

The Ven. Charles Theophilus Hahn, a hitherto unknown Edwardian botanical illustrator in Natal, 1908–1916

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ABSTRACT

A brief biographical sketch is given of the Rev. C.T. Hahn, an English-born, Oxford-educated Anglican missionary in Zululand who painted some 235 watercolours of Natal flora between 1908 and 1913. Hahn (who later changed his name to Headley) was one of the most productive of the early botanical illustrators in Natal but as a collection of his paintings has only recently been discovered, his work has until hitherto remained unknown.

UITTREKSEL

'n Kort lewensskets van eerw. C.T. Hahn word gegee. Hy is in Engeland gebore, het aan Oxford studeer en is later as Anglikaanse sendeling na Zoeloeland. Van 1908 tot 1913 het hy die Natalse flora in sowat 235 waterverfskilderye afgebeeld. Hahn (wat sy naam later na Headley verander het) was een van die produktiefste vroeë botaniese illustreerders in Natal. Omdat 'n versameling van sy skilderye eers onlangs ontdek is, was sy werk tot dusver onbekend.

INTRODUCTION

In February 1988 a collection of 235 original water colour illustrations of Natal flora dating from 1908 to 1916 was brought to the Compton Herbarium, Kirstenbosch for identification and cataloging. These paintings are the work of the Rev. C.T. Hahn, an Anglican missionary who in 1909 became priest in charge of Empangeni and Inhlwati in the Diocese of Zululand. The artist is not listed in Desmond (1977), Gordon-Brown (1975), Gunn & Codd (1981), or Lanjouw & Stafleu (1954 et seq.) either as a botanical illustrator or plant collector. Indeed, nothing appears to have been recorded about Hahn's activities as an artist—particularly in respect of his botanical paintings, and as there is the ever present possibility that the collection may be fragmented and dispersed, a list of these works is published here as a permanent record together with the few biographical details currently available to us.

Hahn appears to have been a shy, self-effacing personality whose work has only recently come to light. His botanical paintings are accurate and have considerable charm apart from their inherent historical interest. Executed under primitive field conditions, they were evidently not undertaken with a scientific motif in mind but rather for his personal satisfaction and relaxation, or perhaps, merely as a record of his period of temporary residence in South Africa.

BRIEF BIOGRAPHY

Charles Theophilus Hahn, the only son of Theophilus Sigmund Hahn and Helen Marfield Hahn (formerly Walters) was born on 1st March 1870 at Wandsworth, Surrey, south London but was subsequently brought up in the village of Headley in Hampshire. As a young man, he entered Pembroke College, Oxford, graduating a B.A.

in 1892 and later an M.A. in 1895. Shortly after receiving his first degree he decided to take up the ministry and in 1892 embarked upon a period of training at the Leeds Clergy School. He was ordained a deacon in 1893 and a priest in 1894. Hahn held various church appointments in England before coming to South Africa to undertake missionary work. We have not been able to establish precisely when he arrived in South Africa. Nevertheless, a landscape painting titled 'On the road to Pretoria' dated May 1906 establishes the earliest date of his residence here that we have traced so far.

His first posting in South Africa was as curate of Etalaneni in 1908. In 1909 he became priest-in-charge of Empangeni and Inhlwati ('Nhlwati) in the Diocese of Zululand—a position in which he remained until 1913 when he became Archdeacon of Eshowe and Canon of St Peters, Vryheid. It was during this period (1908–1913) that the great majority of his botanical paintings were executed (about 200 out of 286). While at Vryheid, however, he continued to paint, often visiting his old haunts at Empangeni, Nongoma and the Mission at Inhlwati. Hahn's output was surprisingly high. In one month for example (November 1911) he completed 11 paintings, that is approximately one every three days. Indeed, one wonders how much missionary work he undertook during this phase of his life which seems to have been very largely devoted to painting flowers.

In 1917 Hahn returned to England to become Vicar of Pontefract but shortly afterwards joined the Church Army serving in France, 1918, 1919 (Figure 1). It was at about this time that he changed his name from Hahn to Headley, using the name of his former home village in Hampshire as his new surname. This rather drastic step was presumably taken in response to anti-German sentiments prevailing at that time in Britain. Throughout this article we have used the name Hahn rather than Headley as the botanical illustrations executed in Natal were completed before he changed his name.

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FIGURE 1.—Charles Theophilus Hahn, in a Church Army uniform, ± 1919.

By 1919 he was back in South Africa where as C.T. Headley he served as Sub Dean of St George's Cathedral, Cape Town, until 1922, later moving to South West Africa (now Namibia) as priest-in-charge at Keetmanshoop from 1922 till 1924 and Archdeacon of Damaraland from 1924 until 1927. When he returned to Britain he took up a position in the Diocese of Chelmsford, Essex. Charles Theophilus Headley died at Holborn, London on 16th September 1930 aged 60.

DESCRIPTION OF THE BOTANICAL COLLECTION

The artwork is on sheets of creamy-white (possibly hand made) paper of variable size, cut to suit the subjects, all of which are depicted life size. Each plate is labelled with a date (month and year) and a sequence number in either the lower left or lower right hand corner. They are mounted centrally on light-weight brown manilla sheets measuring 460 × 355 mm, reinforced along the left hand margin with a strip of manilla perforated in four places to facilitate loose binding. Traces of a gold silk cord were found threaded through the perforations suggesting that a cord binding was originally used to hold the collection together.

In the lower right hand corner of each manilla mounting sheet, locality data is inscribed in ink in long hand. All

the botanical plates we examined were unsigned. At the top left hand corner of the manilla mounting sheet the family name appears in printed script in Hahn's hand preceded by its Bentham & Hooker sequence number. In many instances an identification to genus and species is also provided. These determinations as well as the occasional English or African vernacular name are in the same printed script, presumably Hahn's.

Great pains were evidently taken to have his subjects correctly identified. Where this has been done to species level the determinations are invariably correct or bear names that are now merely nomenclaturally outdated. It thus seems highly probable that he was assisted by a competent botanist, possibly J. Medley Wood (Figure 2).

Other paintings by the artist

Hahn was also an accomplished landscape artist whose work depicts scenery in various parts of the world including South Africa. We were informed by two of the owners of the Hahn collection, Mr D. Cope and Mr J. Wesels, that a portion of the collection purchased by them in London during 1984, contained topographical water-colours of east Africa (mainly harbour scenes) and also sketches done in South America, India, Spain, Italy and South West Africa (now Namibia). In 1986 the collection was augmented by the purchase of 235 plates of Natal flora from Hahn's heirs which are the subject of this paper. A Transvaal landscape and an interior scene in a mission church in Natal, both completed during his South African sojourn, are reproduced here as examples of his non-botanical work (Figure 3).

Comments on Hahn's botanical paintings

Hahn has a free and bold style. The plant outline was no more than roughly pencilled to establish placement and proportions before colouring. The paint is applied in bold, somewhat wet strokes, rather than graded washes or with a dry brush technique as practised by Arabella Roupell, Emily Thwaites and Ethel May Dixie. The relative speed of the technique which he employed would have enabled Hahn to achieve the prodigious amount of work which he did. The colours are very faithful, and still vibrant, and the quality of the paintings remarkably consistent: those done in 1910 are barely to be distinguished from those of five years later. The first few paintings, done in Durban in 1909 (*Argemone*, *Tecomaria* and *Scaevola*), although of comparable style to the remainder, are smaller, and depict a rather modest and meagre part of the plant, unlike the confident and generous representations executed later. The facies of the plant are highly natural and the modelling and texturing good. He succeeded in capturing the lustre on glossy leaves without resorting to oils or transparent glazes as did Katharine Saunders. The style and composition is much more modern than that of Sanderson and Saunders, and the arrangement of the plant parts on the page spatially informed and aesthetically pleasing, and not at all contrived. In some of Saunders' paintings, for example, the plant is abruptly bent beneath the flower to display a top view of the flower but side view of the plant; or the leaves may be splayed out and flattened unnaturally; or the flowers artfully arranged in isolation amongst the foliage; and in some the flowers are even morphologically upside down. Saunders' illustrations, however, stand apart

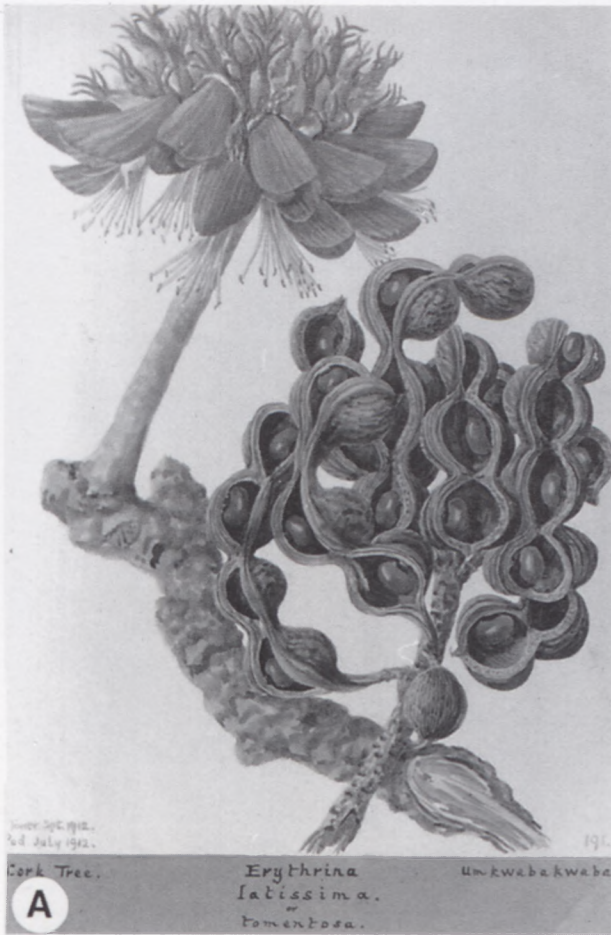


FIGURE 2.—Examples of C.T. Hahn's botanical illustrations: A, *Erythrina latissima* E. Mey.; B, *Ricinus communis* L.; C, *Ochna serrulata* (Hochst.) Walp.; D, *Hibiscus calyphyllus* Cav. The captions at the base of each illustration are in Hahn's hand.

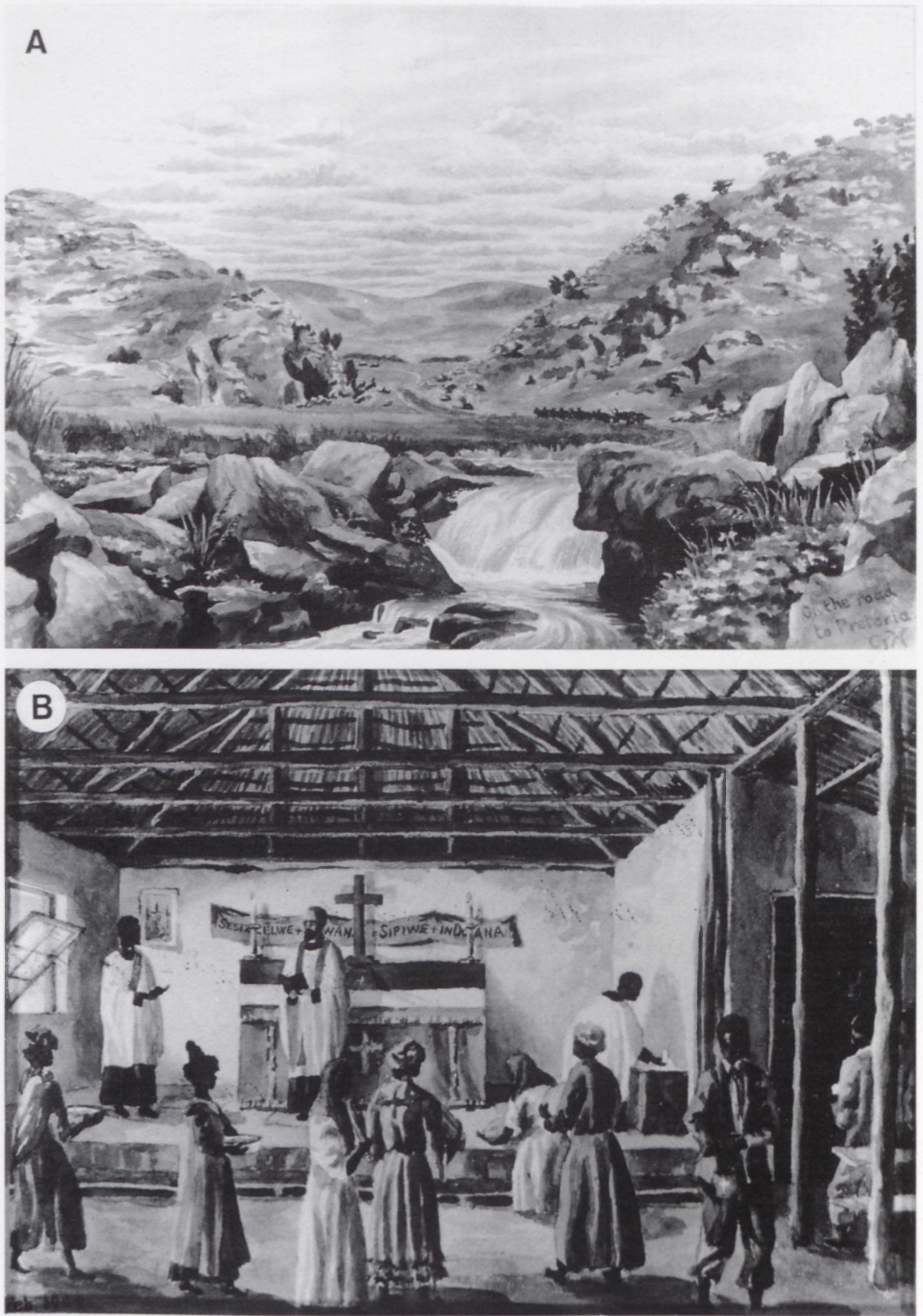


FIGURE 3.—A, an example of a landscape in watercolours, titled 'On the road to Pretoria' (with a waterfall in the Watersmeet Valley, Lyton in the foreground, May 29–31, 1906) signed C.T.H. B, an unusual view by C.T. Hahn of the interior of a mission church in watercolours, titled 'i Babanango Out-Station. The Offertory at Holy Communion. Feb. 1909'. Unsigned.

in the floral dissections which accompany some, indicating an intimate knowledge of plant structure, presumably reflecting the botanically scientific influence of McKen or Wood.

Hahn's illustrations present rather complete representations of the species, much as in good herbarium specimens, displaying aspects of the branching pattern, phyllotaxy, inflorescence morphology, etc. which aids identification greatly, unlike the frequently piecemeal fragments illustrated by Saunders. Also, each species has a plate alone, although different stages of the same may be included: the decorative floral bouquets of Victorian artists are eschewed in favour of a more austere approach. Hahn's scientific and botanically educated mind is evident in the careful combination of fruiting and flowering stems of a number of species, necessitating re-collecting of material later in the season, and in the inclusion of the underground parts of most of the monocotyledons, which are important characters in this group. It is clear that Hahn systematically set about recording the flora, both indigenous and naturalised (but not exotic) of his immediate vicinity, and avoided those species not native to the area. The inclusion of the native names of many is an interesting point. His intention in painting the plants was clearly different from that of Saunders, whose primary interest was in the beauty of the flowers.

EARLY BOTANICAL EXPLORATION OF NATAL

Natal was first explored botanically by J.F. Drège who, in 1832, travelled along the coast from Grahamstown to Durban as a member of Dr Andrew Smith's expedition to Zululand. He was followed by two other pioneers, Drs W. Gueinzus in 1838 and F. Krauss in 1842, both of whom collected in and around Durban, the latter with an occasional foray into the Natal interior. With the declaration of British sovereignty over Natal in 1843, the German phase came to an end, but a stream of settler botanists began to enter the colony from Britain. These, with the dates of their arrival, were Dr W. Stanger (1844), the Fannin family (1847), M.J. McKen and J. Sanderson (1850), R.W. Plant and J.M. Wood (1852), the Saunders family (1854) and W.T. Gerrard (1856). Of these, all except Stanger (Colonial Geologist) and the Fannins (who settled in the Midlands) purchased farms in the Tongaat area just north of Durban. It seems that the Saunders' homestead in particular became a convenient rendezvous for North Coast botanists (Bayer 1979). McKen, Sanderson, Plant, Wood and Gerrard were by far the most active Natal plant collectors of the last century. The Rev. J. Buchanan, who arrived in Natal in 1861 was at one time in charge of the

Presbyterian Mission at Mapumulo, north of Tongaat, and collected also with McKen, but left the Colony in 1874.

Hahn arrived in Natal in 1908, some 50 years after this concentrated influx of settler botanists. His work as an illustrator of Natal plants was preceded by that of Sanderson and Saunders. Both these artists were well acquainted with other collectors in Natal and with the botanists at Kew, forming, as it were, a social-scientific circle north of Durban where their farms lay, which was the hub of botanical interest in the colony. It was to the Saunders' home that Marianne North, the celebrated botanical and landscape artist, came in 1883 when she visited Natal. Hahn arrived in Natal too late to join this network. Katharine Saunders died in 1901. Gerrard had left Natal for Madagascar in 1864; Plant had died in 1858; and McKen in 1871. Medley Wood, succeeding as Curator of the Durban Botanical Gardens in 1882, although available, was no longer young when Hahn was working, and died suddenly at his desk in 1915, aged 88. His death corresponds almost exactly with the cessation of Hahn's work in 1916. We have been unable to establish whether Medley Wood and Hahn ever met although it seems highly probable that they were acquainted.

ACKNOWLEDGEMENTS

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APPENDIX

LIST OF BOTANICAL PLATES EXAMINED BY THE AUTHORS

In this list the 235 plates are arranged by plant families. The numbers after the species name are Hahn's numbers which appear on the lower right (occasionally lower left) hand corner of each illustration. A set of xerox photocopies of all the illustrations listed here is filed in the archives of the Compton Herbarium.

MONOCOTYLEDONS

ARACEAE

Zantedeschia aethiopica (L.) Spreng., 124, Nov. 1911, found in marshy ground at 'Nhlwati.

Zantedeschia jucunda Letty, 234, Nov. 1913, grown in a garden at Nongoma from a bulb sent from Swaziland.

Zantedeschia rehmannii Engl., 29, Nov. 1910, found in the grass among scrubby bush near Mhlopekulu, Nongoma.

COMMELINACEAE

- Aneilema aequinoctiale* (P. Beauv.) Loudon, 156, April 1912, found in the bush at Amatshemhlope.
Commelina africana L., 18, Sept. 1910, found as a weed in the garden at Nongoma.
Commelina diffusa Burm. f. subsp. *diffusa*, 24, Nov. 1910, found in an old mealie garden at 'Nhlwati.
Cyanotis speciosa (L. f.) Hassk., 69, Mar. & Dec. 1911, found in the veld at Nongoma.
Murdannia simplex (Vahl) Brenan, 275, Jan. 1916, found near a stream at Empangeni.

LILIACEAE

- Agapanthus praecox* Willd., 56, Jan. 1911, found in the veld at Nongoma.
Albucca angolensis Welw., 238, Jan. 1914, found in the veld near the Emadundwini on the Nongoma-Hlabisa road.
Albucca nelsonii N.E. Br., 78, May 1911, found in the veld at Nongoma.
Aloe arborescens Mill., 163, May 1912, found beneath a high rocky krantz in veld at Vryheid.
Aloe arborescens Mill., 208, June 1913, found in a donga among big rocks at Nongoma.
Aloe boylei Bak., 27, Nov. 1910, found in the veld at 'Nhlwati.
Aloe ecklonii Salm-Dyck, 7, Aug. 1910, found in the veld at Nongoma.
Aloe kraussii Bak., 134, Jan. 1912, found in the open veld at 'Nhlwati.
Aloe parviflora Bak., 155, March 1912, found in the veld at 'Nhlwati.
Aloe saponaria (Ait.) Haw., 175, July 1912, found in the bushveld near the Wela, on 'Nhlwati rd.
Aloe spectabilis Reynolds, 164, May 1912, found in the bare stony veld on the top of Ngome.
Androcymbium natalense Bak., 88, July 1911, found in the veld at 'Nhlwati.
Anthericum cooperi Bak., 197, Oct. 1912, found in the veld at 'Nhlwati.
Bulbine asphodeloides (L.) Roem. & Schult., 84, June 1911, found in the veld at Mhlopekulu, near Nongoma.
Dipcadi cf. viride (L.) Moench, 167, May 1912, found in the veld at Nongoma.
Dipcadi viride (L.) Moench, 23, Oct. 1910, found in the veld at Nongoma.
Gloriosa superba L., 278, Jan. 1916, found in the bush on the sand dunes on the foreshore at Durban.
Kniphofia gracilis Harv. & Bak., 147, Feb. 1912, found in the veld at Nongoma.
Kniphofia triangularis Kunth, 83, June 1911, found in the veld at Hlabisa.
Kniphofia tysonii Bak., 65, March 1911, found in the veld at Nongoma.
Ledebouria revoluta (L. f.) Jessop, 2, Aug. 1910, found in the veld at Nongoma.
Protasparagus densiflorus (Kunth) Oberm., 194, Sept. 1912, found in the bushveld near the Wela stream on the way to 'Nhlwati.
Protasparagus racemosus (Wild.) Oberm., 201, Dec. 1912, found in the veld at Nongoma.
Sandersonia aurantiaca Hook., 30, Nov. 1910, found among grass in scrubby bush at Nongoma.
Scilla nervosa (Burch.) Jessop, 127, Nov. 1911, found in the veld at 'Nhlwati.
Tulbaghia ludwigiana Harv., 20, Oct. 1910, found in the veld at Nongoma.
Urginea macrocentra Bak., 192, Sept. 1912, found in the veld at 'Nhlwati.

AMARYLLIDACEAE

- Apodolirion buchananii* Bak., 90, July 1911, found in the veld at 'Nhlwati.
Boophane disticha (L. f.) Herb., 13, Sept. 1910, found in the veld near Mona stream, Nongoma.
Brunsvigia radulosa Herb., 53, Jan. 1911, found in the veld at Nongoma.
Crinum macowanii Bak., 229, Oct. 1913, found by the Mkiwaneni near 'Nhlwati.
Cyrtanthus brachyscyphus Bak., 199, Oct. 1912, found on the banks of a stream on the Nongoma-Ngome track, near Ngongomane Hill.
Cyrtanthus breviflorus Harv., 1, Aug. 1910, found on swampy ground by a stream at Eshowe.
Cyrtanthus contractus N.E. Br., 190, Aug. 1912, found in the veld in the thorns near the Wela on 'Nhlwati track.
Cyrtanthus tuckii Bak., 15, Sept. 1910, found in the veld at Nongoma.
Nerine appendiculata Bak., 81, May 1911, found by the side of a stream in Ngome forest.
Scadoxus puniceus (L.) Fries & Nordal, 93, Aug. 1911, found in the veld at 'Nhlwati.

HYPOXIDACEAE

- Hypoxis angustifolia* Lam., 6, Aug. 1910, found in veld by Mona stream on Nongoma road.
Hypoxis filiformis Bak., 216, Aug. 1913, found in a damp donga at Nongoma.

- Hypoxis gerrardii* Bak., 79, May 1911, found in the veld at Nongoma.
Hypoxis rooperi Moore, 16, Sept. 1910, found in the veld at Nongoma.

DIOSCOREACEAE

- Dioscorea diversifolia* Griseb., 138, Jan. 1912, found among thick tangle of shrubs and tall grass on banks of stream at 'Nhlwati.

IRIDACEAE

- Anomatheca laxa* (Thunb.) Goldbl., 110, Oct. 1911, found in the bush, near the waterfall at 'Nhlwati.
Aristea cognata Weimarck, 26, Nov. 1910, found in the veld at 'Nhlwati.
Aristea ecklonii Bak., 143, Jan. 1912, found in the open veld at 'Nhlwati.
Dierama pendulum Bak., 92, Aug. 1911, found in the veld at 'Nhlwati.
Dietes butcheriana Gerstner, 152, Feb. 1912, found on the banks of the Umkuzana stream near Tokazi.
Dietes iridoides (L.) Klatt, 203, May 1913, found in the bush, by the waterfall at 'Nhlwati.
Gladiolus dalenii Van Geel, 50, Jan. 1911, found in the veld at Nongoma.
Gladiolus ecklonii Lehm. subsp. *ecklonii*, 46, Dec. 1910, found in the veld at 'Nhlwati.
Gladiolus longicollis Bak. var. *platypetalus* (Bak.) Oberm., 19, Oct. 1910, found in the veld at 'Nhlwati.
Gladiolus papilio Hook. f., 45, Dec. 1910, found in the veld at 'Nhlwati.
Moraea elliotii Bak., 43, Dec. 1910, found in the veld at Isandhlwana.
Moraea spathulata (L. f.) Klatt, 98, Sept. 1911, found in the veld at Ngome.
Moraea stricta Bak., 89, Dec. 1910, found in the veld at 'Nhlwati.
Schizostylis coccinea Backh. & Harv., 149, Feb. 1912, found on the banks of a stream near Ngongomane Hill.
Tritonia lineata (Salisb.) Ker-Gawl. var. *lineata*, 95, Aug. 1911, found in the veld at 'Nhlwati.
Watsonia sp., 60, Feb. 1911, found in the veld at Nongoma.

STRELITZIACEAE

- Strelitzia reginae* Banks ex Ait., (no number), Aug. 1916, found in damp situations near the Kulu stream, Mtondweni, Empangeni.

ORCHIDACEAE

- Bonatea speciosa* (L. f.) Willd., 131, Dec. 1911, found in veld among tufts of grass at Alfa (on Ngome-Vryheid road).
Calanthe sylvatica (Thou.) Lindl., 280, Feb. 1916, found in the veld at Ngome.
Disperis stenoplectron Reichb. f., 250, March 1914, found in the veld at Ngome.
Eulophia clavicornis Lindl. var. *clavicornis*, 189, Aug. 1912, found in the veld at Nongoma.
Eulophia clavicornis Lindl. var. *inaequalis* (Schltr.) A.V. Hall, 10, Sept. 1910, found in the veld at Nongoma.
Eulophia clavicornis Lindl. var. *nutans* (Sond.) A.V. Hall, 144, Jan. 1912, found in open veld at Ngome.
Eulophia chitellifera (Reichb. f.) H. Bol., 8, Sept. 1910, found in the veld at Nongoma.
Eulophia ensata Lindl., 239, Jan. 1914, found in the veld at Nongoma.
Eulophia foliosa (Lindl.) H. Bol., 200, Dec. 1912, found in the veld at Nongoma.
Eulophia leontoglossa Reichb. f., 33, Nov. 1910, found in the veld at Nongoma.
Eulophia odontoglossa Reichb. f., 47, Dec. 1910, found in the veld at Nongoma.
Eulophia parviflora (Lindl.) A.V. Hall, 259, Sept. 1915, found in the veld at Empangeni.
Eulophia streptopetala Lindl., 128, Nov. 1911, found in the long grass by the Wela stream, between Empangeni and 'Nhlwati.
Eulophia zeyheriana Sond., 122, Nov. 1911, found in the veld where ground somewhat swampy at 'Nhlwati.
Habenaria clavata (Lindl.) Reichb. f., 52, Jan. 1911, found in the veld at 'Nhlwati.
Habenaria falcicornis (Lindl.) H. Bol. subsp. *caffra* (Schltr.) J.C. Manning, 279, Jan. 1916, found in the veld at Nongoma.
Satyrium parviflorum Sw., 187, Aug. 1912, found in the veld at Ngome.
Schizochilus gerrardii (Reichb. f.) H. Bol., 130, Dec. 1911, found in the veld at Ngome.

DICOTYLEDONS

PROTEACEAE

- Protea gaguedi* Gmel., 245, Feb. 1914, found on the slopes of Mahashimi Hill.

BALANOPHORACEAE

Sarcophyte sanguinea Sparrm., 222, Sept. 1913, found beneath the fever trees near the Umkuze drift at the foot of Ubombo Mtn.

POLYGONACEAE

Achyranthes aspera L., 206, May 1913, found by the roadside at Nongoma.
Cyathula uncinulata (Schrad.) Schinz, 165, May 1912, found among bushes by the roadside at Nongoma.
Polygonum pulchrum Blume, 170, June 1912, found in swampy ground by side of a stream at 'Nhlwati.

AIZOACEAE

Aptenia cordifolia (L. f.) N.E. Br., 116, Oct. 1911, found among some scrubby bushes at Nongoma.
Carpobrotus dimidiatus (Haw.) L. Bol., 211, June 1913, found on the sand dunes on Durban foreshore.
Delosperma galpinii L. Bol., 28, Nov. 1910, found in the veld at Empugwini.

CARYOPHYLLACEAE

Dianthus zeyheri Sond., 273, Dec. 1913, found in the veld at Vryheid.

NYMPHAEACEAE

Nymphaea capensis Thunb., 132, Jan. 1912, found in a vlei at 'Nhlwati.

RANUNCULACEAE

Ranunculus multifidus Forssk., 117, Oct. 1911, found by the side of a stream near the Ngonomane Hill, Ngome.

PAPAVERACEAE

Argemone mexicana L., 105, Oct. 29, 1908, found by the Umgeni River at Umgeni, near Durban.

CAPPARACEAE

Maerua caffra (DC.) Pax, 17, Sept. 1910, found in the open veld at Nongoma.

CRASSULACEAE

Cotyledon orbiculata L., 253, July 1915, found among the rocks on the top of Dupumbane Mtn.
Crassula alba Forssk. var. *parvisepala* (Schoenl.) Toelken, 68, Mar. 1911, found on rocky ground at Ngome.
Crassula pellucida L., 173, June 1912, found on swampy ground at 'Nhlwati.
Crassula vaginata Eckl. & Zeyh., 284, Apr. 1916, found in the veld at 'Nhlwati.
Kalanchoe rotundifolia Haw., 182, Aug. 1912, found among the rocks on the top of 'Nhlwati.

ROSACEAE

Agrimonia odorata Mill., 158, April 1912, found as a weed in the garden at Nongoma.

FABACEAE

Acacia karroo Hayne, 240, Jan. 1914, found in the veld at Nongoma (Framed).
Acacia xanthophloea Benth., 226, Sept. 1913, found in the valley below Imbala ridge on Ubombo road.
Argyrobolium aff. *tomentosum* (Andr.) Druce, 137, Jan. 1912, found in the open veld at 'Nhlwati.
Argyrobolium sp., 272, Nov. 1915, found among rocks on the edge of a krantz at Nongoma.
Cassia floribunda Cav., 146, Feb. 1912, found at the edge of bush at Ngome.
Crotalaria capensis Jacq., 63, Feb. 1911, found in the veld at Nongoma.
Eriosema cordatum E. Mey., 221, Aug. 1913, found in the veld at Nongoma.
Eriosema salignum E. Mey., 143, Jan. 1912, found in the open veld at 'Nhlwati.
Erythrina humeana Spreng., 61, Feb. 1911, found in the veld at Nongoma.
Erythrina latissima E. Mey., 191, (flower Sept. 1912; pod July 1912), found on the slopes of the Mthwadhlane.
Erythrina lysistemon Hutch., 94, Aug. 1911, found in the bush at 'Nhlwati.
Lotononis corymbosa Benth., 102, Sept. 1911, found in the open veld at Nongoma.
Schotia brachypetala Sond., 265, Oct. 1915, found in the thornbush near the Wela on the way to 'Nhlwati.
Sphenostylis angustifolia Sond., 266, Oct. 1915, found in the veld at the edge of the bush at 'Nhlwati.

Tephrosia elongata E. Mey., 153, March 1912, found in the veld at 'Nhlwati (Framed).

Tephrosia macropoda (E. Mey.) Harv., 59, Feb. 1911, found in the open veld at Nongoma.

Vigna luteola (Jacq.) Benth., 125, Nov. 1911, found among the tangled growth on marshy ground at 'Nhlwati.

Vigna unguiculata (L.) Walp., 11, Sept. 1910, found in the open veld at Nongoma.

GERANIACEAE

Geranium flanaganii Knuth, 268, Oct. 1915, found among the bushes by a stream at 'Nhlwati.

Monsonia grandifolia Knuth, 198, Oct. 1912, found in the veld at 'Nhlwati.

Pelargonium luridum (Andr.) Sweet, 111, Oct. 1911, found in the veld at 'Nhlwati.

OXALIDACEAE

Oxalis corniculata L., 166, May 1912, found as a weed in the garden at Nongoma.

Oxalis obliquifolia Steud. ex A. Rich., 34, Nov. 1910, found in the veld at Nongoma.

Oxalis semiloba Sond., 91, July 1911, found in the veld at 'Nhlwati.

RUTACEAE

Calodendrum capense (L. f.) Thunb., 119, Nov. 1911, found in the bush at 'Nhlwati, Zululand.

MALPIGHIACEAE

Acridocarpus natalitius A. Juss., 112, Oct. 1911, found in the bush at 'Nhlwati.

POLYGALACEAE

Polygala virgata Thunb., 207, May 1913, found in the Induna bush, Nongoma.

EUPHORBIACEAE

Clutia sp., 181, Aug. 1912, found in the veld at 'Nhlwati.

Dalechampia capensis Spreng., 141, Jan. 1912, found in the bush at 'Nhlwati.

Euphorbia grandicornis Goebel ex N.E. Br., 205, May 1913, found among the thorn bush near the Black Umfolozi drift.

Euphorbia ingens E. Mey. ex Boiss., 73, Apr. 1911, found in the thorn country below 'Nhlwati, near the Wela.

Euphorbia striata Thunb., 188, Aug. 1912, found by the roadside at Ngome.

Euphorbia trichadenia Pax, 233, Nov. 1913, found in the veld in the thorns near Wela on the way to 'Nhlwati.

Jatropha hirsuta Hochst., 270, Oct. 1915, found in the veld in the thorns by the Wela on the way to 'Nhlwati.

Jatropha sp., 181, Aug. 1912, found in the veld at 'Nhlwati.

Ricinus communis L., 177, July 1912, found in an old garden at 'Nhlwati.

MALVACEAE

Abutilon sonneratianum (Cav.) Sweet, 32, Nov. 191, found in an old disused native garden at Nongoma.

Hibiscus calyphyllus Cav., 136, Jan. 1912, found as an undershrub beneath larger trees near Amatohemphlope, 'Nhlwati.

Hibiscus cannabinus L., 71, Apr. 1911, found in the veld by an old mealie garden, Nongoma.

Hibiscus pedunculatus L., 159, April 1912, found in the bush at 'Nhlwati.

Hibiscus trionum L., 38, Dec. 1910, found in the veld among the long grass at Nongoma.

Pavonia columella Cav., 37, Dec. 1910, found on the site of an old disused mealie garden at Nongoma.

Sida rhombifolia L., 40, Dec. 1910, found in the veld at Nongoma.

OCHNACEAE

Ochna serrulata (Hochst.) Walp., 232, Oct. 1913, found in the veld by the Mona, near Nongoma road.

CLUSIACEAE

Hypericum aethiopicum Thunb., 228, Sept. 1913, found in the veld at Nongoma.

ONAGRACEAE

Oenothera rosea L'Hérit. ex Ait., 41, Dec. 1910, found as a weed in the garden at Isandhlwana.

GENTIANACEAE

Chironia krebsii Griseb., 25, Nov. 1910, found in the veld at 'Nhlwati.

APOCYNACEAE

Carissa bispinosa (L.) Brenan, 109, Oct. 1911, found in the bush at 'Nhlwati.

ASCLEPIADACEAE

Asclepias affinis (Schltr.) Schltr., 35, Nov. 1910, found in the veld at Nongoma.

Asclepias fruticosa L., 99, Sept. 1911, Umkuzana stream, near the Tokazi, Nongoma.

Asclepias physocarpa (E. Mey.) Schltr., 126, Nov. 1911, found in the veld at 'Nhlwati.

Aspidoglossum grandiflorum (Schultr.) Kupicha, 217, Aug. 1913, found on the roadside at 'Nhlwati.

Cynanchum natalinum Schltr., 255, July 1915, found in the bush at Dukumbane.

Raphionacme hirsuta (E. Mey.) R.A. Dyer & Phillips, 220, Aug. 1913, found in the veld at Nongoma.

Schizoglossum cordifolium E. Mey., 256, Aug. 1915, found in the veld at Nongoma.

Xysmalobium stockenstromense Scott-Elliott, 236, Nov. 1913, found in the veld at Nongoma.

Xysmalobium undulatum (L.) Ait. f., 241, Jan. 1914, found in the veld at Nongoma.

CONVOLVULACEAE

Convolvulus farinosus L., 57, Jan. 1911, found among the scrub by the roadside at Nongoma.

Convolvulus natalensis Bernh., 9, Sept. 1910, found in the veld at Nongoma.

Hewittia sublobata (L. f.) Kuntze, 180, Aug. 1912, found in an old mealie garden at 'Nhlwati.

Ipomoea ficifolia Lindl., 77, Apr. 1911, found growing as a weed in the garden at Nongoma.

Ipomoea obscura (L.) Ker-Gawl., 54, Jan. 1911, found in the veld at Nongoma.

Turbina oblongata (E. Mey. ex Choisy) A. Meeuse, 145, Feb. 1912, found in the veld at Nongoma.

LAMIACEAE

Hoslundia opposita Vahl, 274, Dec. 1915, found in the veld at Empangeni.

Leonotis leonurus (L.) R.Br., 213, July 1913, found in the veld at Kwamagwaza.

Leonotis ocymifolia (Burm. f.) Iwarsson, 70, Apr. 1911, found in the veld at Nongoma.

Orthosiphon serratus Schltr., 269, Oct. 1915, found in the veld at 'Nhlwati.

Plectranthus fruticosus L'Hérit., 283, Apr. 1916, found in the shade of thick bush at 'Nhlwati.

Pycnostachys urticifolia Hook., 210, June 1913, found in swampy ground in a donga at Nongoma.

Stachys sessilis Guerke, 261, Sept. 1915, found in the veld at Nongoma.

SOLANACEAE

Datura stramonium L., 160, April 1912, found as a weed in the garden at Nongoma.

Nicandra physaloides Gaertn., 51, Jan. 1911, found on the site of a disused garden at Nongoma.

Physalis peruviana L., 204, May 1913, found on some waste ground at 'Nhlwati.

Solanum aculeastrum Dun., 101, Sept. 1911, found on an old kraal site at Nongoma.

Solanum aculeatissimum Jacq., 246, Feb. 1914, found in the veld by the roadside at Nongoma.

Solanum coccineum Jacq., 154, March 1912, found on the edge of the bush at 'Nhlwati.

Solanum hermannii Dun., 107, Oct. 1911, found in the veld at Nongoma.

Solanum incanum L., 247, Feb. 1914, found on the roadside near Nongoma.

Solanum nigrum L., 103, Sept. 1911, found as a weed in garden at Nongoma.

Solanum panduriforme E. Mey., 115, Oct. 1911, found on waste ground round buildings at 'Nhlwati.

SCROPHULARIACEAE

Buchnera dura Benth., 120, Nov. 1911, found in the veld at 'Nhlwati.

Nemesia umbonata (Hiern) Hilliard & Burt, 42, Dec. 1910, found in an old garden at Isandhlwana.

Striga asiatica (L.) Kuntze, 66, Mar. 1911, found in a mealie garden at Etaltoneni.

SELAGINACEAE

Hebenstretia comosa Hochst., 218, Aug. 1913, found in the veld at 'Nhlwati.

Tetraselago natalensis (Rolfe) Junell, 75, Apr. 1911, found in the veld at Nongoma.

VERBENACEAE

Priva meyeri Jaub. & Spach, 123, Nov. 1911, found on some waste ground at 'Nhlwati.

BIGNONIACEAE

Kigelia africana (Lam.) Benth., 223, Sept. 1913, found on the banks of the Pongola River by the drift on Ubombo-Lugwavuma road.

Tecomaria capensis (Thunb.) Spach, 85, Oct. 23, 1908, found in the Umgeni bush near Durban.

GESNERIACEAE

Streptocarpus daviesii C.B. Cl., 48, Dec. 1910, found on a tree in Ngome forest.

LENTIBULARIACEAE

Utricularia livida E. Mey., 214, July 1913, found in a moist donga at Nongoma.

ACANTHACEAE

Crossandra greenstockii S. Moore, 21, Oct. 1910, found in the veld at Nongoma.

Justicia flava (Vahl) Vahl, 277, Jan. 1916, found in the veld by the roadside at Empangeni.

Justicia petiolaris C.B. Cl., 282, Apr. 1916, found in shady wood by the waterfall at 'Nhlwati.

Peristrophe natalensis T. Anders., 76, Apr. 1911, found among the long grass in the veld at Nongoma.

Ruellia cordata Thunb., 271, Nov. 1915, found in the veld at Nongoma.

Thunbergia atriplicifolia E. Mey., 106, Oct. 1911, found in the veld at Nongoma.

RUBIACEAE

Borreria scabra (Schumach. & Thonn.) K. Schum., 286, April 1916, found in the veld at 'Nhlwati.

Burchellia bubalina (L. f.) Sims, 113, Oct. 1911, found in the bush at 'Nhlwati.

Gardenia thunbergii L. f., 263, Sept. 1915, found in the bushveld near the Vuna on the Nongoma-Mahlabatini road.

Pentanisia prunelloides (Klotzsch ex Eckl. & Zeyh.) Walp., 215, Aug. 1913, found in the veld at Nongoma.

DIPSACACEAE

Scabiosa columbaria L., 178, July 1912, found in the veld at 'Nhlwati.

CUCURBITACEAE

Cucumis prophetarum L., 62, Feb. 1911, found in the veld at Nongoma.

Cucumis sp., 260, Sept. 1915, found in the veld at Empangeni.

CAMPANULACEAE

Lobelia erinus L., 5, Aug. 1910, found in the veld at Nongoma.

Lobelia sp., 224, Sept. 1913, found in the veld near the Swaziland border at Ingwavuma.

Monopsis decipiens (Sond.) Thulin, 100, Sept. 1911, found in the veld at Nongoma.

Monopsis stellarioides (Presl) Urb., 108, Oct. 1911, found by the stream at the waterfall at 'Nhlwati.

Wahlenbergia krebsii Cham. subsp. *krebsii*, 55, Jan. 1911, found in the veld at Nongoma.

GOODENIACEAE

Scaevola plumieri (L.) Vahl, 104, Oct. 28, 1908, found on the sand dunes on Durban foreshore.

ASTERACEAE

Aster bakerianus Burt Davy ex C.A. Smith, 96, Aug. 1911, found in the veld at 'Nhlwati.

Athrixia phyllicoides DC., 82, June 1911, found in the veld at Nongoma.

Berkheya insignis (Harv.) Thell., 31, Nov. 1910, found in the veld at Nongoma.

Bidens pilosa L., 87, July 1911, found as a weed in the garden at 'Nhlwati.

Callilepis laureola DC., 3, Aug. 1910, found in the veld at Nongoma.

Conyza canadensis (L.) Cronq., 227, Sept. 1913, found as a weed in the garden at Nongoma.

Dicoma anomala Sond., 74, Apr. 1911, found in the veld at Nongoma.

Dicoma argyrophylla Oliver, 219, Aug. 1913, found in the veld near the Mona stream on the Nongoma-Hlabisu road.

Dicoma speciosa DC., 64, Mar. 1911, found in the veld at Nongoma.

Gazania krebsiana Less., 185, Aug. 1912, found in the veld at 'Nhlwati.

Gerbera ambigua (Cass.) Schulz. Bip., 14, Sept. 1910, found in the veld at Nongoma.
Helichrysum adenocarpum DC., 162, April 1912, found in the veld at Ngome.
Helichrysum appendiculatum (L. f.) Less., 243, Feb. 1914, found in the veld at Nongoma.
Helichrysum cooperi Harv., 80, May 1911, found in the veld at Nongoma.
Helichrysum herbaceum (Andr.) Sweet, 174, July 1912, found in the veld at 'Nhlwati.
Helichrysum setosum Harv., 172, June 1912, found in the veld at 'Nhlwati.
Helichrysum umbraculigerum Less., 171, June 1912, found in the veld

at 'Nhlwati.
Osteospermum grandidentatum DC., 186, Aug. 1912, found in the veld near 'Nhlwati.
Senecio deltoideus Less., 176, July 1912, found in the bush at 'Nhlwati.
Senecio erubescens Ait., 97, Aug. 1911, found in the veld at 'Nhlwati.
Sonchus integrifolius Harv., 83, Aug. 1912, found in an old mealie garden at 'Nhlwati.
Sonchus oleraceus L., 169, June 1912, found as a weed in the garden at Nongoma.
Vernonia hirsuta (DC.) Sch. Bip., 262, Sept. 1915, found in the veld at Nongoma.