an outspoken advocate of planting indigenous (Pim 1971: see 'Dedication' on page facing half-title page, Taylor 2015: 127).

Margaret Roberts (1937–2017) became synonymous with, *inter alia*, herbal remedies and the use of herbs to foster health and healthy living in southern Africa. She was a prolific author and did much to popularise indigenous plants as natural remedies for a range of ailments (Roberts 1990).

Other applied plant scientists

Although not treated here, in the early-20th century women also made a significant impact in other applied botanical sciences in South Africa, including in agriculture. For instance, Caroline Kathleen Murray (1892–1984) was one of the first women farmers in the fertile Elgin Valley of the Western Cape – for example, 60 % of South Africa's apple crop is produced there – where she established a very successful commercially-driven fruit export business after studying agriculture at Cambridge University in the UK from 1914 to 1917 (Schoeman 2017: 28). Her mother Caroline (Molteno) Murray was an early suffragette in the Cape Colony. In the 1950s Kathleen Murray became active in the Black Sash, a non-violent women's resistance group that opposed apartheid. She was one of the founding members of South Africa's Research Institute for Fruit and Fruit Technology.

Impediments to women's botany careers

Qualifications

The lack of access to higher education by women was one of their main impediments to pursue a career in science. The situation in South Africa can be contextualised by taking into account that in the UK the first university to accept women was the University of London in 1868. However, even as late as the first two decades of the 1900s, women were “still fighting for the right to use university libraries” and were “certainly not expected to engage in controversial research” (Kingsbury 2009: 153, with reference to Miss E.R. Saunders and ‘several young women’ who worked with William Bateson (1861–1926) in the UK on Mendelian genetics). It has also been argued that in the 1950s the work of Barbara McClintock (1902–1992), who in 1981 became the first woman to be awarded an unshared Nobel Prize for Medicine for her work on genetic transposition, was side-lined because she was a woman (Kingsbury 2009: 238). McClintock *inter alia* worked on plant breeding. Further, Mary Richards (1885–1977), one of the most successful collectors of, *inter alia*, plant specimens from Africa for the Royal Botanic Gardens, Kew, wished to study botany at university, but at the time (early 1900s) tertiary education was not seen as a suitable pursuit for women and “her parents were not supportive” (Primrose 2019: 131).

Fortunately, in some areas of botanical endeavour attitudes have been changing lately and the importance and significance of women working across a broad swathe of plant-based academic and commercial pursuits are increasingly being realised and recognised (see for example: Kingsbury 2009: 388, 392, Jewell 2020).

In South Africa the first women qualifying with a higher education degree graduated from the University of the Cape of Good Hope, after having attended the South African College or the Huguenot College. By the 1910s the South African College was very much inclusive and had women lecturers. Several of the first graduates from the University of the Cape of Good Hope continued their studies at Newnham College, University of Cambridge, but there they received a certificate only, and not a degree, as these were not awarded to women at that University until much later. Maria Wilman (discussed above) was one of the first to receive such certification, completing the Natural Science Tripos at Cambridge and obtaining a certificate in 1888. Edith Stephens also left Cambridge with a certificate in 1911.

Regarding higher postgraduate degrees, in the USA the first woman to obtain a PhD was Helen Magill White in 1877 (Reinhold undated). One of the first doctorates in botany awarded to women appears to be the one awarded to Bertha Stoneman (by Cornell University, USA, in 1894) before she emigrated to South Africa to lecture at the Huguenot College. Marie Skoldovska Curie was the first woman to obtain a PhD in France in 1903 (Poole & Tan 2013), while the first woman to obtain a PhD in Botany (Palaeobotany) in Germany was Marie Stopes, at the University of Munich, in 1904 (Falcon-Lang 2008). Not much later, in 1914, Ethel Doidge became the first woman to obtain the degree of DSc in South Africa, which put the country well ahead of many European countries in that regard.

During the period covered, access to tertiary education was difficult but not impossible for black or Indian students in South Africa. For example, Mary Susan Makobajati Malahlela (1916–1981), who was the first black woman to become a medical doctor in South Africa, graduated in 1947 from the University of the Witwatersrand (Digby 2013). Afterwards, with apartheid laws being increasingly enacted, universities became segregated, nevertheless, some such as the Universities of Cape Town, Natal (now KwaZulu-Natal) and the Witwatersrand, admitted some black students with special permits. From 1960

onwards several universities were created dedicated to the black population. However, these new institutions often focused on the arts, humanities, education, and law and awarded first degrees and diplomas only (Herman 2015). The University of Fort Hare (successor of the South African Native College that dates from 1916) offered courses in botany since the 1930s. In 1934, Malcolm Hutchinson Giffen (1902–date of death unknown) was appointed botany lecturer at the then still called South African Native College, with a mandate to build up the botany department. However, overall, qualifying as a botanist was difficult for the majority of the South African population, a situation that is reflected in the general lack of ethnic diversity in botany in the country up to the 21st century.

Marriage

As a consequence of the improvement in access to higher education and professional training, at the beginning of the 20th century, there was an increase in the number of women with active careers in botany. However, in South Africa progress was later hampered by public service administration conditions of service, based on the Fifth Report of the Public Service Commission of Inquiry (known as the Graham Commission) in 1921. This report recommended that “married women or widows should not be accepted as candidates for employment in the Public Service” and that “on marriage a woman [should] resign from the Public Service” (Walker 2001). This may have been the reason why many highly qualified young women did not pursue a career after leaving university, or abandoned their careers when they got married.

Although it is possible that some women abandoned their careers of their own accord, others were likely pressured to do so by their husbands or by the administration rules. An example of the former is Mildred Emmeline Roper (1896–1956). After having obtained a BA from the South African College in 1916, she continued her studies at Newnham College in Cambridge, but got married in 1921 and gave up her career, remaining in England (Jons 2016). Included in the latter group are those who had to leave already established positions in scientific careers. Likely they left reluctantly, as in some cases they returned to their professional careers some decades later. Rebecca Lurie who was in charge of the Transvaal Timber Research Laboratory, could not continue to work full-time after she got married in 1936, eventually resigning. Edna Plumstead had to leave the position of lecturer at the University of the Witwatersrand in 1934, when she got married, and Anna Amelia Mauve was Curator of the Transvaal Museum Herbarium in Pretoria until 1938, when she left to get married. Both Plumstead and Mauve returned to their careers later in life. After getting married in 1930 Mildred Radloff soon had to leave the position she held as lecturer at what was to become the Potchefstroom University for Christian Higher Education “due to the protocol of the University” (Cilliers et al. 2021) and she never resumed her career.

Marriage barring a woman from pursuing a career in public service, where most botanists are employed, was not restricted to South Africa. In 1953 the ichthyologist Rosemary (‘Ro’) Helen (née Lowe-)McConnell (1921–2014) was obliged to resign from the British Colonial Service when she got married (Greenwood 2015).

Lack of rights

During most of the period treated here, women had limited rights regarding property, inheritance, and voting in South Africa. The botanist Sydney Stent became the first woman to vote in South Africa, when women were still not allowed to do so: she cast her vote in the 1920 general election, as her name (also the name of her father, the architect Sydney Stent) was interpreted as being of a male and added to the voters roll. Women (white and Asian) only obtained voting rights in South

Africa ten years later, in 1930. However, a regression of rights during the apartheid years restricted the vote to white women. Black women only obtained voting rights as late as 1994.

As far as can be determined, there are no records of any black or Indian woman active in the field of botany in South Africa during the period covered. It was only towards the end of the 20th century that the first few were recorded.

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Appendix List of women active in botany in southern Africa from the earliest days of recorded botanical endeavour (mid-17th century) to about 1950.

We provide a list of 303 women active in botany in southern Africa over a c. 300-year period, from the earliest days of recorded botanical endeavour to c. 1950. For all the women included in the list the birth date is known, or could be inferred, as having been before 1 January 1950. Botanists, i.e., plant taxonomists, other scientists whose activities related to plant taxonomy or who collected plants for herbaria, herbarium assistants and technicians, botanical artists (not exhaustive), dedicated specimen collectors, and foreign taxonomists and visitors who participated in short-term collecting expeditions are included. Phycologists and mycologists are also included.

The compiled names are ordered according to the surname by which the women are mostly known. Name changes due to marriage are indicated in parentheses; these are used either for maiden names (before the name they are ordered under) or for married names (after the name they are ordered by). The terms 'Mrs' and 'Miss' are retained as recorded from the literature, instead of being removed or replaced with 'Ms', because of the informative content of these forms of female address. 'Mrs' is given in cases where the name was found to be cited using the husband's name, and it is given either before the surname or before the initials, which, in fact, could be the initials of the husband. 'Miss' is given for those names for which first names are unknown, as it is often the only indication of gender, based on the literature review. Nicknames are given in parentheses and quotation marks. Southern African countries where the women were active are given these abbreviations: Botswana (BO), Eswatini (ES), Lesotho (LE), Mozambique (MO), Namibia (NA), South Africa (SA), Zambia (ZA), Zimbabwe (ZI). Mozambique, Zimbabwe, and Zambia, three south-tropical African countries that about the FSA region (see the 'Introduction' for its definition), do not form part of the main geographical region surveyed in this study. However, where individuals are known to have been active in these neighbouring countries, this information is provided.

References included in the list refer only to literature examined in addition to the references cited in the main paper. Notes are included for some women. Universities and colleges are abbreviated as: GUC – Grey University College; HugC – Huguenot College; NU – University of Natal; NUC – Natal University College; PotU – Potchefstroom University for Christian Higher Education; RAU – Rand Afrikaans University; RhU – Rhodes University; RhUC – Rhodes University College; SAC – South African College; SteU – Stellenbosch University; TrUC – Transvaal University College; UCGH – University of the Cape of Good Hope; UCOFS – University College of the Orange Free State; UCT – University of Cape Town; UKZN – University of KwaZulu-Natal; UniSA – University of South Africa; UP – University of Pretoria; Wits – University of the Witwatersrand.

Given the very broad scope of the subject addressed in this paper, it comes with the potential for error. We have gathered as much information on the topic from as diverse a range of hard-copy and online sources as possible, but in some instances were unable to fact-check from primary references. We would be eager to be informed of omissions or errors.

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Adams (Matthews), Berenice Zoe Margaret			South Africa	1925–	SA, ZI	Biologist	
Adams (Tardrew), Constance ('Daisy') Georgina			South Africa	1883–1968	SA	Teacher	S2A3 (2021)
Anderson (Geary-Cooke), Fay	Diploma (UCT, 1955)		Pakistan	1931–	SA	Artist	
Anderson, Heidi Marguerite (Schwyzer)	PhD (Wits, 1977)	H.M.Anderson (1976–1985)	South Africa	1944–	SA	Palaeobotanist	
Appleyard, [Miss]					BO, SA	Teacher	
Arbuthnot, Isobel Agnes			Ireland	1870–1963	SA	Technician	
Archibald (Gledhill), Eily Edith Agnes	PhD (London)	Archibald (1940–1960)	South Africa	1914–2007	SA	Botanist	
Bár, Sister Ottilie			England	Fl. 1931	NA	Missionary?	
[Mrs F.W.]Barber, Mary Elizabeth (Bowker)				1818–1899	SA	Naturalist and artist	Creese & Creese (1998), S2A3 (2021)
Barker, Winsome Fanny ('Buddy')	BSc (RhUC, 1928)	W.F.Barker (1930–1989)	South Africa	1907–1994	SA, ZI	Botanist	
Barkly, [Lady] Anne Maria (Pratt)			UK	1837–1932	SA	Naturalist and artist	S2A3 (2021)
Batten, Auriol Ursula (Taylor)	BSc (NU, 1938)		South Africa	1918–2015	SA	Teacher and artist	
Bayliss, Estelle Ada (Wood Dell)			South Africa	1914–2000	SA	Collector	
Bean, Patricia Anne (Taylor)	MSc (UCT, 1962)	P.A.Bean (1990)	Canada	1930–	SA	Biologist	S2A3 (2021)
[Mrs]Becker, Mary Julia			South Africa	1821–1885	SA	Collector	Lavranos (1999), Eggli & Newton (2004)
Bellerue-Bleck, Mary			USA	1932–1999	SA	Horticulturalist	
Bertelsen (Aas), Ellen Sofie (Olsen)			Norway	1851–1934	SA	Missionary	S2A3 (2021)
Berthoud, Ruth (Junod)			Switzerland	1859–1901	SA	Collector natural history	S2A3 (2021)
Beyers, Josephine Bertha Pauline ('Jo') (Minnar)	PhD (UP, 2000)	Beyers (1995–2002)	South Africa	1944–2003	SA	Botanist	
Blackbeard, Gladys Ivy			South Africa	1891–1975	SA	Naturalist, gardener	S2A3 (2021), Skotnes (2007)
Bleek, Dorothea Frances	Hon. Doct. Not accepted		South Africa	1873–1948	NA, SA	Ethnologist	

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Bleissner (Giess), Anna Ida Franziska Brigitte (Scherz)			Germany	1917–1999	NA	Botanical assistant	
Bleissner (Luedtke), Sabine			Germany	1943–	NA	Physiotherapist	
Bokeimann, Hertha Ludovica (Faekle)			Spain	1915–2005	SA	Artist	
Bolus, Ethel			South Africa	1866–1890	SA	Collector	
Bolus, Harriet Margaret Louisa ('Lulu') (Kensit)	Hon. Doc. (SteU, 1942)	L. Bolus (1913–1967)	South Africa	1877–1970	SA	Botanist	Creese & Creese (1998), S2A3 (2021)
Bond (Fairall), Pauline	BSc (UniSA, 1946)	Bond (1940–1987)	South Africa	1917–2010	SA	Botanist	
[Mrs]Borle, Johanna ('Jeanne') Louise ¹			Switzerland	1880–c.1979	MO, NA, SA, ZI	Missionary	
Bosman, Marie			South Africa	Fl. 1930–1932	SA	Botanical assistant	
Bottomley, Averil Maud	BA (SAC, 1912)	Bottomley (1948)	South Africa	1889–1984	SA	Mycologist	S2A3 (2021)
[Mrs]Böttrich, Adelheid			South Africa	Fl. 1938	NA	Collector	
Bowker, Mary Anne (Wilmot) (Stubbs)				1822–unknown (Fl. 1861)	SA	Collector	S2A3 (2021)
Bredenkamp, Christina ('Christien') Lindith (Keyser)	PhD (UP, 2002)	Bredenk. (1993–2003)	South Africa	1947–	ES, NA, SA	Botanist	
Breyer-Brandwijk, Maria Gerdina	PhD (Utrecht, 1923) DSc (Wits, 1935)		Netherlands	1899–1994	SA	Pharmacologist	
Brink, Estelle (Naudé)	BSc (PotU, 1956)	E. Brink (2003–2006)	South Africa	1936–2020	SA	Botanist	
Britten, Grace Violet			South Africa	1904–1987	SA	Botanical assistant	
Britten, Lilian Louisa	BSc (RhUC, 1907)	L. L. Britten (1940–1954)	South Africa	1886–1952	SA	Botanist	S2A3 (2021)
Brooke, Winifred Mary Adelaide			England	1893–1975	LE	Collector	
Bruce, Eileen Adelaide	BSc? (London)	E. A. Bruce (1931–1955)	England	1905–1955	SA, ZI	Botanist	
Brueckner (Ludlow), Anna Elizabeth	MSc (NUC, 1944)	A. E. Brueckner (1951–1954)	South Africa	1920–2016	SA	Botanist	
Buitendag, Elise (Van Rensburg)	BSc (UP, 1973)		South Africa	1941–	SA	Botanist	
Burger, Gladys Hever (Hoare)	(UCGH)		South Africa	1906–1990	SA	Conservationist	
Burton, Helen Marie Rousseau (Kannemeyer)	PhD (Holland, 1976)		South Africa	1878–1973	SA	Naturalist	S2A3 (2021)
Camerik, Anne Margariette (Sister Karin)			Indonesia	1941–	BO	Botanist and missionary	
Cattell, June			England	1944–	SA	Writer and artist	Smith & Willis (1999) S2A3 (2021)
[Mrs Evelyn]Cecil (Lady Rockley), Alicia Margaret (Amherst)			England	1865–1941	Visitor (MO, SA, ZA/ZI)		
Chennells, Doris	BA (UCGH, 1910)		England	1892–1943	SA	Teacher	S2A3 (2021)
Cherry, Ellen ('Nellie') M.			South Africa	1888–1967	SA	Botanical assistant	S2A3 (2021)
Chippindall ([Mrs A. O.] Crook), Lucy Kathleen Armitage	BSc (Wits, 1948)	Chippind. (1945–1946)	South Africa	1913–1992	MO, SA, ZI	Botanist	
Cholmondeley ([Mrs Stevenson] Hamilton), Hilda			Australia	1901–1979	SA	Artist	
Claassen, Martha Isabella	PhD (UP, 1982)	Claassen (1969–1970)	South Africa	1931–	SA	Botanist	
Clarke, Brenda (Stiemens)	MSc (UP, 1939)		South Africa	1917–2012	SA	Plant physiologist and artist	

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Clarke, [Mrs] C.S. [Lady]Clayton				Fl. 1887–1888	SA	Collector	
Coetzee, Hester	MSc	Coetzee (1973)		1945–	SA	Collector	Coetzee et al. (1973)
Coetzee, Johanna ('Joey') Alida	PhD		South Africa	1921–2007	SA	Botanist	
Cohen (Gluckman/Gillon), Ethel Hadassah	BSc? (Wits)		South Africa	1917–2003	LE, SA	Botanist, palynologist	Jewish Women's Archive (2020)
Collett, Rhona (Brown)	BA (NUC, 1944)		South Africa	1922–2014	SA	Artist	
Collins (Roos), Elizabeth ('Liz') Sophia			South Africa	1898–1969	SA	Teacher	
Collins (Holden), Maria ('Mir') Carolina			South Africa	Unknown–1918	SA	Botanical assistant	S2A3 (2021)
Connell (Stutterheim), Mary Elizabeth ('Betty')			England	1917–1997	SA	Artist	
[Mrs]Cooke, Olive L.					SA	Collector	
[Mrs]Cookson				Fl. 1955	SA	Collector	
Coombs, Sarah Virginia (Hall)			USA	1869–1949	SA	Collector	
Corbishley, Amy Gertrude	BA (NU, 1912)	Corbishley (1919–1922)	South Africa	1889–1977	SA	Botanist	
[Mrs Samuel]Cordukes, Sarah Alice (Greaves)			England	1821–1894	SA	Collector	
Cory (Ribbink), Dulcibel Mowbray			South Africa	1899–unknown	SA	Teacher	
Court, Grace Doreen (Morris)	BSc (RnU, 1951)		South Africa	1928–	SA	Botanist	
Courtenay-Latimer, Marjorie Eileen Doris	Hon. Doc.		South Africa	1907–2004	SA	Ichthyologist, Director of the East London Museum	JSTOR Global Plants (2021)
Curtis, Anita Deidamia (Grosvenor)			USA	1895–1980	Visitor (NA)	Collector	
Dalgairns, Magdalene			Scotland	1809–1907	SA	Teacher	S2A3 (2021)
[Countess of]Dalhousie, Christian (Broun)			Scotland	1786–1839	Visitor (SA)	Collector	
Daly (Henry), Mary Florence			South Africa	1881–1960	SA	Botanical assistant	S2A3 (2021)
Davidson, [Mrs] K.L.			England	Fl. 1905–1906	SA	Writer, botanist	S2A3 (2021)
Davidson, Lynette Elizabeth (Cook)	MSc (Wits, 1938)	L.E.Davidson (1975–1985)	South Africa	1916–1996	SA	Botanist	
De Vos, Miriam Phoebe	DSc (StelJ, 1940)	M.P.de Vos (1952–1999)	South Africa	1912–2005	SA	Botanist	
Delf(-Smith), Ellen Marion	DSc (London, 1912)	Delf (1921)	England	1883–1980	SA	Phycologist	
Dieterlen, Anna (Busch)			France	1859–1945	LE	Teacher and missionary	S2A3 (2021)
Dohse (Schloffeldt), Annette	BSc (NU, 1951)		South Africa	1930–	LE, SA	Botanist	
Doidge, Ethel Mary	DSc (UCGH, 1914)	Doidge (1917–1950)	England	1887–1965	SA	Mycologist and bacteriologist	S2A3 (2021)
Drewe, Priscilla B.				1926–	SA	Botanist	JSTOR Global Plants (2021)
Du Plessis, Enid Phoebe (Immelman)	MSc (UCOFS, 1962)		South Africa	1929–	SA	Botanist	
Du Plessis (Gill), Rosalie	MSc	R. du Plessis (1958)			SA	Botanist	Du Plessis (1958), Egglis & Newton (2004)
Duckitt, Hildagonda Johanna			South Africa	1840–1905	SA	Writer and gardener	
Duthie, Augusta Vera ('Avie')	DSc (UniSA, 1929)	A.V.Duthie (1924–1940)	South Africa	1881–1963	SA	Botanist	Creese & Creese (1998), S2A3 (2021)

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Earthy, Emily Dora ²			England	1874–1960	MO, SA, ZI	Missionary and ethnographer	
Eastwood, Jane Emma Mary (Bidwell) ³			South Africa	1863–1930	SA	Collector	Wongtschnowski (2003)
Edwards, Elizabeth M.	Diploma? (NU)		South Africa	Fl. 1945	SA	Teacher	
Edwards, Gwendolen Gallop	BA (UCGH, 1916)		South Africa	1888–1960	SA	Botanist	S2A3 (2021)
Elffers (Munday), Joan	BSc (Wits, 1948)	Elffers (1957)	South Africa	1928–	BO, SA	Botanist	
Elovson, Sima (Benveniste)	BA (Wits, 1939)		South Africa	1919–1990	SA	Teacher and writer	
Elonheimo, Katri Marjatta	MSc (Helsinki)		Finland	1933–	NA	Teacher	
Esterhuysen, Elsie Elizabeth	MA (UCT, 1933)	Esterfh. (1936–1990)	South Africa	1912–2006	SA	Botanist. One of the most prolific collectors, with 34,000 specimens	
Fabian, Anita			South Africa	1934–	SA	Artist	
Fannin (Roberts), Marianne Edwardine			England	1845–1938	SA	Artist	S2A3 (2021)
Farquhar, [Miss] J.H.J. ⁴			England	Fl. 1910	SA	Collector	
Fawkes, Madeleine ('Madge') Charlottie			Malta	1880–1954	SA	Collector and artist	Codd & Gunn (1985)
Fellingham, Anna C. (Bester)			South Africa	1933–	SA	Botanical technician	
Ferrar, [Miss] Evelyn	BSc (PotU, c. 1954)	Fellingham (1991–2007)	South Africa	Fl. 1942	SA, ZA, ZI	Botanical assistant	
Fischer, Ilse			Germany	Fl. 1887–1897	NA	Collector	
Fisher, Beryl Stranack	PhD (NUC, 1929?)	B.S.Fisher (1941)	South Africa	1907–1951	MO, SA, ZI	Botanist	
Forbes, Helena Madelain Lamond		H.M.L.Forbes (1930–1948)	Scotland	1900–1959	SA	Botanist	
Franks (Flanders), Millicent		Franks (1911)	South Africa	1886–1961	SA	Artist	S2A3 (2021)
Frean, Millicent ('Micky') Louise	BSc (c.1950)		South Africa	1927–2010	SA	Botanist and artist	Anonymous (2010)
Galpin, Marie Elizabeth			South Africa	1859–1933	SA	Artist	S2A3 (2021)
Garabedian, Star	MA (UCT, 1919)	Garab. (1924)	Scotland	1895–1978	SA, ZI	Botanist	
Gemmel, Dorothea Margaret	MSc (GUC)		Scotland	1899–unknown	SA	Botanist	
Getliffe (Norris), Fiona Mary	PhD (Liverpool, 1968)	Getliffe (1972–1990)	South Africa	1941–	LE, SA	Botanist	
(Gibbs) Russell, Garland Elizabeth	PhD (Georgia, 1974)	Gibbs Russ. (1981–2006)	USA	1945–	BO, SA, ZA/ZI	Botanist	
Gibson, Janet Mary (Sands)			England	1908–unknown	SA	Artist	
[Mrs A.B.]Gillett, Margaret (Clark)	MA (Cambridge, 1901)		England	1878–1962	Visitor (SA)	Collector	S2A3 (2021)
Gilmore (McAfee), Jane Georgina	BSc (Belfast)		Northern Ireland	1887–unknown	SA	Teacher	
Glen, Ren�e Petronel (Henrici)	BSc (UCT, 1969)		South Africa	1946–	SA	Botanist	
Glover (Wordsworth), Ruth Mildred	BA (1911)	R.Glover (1913–1918)	South Africa	1889–1961	SA	Botanist	S2A3 (2021)
Gordon-Gray, Kathleen Dixon (Huntley)	PhD (UN)	Gordon-Gray (1966–1978)	South Africa	1918–2012	ES, SA	Botanist	
Grant, Ad�le Gerard (Lewis)	PhD (Washington)	A.L.Grant (1921–1936)	USA	1881–1967	MO, SA, ZA/ZI	Botanist	
Gunn, Mary Davidson			Scotland	1899–1989	SA	Librarian and biographer	
Guthrie, Louise		L.Guthrie (1927–1942)	South Africa	1879–1966	SA	Botanical assistant	
Hall, Lisabel Irene (Booyesen)	BSc (UP, 1955)	L.I.Hall (1984)	South Africa	1919–2008	SA	Botanist	
Hancock, Florence Dorothy	PhD (Wits, 1967)		South Africa	1902–2000	SA	Botanist	
[Mrs Eric] Harris, Zo�e Anne (Borlase)			South Africa	1895–1970	SA	Collector	

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Hartmann, Heidrun Elisabeth Klara (Osterwal)	PhD (Hamburg, 1973)	H.E.K.Hartmann (1982–2019))	Germany	1942–2016	Visitor (NA, SA)	Botanist	
Heginbotham (Schirach), Marjorie Constance Ena			Turkey	1921–2003	SA	Librarian	
Henderson (de Winter), Mayda Doris	BSc? (RhU, 1946)	M.D.Hend. (1954–1963)	South Africa	1928–2015	SA	Botanist	
Hennessy, Esmé Francis (Franklin)	MSc (NU)	Hennessy (1980–1989)	South Africa	1933–	SA	Botanist and artist	
Henrici, Marguerite Gertrud Anna	PhD (Basle, 1921)		Switzerland	1892–1971	SA	Plant physiologist	S2A3 (2021)
Hewitt, Florence Ellen	MSc (RhU, 1955)	Hewitt (1960)	South Africa	1910–1979	SA	Phycologist	
Hilliard, Olive Mary (Hilary)	PhD (NU)	Hilliard (1964–2006)	South Africa	1925–	BO, SA	Botanist	Goldman (2013)
Hilner (Dreyer), Olga Gertrude	BA (RhU)		South Africa	1898–unknown	SA	Botanical assistant	
Hofmeyr (Claassens), Joan Mary		Hofmeyr (1922–1925)	South Africa	1901–1968	SA	Botanical assistant	
Holcroft, Rosemary Charlotte (Temperley)	UniSA, did not finish		Kenya	1942–2000	SA	Artist	
Holland, Maria Elizabeth (Armstrong)			South Africa	1836–1878	SA	Artist	S2A3 (2021)
Horrocks, Nancy Margaret Emily (Gillies)			New Zealand	1902–unknown	SA	Botanical assistant	
Hosten, Liliane Francine (Willems)	MSc (StelU, 1957)		DRC	1932–unknown	SA	Botanist	
Hugo ([Mrs]Van Zyl), Loretta	MSc (StelU)	Hugo (1988)/Van Zyl (1997–1999)	South Africa	1942–2001	SA	Botanist	
Hume, Eleanor Muriel Margaret ('Margot')	BSc?		England	1887–1968	SA	Botanist	Ritchie (1918), Forrester & Cameron (2017)
Hutchings, Anne Doris (Damant)	MSc (NU, 1992)	Hutchings (1993)	South Africa	1936–2013	SA	Botanist, ethnobotanist	Menne (2013)
[Mrs Henry]Hutton, Caroline Atherstone			South Africa	1826–1908	SA	Collector	S2A3 (2021)
Jacobsz, Margaretha Lambrechts (Van Wijk)	BSc (UP, 1928)		South Africa	1908–unknown	SA	Botanist	
Jacobsz, [Miss] Sarah				Fl. 1894–1896	SA	Collector	
Jacot Guillarmod, Amy Frances May Gordon (Hean)	DSc (St Andrews, 1970)	Jacot Guill. (1972)	South Africa	1911–1992	LE, SA	Botanist	
Jacottet, Hélène Alice			Switzerland	unknown–1935	LE, SA	Collector	S2A3 (2021)
Jameson, Rachel			Likely Britain	unknown–1893	Visitor (SA)	Collector	
Jeppé, Barbara Joan (Brereton)			South Africa	1921–1999	SA	Artist	Smith & Steyn (2000)
Joffe, Hileen ('Pitta') (Rowe)	BSc (Wits)		South Africa	1947–	NA, SA	Botanist	
Johnson (Gillatt), Sheila Myra	BSc (Wits)		South Africa	1927–1992	SA	Botanist	
Jordaan, Marie (Prins)	PhD (UP)	Jordaan (1999–2020)	South Africa	1948–	SA	Botanist	
Joubert (Reitz), Hester Susanna			South Africa	1797–1884	SA	Collector	S2A3 (2021)
Judd, [Mrs] S.W.					SA	Collector	
Karsten, Maria ('Mia') Caroline	(Amsterdam)	M.C.Karst. (no names located)	Netherlands	1902–1991	ES, SA	Botanical historian	
Kemp, Ellen (Schragel)	MSc (Massachusetts, 1972)		USA	1948–	ES	Botanist	
Kestliä, Alma Helena			Finland	1877–1965	NA	Teacher	
Kidd, Mary Catherine (Maytham)			South Africa	1914–2001	SA	Artist	
Kies (Bohnen), Pauline	MSc (HugC, 1939)	Kies (1945–1952)	South Africa	1918–1999	SA	Botanist	

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Kleinhoonte, Antonia	PhD (Utrecht, 1928)	Kleinhoonte (1926–1940)	Netherlands	1887–1961	Visitor (SA)	Botanist	
Kofler, Lucie Noël	DSc	Kofler (1956)	France	1910–2004	LE	Botanist	
[Mrs F.W.]Kolbe, Isabella Maria (Elliott)			South Africa	1830–1893	MO, SA	Collector	S2A3 (2021)
Kriel, Hélène				1935–	SA	Botanical assistant	Smith & Willis (1999)
Lambert, Georgina	MSc (NU, 1972)		England	1946–	SA	Botanist	
Lansdell, Kathleen Annie			South Africa	1888–1967	SA	Artist	S2A3 (2021)
Larsen, Bertha (Christiansen)			Denmark	Unknown–1977	SA	Collector	
Latsky, Louise ('Lulu')	DSc (SteU, 1930)		South Africa	1901–1980	SA	Zoologist	Verwey (1995)
Laughton, Elaine Margaret (Young)	PhD (Madison, 1927)	Laughton (1948)	South Africa	1898–1974	SA, ZI	Mycologist	
Lauth (Floyd), Wanda Marie Frieda			England	1879–1949	SA	Botanical assistant and artist	S2A3 (2021)
Lavis (O'Connor-Fenton), Mary Gwendolene		Lavis (1928–1969)	South Africa	1903–1992	SA	Botanical assistant	
[Mrs]Lawn, G.S.					SA	Collector	
Lee, Dorothy Grace	BA (UCT, c. 1912)			Unknown–1970	SA	Botanist	S2A3 (2021)
Leendertz (Pott), Reino	BSc (Holland, 1891)	R.Pott (1913)	Netherlands	1869–1965	SA	Botanist and pharmacist	S2A3 (2021)
Leighton ([Mrs W.E.]Jsaac), Frances Margaret	BSc (RhU, 1931)	F.M.Leight. (1932–1965)/ Isaac (1937–1939)	South Africa	1909–2006	SA	Botanist	
Lennox (Boik), Fay			South Africa	1924–	SA	Naturalist	
Lety (Forssman), Cythna Lindenberg	Hon. LLD (Wits, 1975)		South Africa	1895–1985	SA	Artist	
Levick, Sybil F.	BSc?			1939–	SA	Botanist	Smith & Willis (1999)
Levyns, Margaret Rutherford Bryan (Michell)	DSc (UCT, 1932 or 1933)	Levyns (1934–1970)	South Africa	1890–1975	SA, ZI	Botanist	S2A3 (2021)
Lewis, Gwendoline Joyce	PhD (UCT)	G.J.Lewis (1931–1962)	South Africa	1909–1967	SA	Botanist	
Loeb, Ella-Marie (Karr)			USA	1916–1989	Visitor (NA)	Collector	Holmgren et al. (1990), Smith & Willis (1999)
Lorber, Patricia S.				1942–	SA	Botanist	
Louw, Hester E.				Unknown–1977	SA	Teacher	
Louwrens, Beatrice Aletta			South Africa	1903–unknown	SA	Teacher	
Lucas, Annabelle (Denley)	MSc (Wits, 1957)		South Africa	1934–	MO, SA	Botanist	
Lugard, Charlotte Eleanor ('Nell') (Howard)			Likely England	1859–1939	Visitor (NA)	Artist	S2A3 (2021)
Lurie, Rebecca ('Becky') Leah	MSc (Wits, 1931)	Lurie (1948–1951)	South Africa	1902–1978	SA	Plant pathologist and mycologist	S2A3 (2021)
MacDonald, [Mrs] E.C.				Fl. 1950	NA	Collector	
Marais, Elizabeth Maria	MSc (SteU, 1981), later PhD	E.M.Marais (1981–2017)	South Africa	1945–	SA	Botanist	
Markötter, Erika Irene	DSc (SteU, 1931)	Markötter (1930–1939)	South Africa	1906–1983	SA	Botanist	
Marsh (Hutchings), Judith ('Judy') Anne	MSc (UP)	J.A.Marsh (1966)	South Africa	1941–	SA	Botanist	Hutchings (undated)
Martin, Bina Elizabeth			England	1900–unknown	SA	Horticulturalist and botanical assistant	
Mason, [Miss] E.				Fl. c. 1923	SA	Collector	
Mason, Marianne Harriet			England	1845–1932	SA	Artist and social welfare worker	
McCallum (Ringer), Isobel Mary Stuart			Zambia/Zimbabwe (Rhodesia)	1899–1979	SA	Collector	

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
(Lowe-)McConnell, Rosemary ('Ro') Helen as Mrs. R.M. McConnell and R.H.McConnell	PhD		England	1921–2014	BO	Ichthyologist	Exell & Hayes (1967), Stiasny & Kaufman (2015) S2A3 (2021)
Meyer, Anna Bertha Luise (Olpp)			Namibia	1873–1956	SA	Collector	S2A3 (2021)
Meyer, Luise Pauline Marie			South Africa	1905–unknown	SA	Collector	
[Mrs]Milford, Helen A.			England	1877–1940	SA	Collector	
Monson, [Lady] Anne Vane			England	c. 1714–1776	Visitor (SA)	Naturalist	Creese & Creese (1998), S2A3 (2021)
Morgan, Kathleen E.			Ireland		SA	Collector	
Morris, Florence Nightingale (Seller)	LTCL (London)		South Africa	1897–unknown	SA	Plant enthusiast	
Moss, Margaret (Heatley)	MA (Wellesley, 1910)	M.Moss (1941)	England	1885–1953	MO, SA	Botanist	
Muller, Sandra Maude (Cawood)			South Africa	1928–	SA	Collector	
Nation, Olive				Fl. 1903–1911	SA	Teacher	
Nei, [Miss] M.A.					SA	Collector	
Newdigate, Caroline Barbara			South Africa	1857–1937	SA	Naturalist	S2A3 (2021)
Obermeyer (Mauve), Anna Amelia	MSc (TrUC, 1929)	Oberm. (1933–1992)	South Africa	1907–2001	SA, ZA, ZI	Botanist	
Ogilvie (Mathews), Barbara M.L.	BSc (NU)	Ogilvie (no names located)		Fl. 1930	SA	Botanical assistant	
Oliver, Inge Magdalene (Nitzsche)				1947–2003	SA	Botanical assistant	
Oliver, Maria ('Ria') Catherina (Schoeman)	DSc (StelU, 1966)		South Africa	1927–	SA	Botanist	
Onderstall, Jacoba Johanna ('Jo') Haumann (De Beer)	(UCOFS)		South Africa	1929–2016	SA	Teacher	
Orpen, Katherine ('Kate') Irene Theodora			South Africa	1870–1943	SA	Collector	S2A3 (2021)
Orpen, Lilian			South Africa	1866–1947	SA	Collector	S2A3 (2021)
Ottley, Alice Maria		Ottley (1923–1944)	USA	1882–1971	MO, SA	Botanist	
Owen, [Miss] M.C.	PhD (California, 1921)		England	1802–1854	SA	Collector	Creese & Creese (1998)
Palmer, Evelyn ('Eve') Mary (Jenkins)	Diploma (London, 1938)		South Africa	1916–1998	SA	Journalist, naturalist and writer	
Paterson, Florence Mary (Hallack)			South Africa	1869–1936	SA	Naturalist	Creese & Creese (1998), S2A3 (2021)
Pegler, Alice Marguerite			South Africa	1861–1929	SA	Teacher	S2A3 (2021)
Perold, Sarie Magdalena (Lombard)	PhD (UP, 1992)	Perold (1984–2005)	South Africa	1928–2011	SA	Botanist	
Perry, Pauline Lesley	MSc (UCT)	P.L.Perry (1984–1999)	England	1927–	SA	Horticulturalist	
Phillips, [Lady] Dorothea Sarah Florence Alexandra (Ortlepp)			South Africa	1863–1940	SA	Patron of arts and science	Creese & Creese (1998)
Pienaar, Barendina ('Barnie') Jacoba (De Villiers)	MSc (UP, 1992)	B.J.Pienaar (1988–1993)	South Africa	1926–	SA	Botanist	
Pike, Rosalie Barbara (Eizas)	BSc (Wiits)		South Africa	1933–	SA	Artist	
Plumstead, Edna Pauline (Janisch)	DSc (Wiits, 1959)	Plumst. (1962, fossils)	South Africa	1903–1989	SA	Geologist palaeobotanist	
Pocock, Mary ('Mamie') Agard	PhD (UCT, 1932)	Pocock (dates undetermined)	South Africa	1886–1977	SA, ZA	Phycologist	
[Mrs]Pole-Evans, Mary Ross Hall (Thomson)	BA (SAC, 1915)		Scotland	1896–1975	SA	Botanist	S2A3 (2021)

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Pooley, Elsa Susanna (Bond)	Hon. Doc. (UKZN, 2007)		South Africa	1941–	SA	Artist, amateur botanist	
Powrie, Elizabeth (Coates)	Medical doctor (UCT)	Powrie (1969–1972)	South Africa	1925–1977	SA	Botanist	
Putterill (Abbott), Kathleen Margaret		K.M. Putterill (1954)	South Africa	1910–1982	SA	Botanical assistant, mycology	
Radloff, Ellen Miranda	PhD (Yale)		South Africa	Unknown–1982	SA	Plant physiologist	
Radloff (van der Merwe), Mildred ('Millie') Mathilde	DSc (SteU, 1930)		South Africa	1902–1997	SA	Botanist	Cilliers et al. (2021), Anonymous (undated)
Rennie, Margaret Ann (Campbell)	BSc (Scotland, 1951)		England	1949–	SA	Collector	
Retief, Elizabeth	PhD (UP, 2004)	Retief (1980–2018)	South Africa	1947–	NA, SA	Botanist	
[Mrs H.M.] Richards, Mary Alice Eleanor (Stokes)			Wales	1885–1977	BO, ZA	Collector	
Robertson (Giliam), Rosemary Gwladys			South Africa	1924–	BO, LE, SA, ZA	Botanical assistant	
Röhrbeck, Matilda Augusta	BSc (UP, 1969)		South Africa	1938–	SA	Botanist	
Rood, Petrusa Benjaminia (van Rhyin)			South Africa	1861–1946	SA	Collector	S2A3 (2021)
Roux, Cecilia	MSc (RAU, 1978)	Cec. Roux (1986–1996)	South Africa	1947–	MO, NA, SA	Mycologist	
Runnalls, Pat			England	1930–	SA	Collector	Smith & Willis (1999)
Ryder, Eleanore Frederica (Fisher-Rowe)			England	1875–1958	SA	Collector	
Saunders, Katharine (Wheelwright)			England	1824–1901	SA, ZI	Artist	Creese & Creese (1998), S2A3 (2021)
Schinz, Anni				Fl. 1926	Visitor (SA)	Collector	
Schmitz, Marthe Odile (Ruch)	BSc (Strasbourg, 1958)		France	1935–1982	LE	Teacher, missionary	
Seely, Mary Kathryn	PhD (California, 1965)		USA	1939–	NA	Zoologist	
Simpson, [Miss] M.W.				Fl. 1950	SA	Technical assistant	
Skarpe, Christina			Sweden	1946–	Visitor (SA)	Ecologist	
Skinner, Gwendoline Constance (Wright)			England	1915–	SA	Conservationist	
Smith, Esther				Fl. 1893–1925	SA	Artist	
Smithies, Shirley J.	MSc			1947–	SA	Botanist	
Smook (Fish), Lynette ('Lyn')	BSc (RhU, 1969)	Smook (1993)/Fish (2006–2011)	South Africa	1946–	BO, ES, LE, NA, SA	Botanist	
Snijman, Deirdre ('Dee') Ann	PhD (UCT, 1992)	Snijman (1981–2014)	South Africa	1949–	SA	Botanist	
Soini, Syvi Esteri	Agronomist (Helsinki)		Finland	1920–2018	NA	Agronomist	S2A3 (2021)
Sole, Myrtle Irene			South Africa	1888–1948	SA	Collector	
Stanford, Kate			England	Unknown–1952	SA	Nurserywoman	
Stebbins, Inez F.	MA			Fl. 1904	SA	Botanist	S2A3 (2021)
Steedman, Ellen Constance	MA	Steedman (no names located)	England	1859–1949	SA, ZI	Botanist	S2A3 (2021)
Stent, Sydney Margaret	(Bedford College)	Stent (1923–1934)	South Africa	1875–1942	SA	Botanist	S2A3 (2021)
Stephany, Sister	BSc?			Fl. 1912	SA	Botanist	
Stephens, Edith Layard	BA (UCT)	Stephens (1910–1938)	South Africa	1884–1966	SA	Botanist	Creese & Creese (1998), S2A3 (2021)
Stewart, Joyce (Tucker)	MSc (London)	J. Stewart (1973–1998)	England	1936–2011	SA	Botanist	
Stewart, Mabel				Fl. 1906–1912	ES	Collector	S2A3 (2021)

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Stielau, Dorothea Gudrun (Winkler)	MSc (NU, 1974)		Tanzania	1932–2013	SA	Botanist	
Stoneman, Bertha	PhD (Cornell, c. 1896)	Stoneman (1898)	USA	1866–1943	LE, SA	Botanist	Creese & Creese (1998), S2A3 (2021)
Tarcisia, Sister Taylor, [Miss] A.	(NU)			Fl. 1924	SA	Collector	
Thiener, Sister O.	BSc (Cambridge)		South Africa	Fl. 1944	SA	Teacher	
Thoday, Mary Gladys (Sykes)			England	1884–1943	SA	Collector	JIC (2020), S2A3 (2021)
Thompson, Edith Awdry ('Googoo') (Eastwood)			South Africa	1895–1991	SA	Botanist	Wongtschowski (2003), Figueiredo & Smith (2011)
Thompson (Rand), Mary Fraser	MSc (Wits, 1972)	M.F.Thomps. (1972–1977)	South Africa	1941–1982	SA	Botanist	
Thompson, Sheila ('Box') Clifford	BSc (Wits)		South Africa	1917–1998	SA, ZI	Nurserywoman	
Tilney, Patricia M.	PhD	Tilney (1987–2011)			SA	Botanist	
Tosh (Mulder), Patricia A.	(NU)			Fl. 1950	SA	Collector	
Tredgold (Macintosh), Edith Kathleen	MA (UCT, 1923)		South Africa	1900–unknown	SA	Technician	
Treleaven, Charlotte Annie Snowden				Unknown–1953	SA	Botanical assistant	
Troughton, Sarah Caroline	BSc (UCT)		Zimbabwe	1942–	LE, SA	Botanical assistant, librarian	
Tugwell, Anna M.				Fl. 1914–1929	SA	Collector	JSTOR Global Plants (2021)
Turton, Lilian M.	PhD		England	1921–2011	BO	Botanist	JSTOR Global Plants (2021)
Van der Menwe, Aleida Hendrika (De Bruyn)	BA (NU, 1954)		South Africa	1933–	SA	Artist	
Van der Menwe, Jacoba Johanna Maria	BSc (PotU, 1967)	J.J.M.van der Menwe (1971–1988)	South Africa	1946–	SA	Botanist	
Van Druuten, Denise		Druuten (1956)	South Africa	1930–	SA	Botanist	Van Druuten (1956)
Van Hoepen, Estelle (Wasserfall)	MSc (UCOFS, 1942)		South Africa	1919–2019	SA	Botanist	
Van Niekerk, Grace			South Africa	Unknown–1983	SA	Teacher, botanical assistant	
Van Otteren, Margaretha Hendrina			Netherlands	c. 1665–unknown (Fl. 1693–1700)	SA	Collector	Robertson (undated)
Van Wijk, Yvette E.	PhD			1941–	SA	Botanist	
Van Zijl, Dorothy				Fl. 1926	SA	Collector, gardener and plant enthusiast	JSTOR Global Plants (2021)
Verdoorn, Inez Clare	Hon. Doc. (NU, 1967)	I.Verd. (1919–1979)	South Africa	1896–1989	MO, SA, ZI	Botanist, over 300 publications	
Vogts, Marie Murray (Neethling)	PhD (StelU, 1971)		South Africa	1908–1998	SA	Botanist	Attwell (1998)
Von Breitenbach, Jutta (Hofrichter)			Poland	1931–2016	SA	Collector	
Von Leubnitz, Elisabeth			Likely Germany	Fl. 1884	Visitor (NA)	Collector	
Von Teichman, Irmgard	PhD (UP)	Von Teichman (1994)	South Africa	1940–	SA	Botanist	
Walgate (MacNae), Marion Meason	MSc (UCT, 1936)	Walgate (no names located)	England	1914–unknown	SA	Botanist	
Walter, Erna (Schenck)	DSc (Heidelberg, 1918)		Germany	1893–1992	Visitor (NA)	Botanist	

Appendix (cont.)

Name	University education; highest qualification	Abbreviation and dates as plant name author	Country / place of birth	Birth–death or Fl.	Southern African countries where active	Occupation	References
Wanntorp, Henni (Palson)	(Stockholm)		Sweden	1943–	Visitor (NA)	Botanist	
Ward-Hilhorst, Johanna Elaphie			South Africa	1920–1994	SA	Artist	
Webb (Gerber), Mabel Margaret	BSc (NU, 1938)		South Africa	1918–unknown	SA	Teacher	
Weber, Anne Antoinette (van Bosse)	Hon. Doc. (Utrecht, 1910)	Webber Bosse (dates undetermined)	Netherlands	1852–1942	Visitor (SA)	Phycologist	S2A3 (2021)
Webster, Mary McCallum			England	1906–1985	Visitor (SA, ZA)	Collector	
Weintraub, Dora ⁵	BSc (Wits)	Weintraub (1931)		Fl. 1931–1950	MO, SA	Mycologist	
Weiman, Wilhelmina ('Minkie') Gerhardina	MSc (UOFS, 1966)	Weiman (1996–2000)	South Africa	1944–2019	SA	Botanist	S2A3 (2021)
West (Anderson), Ethel			England	1870–1939	SA	Naturalist	S2A3 (2021)
[Mrs George]White, Bliss Ann Atherstone			South Africa	1823–1907	SA	Collector	S2A3 (2021)
Williamson, [Miss] C.					SA	Collector	
Wilman, Maria	Hon. LLD. (Wits, 1939)		South Africa	1867–1957	SA	Botanist and geologist	S2A3 (2021)
Wolfowitz, Jennie	BSc		South Africa	1915–unknown	SA	Botanist	Gomes e Sousa (1941), Exell & Hayes (1967)
Wolfson, Maureen	PhD			1945–	SA	Botanist	Smith & Willis (1999)
Wollaston, Elise Margaretta	PhD	E.M. Woll. (1968–1998)	Australia	1922–2012	Visitor (SA, MO)	Phycologist	
Wormald (Sister Monica), Katherine Cuyler	(UCGH)		South Africa	1882–1957	SA	Collector	S2A3 (2021)
(Norwood)Young, Marion Emma Blenkiron ⁶	(Leeds)		England	1903–2000	SA, ZI	Botanist	Fox & Norwood Young (1982)

¹ Born Switzerland, 1880, died South Africa, c. 1979. Wife of the Swiss missionary James Borie who was a medical doctor in South Africa and from 1905 onwards associated with the Swiss Mission Elim Hospital in Limpopo. After her husband's death she worked for a while in Mozambique. In the 1950s she returned to Elim, and was a volunteer at the Elim Hospital until the age of 97. She died at the age of 99 and is commemorated in *Acacia borfee* Burtt Davy (*Fabaceae*) (Gomes e Sousa 1942, Exell & Hayes 1967, Gunn & Codd 1981, Van der Merwe 2001).

² Born in Witley, Essex, England, 20 March 1874, died Turo, Cornwall, England, 18 August 1960. She was a self-taught anthropologist who went to South Africa as a missionary of the Church of England's organisation Society for the Propagation of the Gospel in Foreign Parts (SPG), working in Johannesburg and Potchefstroom from 1911 to 1916. In September 1917 she moved to Maciene (near Xai-Xai, Gaza), Mozambique, where she remained and worked at the mission until December 1930. In 1928 she received a grant from the Research Committee of Bantu Studies of the University of the Witwatersrand, to do fieldwork among the Valenge (a branch of the Chopi ethnic group) for a period of six months. Even though further grants were rejected by her priest-in-charge, she published several papers and a book on the social and economic life of Valenge women. In 1930 she retired from service in the SPG and returned to her family home in Turo, Cornwall, to attend to her invalid sister. She returned to Africa for a short stay, from October 1932 to February 1933, in Sierra Leone and Liberia, where she made social and medical observations. Her collections are deposited at Herbs BM, K, PRE, and NU (Earthy 1933, Gomes e Sousa 1949, Exell & Hayes 1967, Gaitskell 2000, 2011, 2012, Glen & Germishuizen 2010, SOAS 2018, D. Gaitskell pers. comm. Nov. 2018).

³ Born Grahamstown, 15 November 1863, died Haenertsburg, Limpopo, South Africa, 11 November 1930. After working as a governess in Johannesburg, in 1894 she married Arthur Keble Eastwood (see under Thompson), an only child, was born from the marriage. In 1903 the family moved near to Haenertsburg (Limpopo) where they would remain for the rest of their lives. Arthur Eastwood was Forestry Officer at Woodbush for about three years; he was replaced by Charles Edward Lane-Poole (1885–1970). Jane Eastwood collected several ferns in 1905, at request of Thomas Robertson Sim (1858–1938) who had approached her husband for information on the ferns of Woodbush. These collections are under the husband's name, A.K. Eastwood (Wongischowski 2003).

⁴ Cited by Glen & Germishuizen (2010) as a collector who was also active in Nigeria. However, the collector J.H.J. Farquhar in Nigeria was a man who worked on forestry and collected for Herb K. Miss Farquhar sent material to Thomas Robertson Sim (1858–1938). She might be related to the naturalist John Farquhar (birth date unknown–1930) who was active in the Eastern Cape from 1883 to 1910 (S2A3 2021).

⁵ Dora Weintraub graduated from the University of the Witwatersrand in Johannesburg, South Africa, obtaining an MSc. She was supervised by C.E. Moss and in 1933 published on the aquatic vegetation and flora of the Witwatersrand. She was later employed by the Transvaal Timber Research Laboratory of the Chamber of Mines, in Johannesburg, which was managed by Rebecca Leah Lurie (1902–1978). Weintraub studied fungi that cause decay in timber and fabrics, and was also involved in medical mycology, especially studying sporotrichosis. She was senior mycologist in 1952. By 1965 she was working for the South African Institute for Medical Research. Her main collection is at Herb. J and duplicates are kept at Herbs BM and PRE (Weintraub 1933, Brown et al. 1947, Gomes e Sousa 1949, Doige 1950, Mycological Society of America 1952, Exell & Hayes 1967, Glen & Germishuizen 2010).

⁶ Born at 142 Strathmore Crescent, Benwell, Newcastle-on-Tyne, Northumberland, England, 22 June 1903, died at House 'Zuidzicht', Fourways, Johannesburg, South Africa, 24 October 2000. Née Blenkiron, she had 10 sisters, one of whom was the artist (painter) Edith Hilder (born 11 November 1904, married Rowland Hilder in 1929, died 5 August 1992, London). Marion Emma, [later known as Marion Norwood Young], studied at Leeds University and afterwards emigrated to South Africa. She became a teacher in Johannesburg and later a lecturer in botany at the University of the Witwatersrand (1927–1928). She then met R.G.N. Young who was a postgraduate student, and they married in 1928, but later divorced. After the divorce Marion was independently wealthy. During World War II she served as a nurse and afterwards worked in an office. During the War she also studied fossil pollen (William Stucke, pers. comm. 16 July 2019). Later she was the Librarian at the British Consulate in Johannesburg, South Africa. She used to relate that she refused to retire, unless she was given a pension. Even after she was made a Member of the British Empire (MBE) in 1970, she carried on working at the Consulate, until she was 75. Thereafter she moved to the house called Culvertown, near Sudbury, Suffolk, UK, of a family member. When the family moved to South Africa in the early-1980s, she joined them. She took part in numerous expeditions to, at the time, little-explored areas, including South Africa's Transkei region (eastern parts of the Eastern Cape province) and Angola, and it has been recorded that in the 1930s she twice 'went up the Zambezi in a dug-out canoe in search of a rare water-plant'. She also collected specimens from the Far East as well as from all over southern Africa (Fox & Norwood Young 1982; inside back cover flap text). In her 80s she spent a lot of time in Darinis, Lot, France, with her daughter whose family had been running L'Ancienne Auberge de Darinis since 1886. A room on the first floor of the Auberge is known as 'Granny's Room' in honour of Norwood Young. In 1982, with Francis William Fox, she co-authored the well-known book 'Food from the veld', which was published in South Africa. The first edition of the book (1982) had indices for English, Afrikaans, and botanical names. The 1988 reprint had indices in numerous languages, including non-South African ones (Fox & Norwood Young 1982 [1988 reprint]: 377–422). These indices were prepared, based on Norwood Young's dataset, by William Stucke. From July–November 1932 M.E. Norwood Young accompanied her husband on an expedition sponsored by the Natural History Museum, London, to Zambia, D.R. Congo, and Angola. The collections are under the name of her husband. While in South Africa she also made collections with A.G. Grant. Her collections appear under the names M.E. Blenkiron, M.E. Young, and M.E.N. Young. (The London Gazette 1970, Gunn & Codd 1981, Fox & Norwood Young 1982, William Stucke pers. comm., 16 July 2019).