

The botany of the Cunene–Zambezi Expedition with notes on Hugo Baum (1867–1950)

E. FIGUEIREDO*, M. SOARES**, G. SEIBERT***, G.F. SMITH* and R.B. FADEN**

Keywords: Angola, Baum, collectors, flora

ABSTRACT

A record and discussion of the Cunene–Zambezi Expedition that took place in Angola from 1899 to 1900 is provided. Although the main aim of the expedition was to evaluate the economic potential of southern Angola, it also resulted in significant botanical collections made by Hugo Baum (1867–1950), many of which serve as holotypes of names of plants from the region, and beyond. The itinerary is supplemented by a map illustrating the route followed by the expedition, and locality names are clarified and updated. A full list of the type specimens of flowering plants is provided, with their nomenclature updated and an indication of where known duplicates are housed.

CONTENTS

Abstract	185
Introduction	185
Material and methods	187
Historical overview and itinerary of the expedition	187
List of Baum type collections given in Warburg (1903)	191
Acknowledgements	201
References	201
Index to plant names	203
Index of Baum collection numbers cited and taxon under which they are cited in this paper	206
Appendix 1	208

the Cuando River in March 1900. After turning around, the expedition finally arrived back at Moçâmedes on 26 June 1900, more than 10 months later.

The expedition resulted in over 1 000 plant collections, many of which are types. In Warburg (1903), 281 taxa of flowering plants new to science are described based on these collections, with 310 numbers referred to as types. To these must be added an unknown number of taxa that were published later. In the Aluka database of types of African plant names (Aluka 2008, accessed in January 2008), there are 1 209 images of specimens collected by Baum. This figure includes duplicates of the same collection number. In fact, the Baum collections provided a series of duplicates distributed among European herbaria. This is fortunate because the holotypes of the taxa published in Warburg (1903) were deposited in the Herbarium of Berlin (B) and many of these specimens were destroyed in a fire during the Second World War. For that reason the Aluka database presently hosts only 48 images of Baum specimens from B. Duplicates have been recorded in various herbaria, namely B, BM, BR, COL, E, G, K, M, NY, P, S, W and Z (Holmgren, *et al.* 1990), which include several herbaria that were not listed as depositories of Baum collections in Lanjouw & Stafleu (1954). However, for some taxa, the holotype destroyed at B was apparently unique.

In terms of type material the Baum collection is one of the most important among those that originated in Angola, and is only surpassed by those of F. Welwitsch and J. Gossweiler. In addition to their type status, they provide information on type locality. This is very important in the case of rare plants, particularly those that were collected only once. Information on the exact collecting localities helps researchers find rare plants in the field, which in turn facilitates the eventual proposal of specific conservation measures. In the case of the Baum collection, pinpointing the collecting localities is often difficult for several reasons: 1, localities recorded on the labels are often not consistent with duplicates of the same collection, or localities given in the book; 2, the changes of geographical place names that took place in Angola over the last century; and 3, the original spelling of the localities that does not match the more recent spelling used in maps and gazetteers.

INTRODUCTION

The collector Hugo Baum (1867–1950) participated in the Cunene–Zambezi Expedition, which took place in Angola from 1899 to 1900, led by the Dutchman, Pieter van der Kellen. In addition to botanical and zoological collections, ethnological observations were also recorded. All of these were described in German by Warburg (1903) in the now very rare book *Kunene–Sambesi Expedition. H. Baum*, which can only be found in highly specialized libraries or in the collections of rare book antiquarians. The book includes a folded map (Figure 1) that illustrates the course of the expedition, which left Moçâmedes (Namibe) on 11 August 1899 in an easterly direction, through the actual provinces of Cunene and Cuando-Cubango, reaching

* H.G.W.J. Schweickerdt Herbarium, Department of Botany, University of Pretoria, 0002 Pretoria. estrelafigueiredo@hotmail.com.

** Departamento de Botânica, Universidade de Coimbra, 3001-455 Coimbra, Portugal. miguel.vonberg@gmail.com.

*** Centro de Estudos Africanos (CEA)/ISCTE, Lisbon, Portugal. mailseibert@yahoo.com.

• Biosystematics and Biodiversity Collections, South African National Biodiversity Institute, Private Bag X101, 0001 Pretoria / Acocks Chair, H.G.W.J. Schweickerdt Herbarium, Department of Botany, University of Pretoria, 0002 Pretoria. smithg@sanbi.org.

•• Department of Botany, MRC 166, National Museum of Natural History, Smithsonian Institution, P.O. Box 37012, Washington DC 20013-7012, USA. fadenr@si.edu.

+ Corresponding author. Email address: estrelafigueiredo@hotmail.com.

MS. received: 2009-01-19.

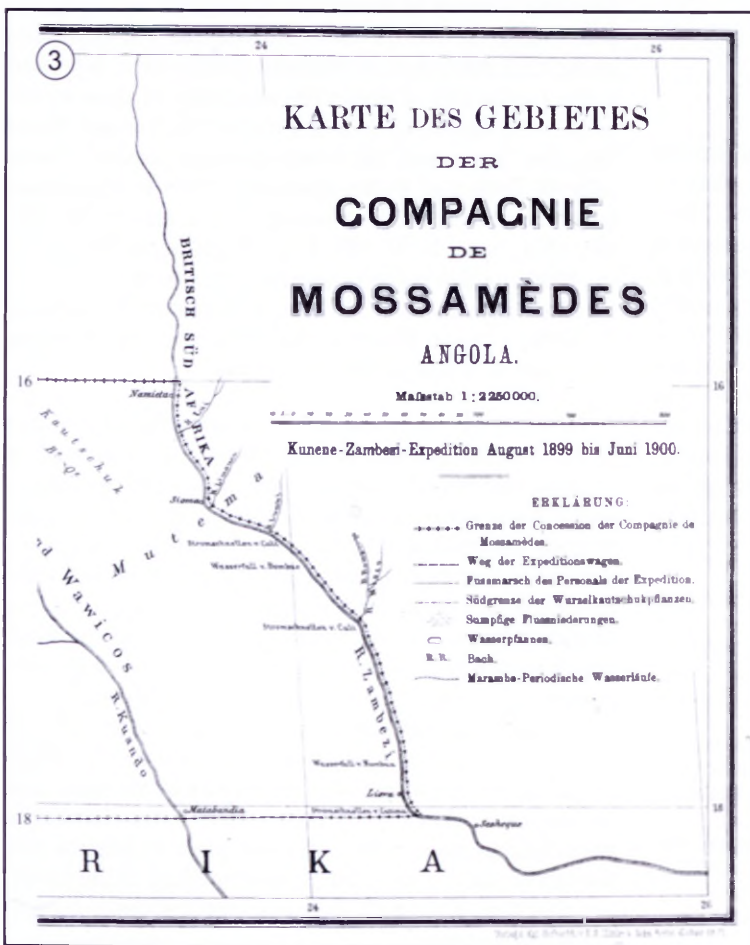


FIGURE 1.—Original map of expedition itinerary divided into three sections (Warburg 1903).

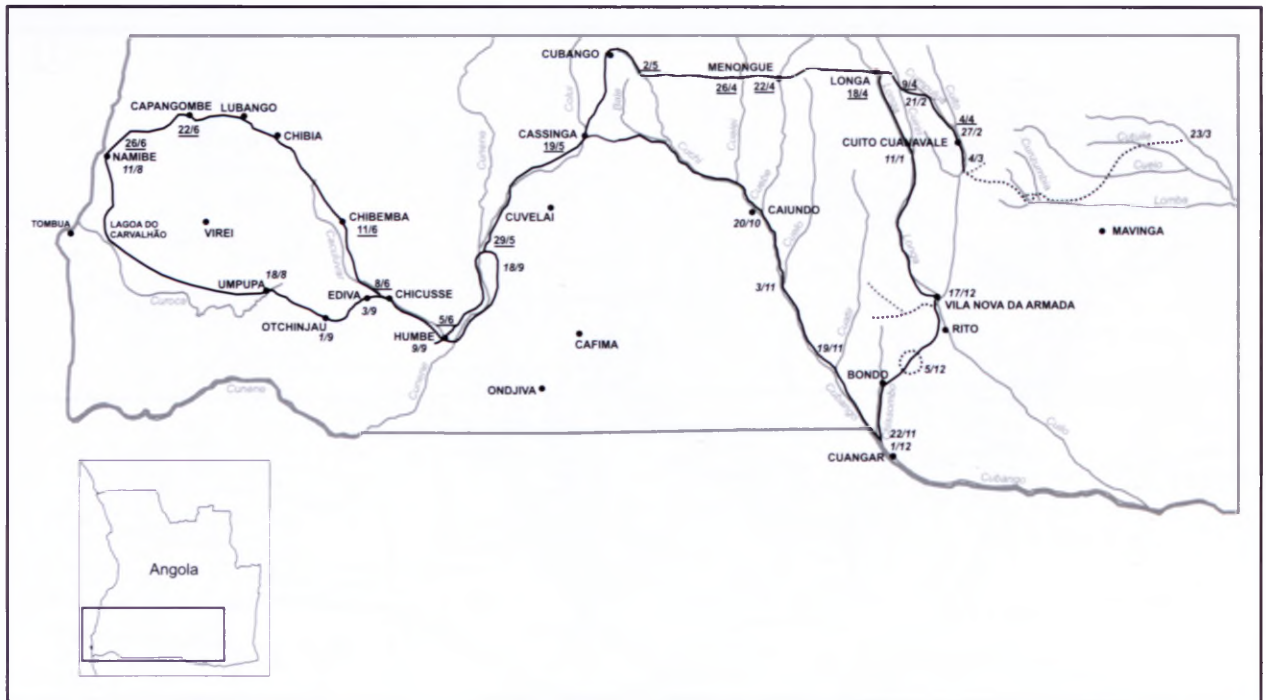


FIGURE 2.—Actual map of expedition itinerary showing route taken by ox-wagons (continuous line), routes travelled on foot (dotted lines), and dates when some localities were reached (in italics for journey out, underlined for return journey).

two-year study course in pomology in Proskau (Silesia). Following his compulsory military service in Magdeburg, he worked for ten years at the old Botanical Garden in Berlin. In 1899, thanks to his extensive botanical knowledge, he was invited to participate in the Cunene–Zambezi Expedition. After his return from Angola, in 1901, Baum was employed as master gardener by the Botanical Garden of the University of Rostock. In the same year he married Auguste Tank. For the following few years Baum busied himself evaluating the Cunene–Zambezi Expedition and in 1903 the expedition report was published. Baum undertook another botanical expedition to Mexico, from January to May 1925. In 1926 he was promoted to chief garden inspector (Gartenoberinspektor) of the University of Rostock, and in 1933, at the age of 66, he retired. On 15 April 1950, shortly after his 83rd birthday, Baum died impoverished. His wife passed away the following year. Altogether 71 taxa, including two genera, namely *Baumiella* (a mushroom) and *Baumia* (belonging to the Scrophulariaceae), have been named after Baum (Mansfeld 1983; Heintze 2007).

The Cunene–Zambezi Expedition was carried out at the request of the Berlin-based Colonial-Economic Committee together with the Compagnie de Moçâmedes (Paris) and the South West Africa Company (London). Its objective was to investigate the economic potential of the south of Angola. The expedition was the result of the interest of German Southwest Africa (now Namibia) in the planned train connection between Porto Alexandre (presently Tombua) in Angola and the then independent Zuid-Afrikaanse Republiek, later the Transvaal province of South Africa. At the time, there was a lack of knowledge of wild-growing cash crops and local African cultures in the area. In his expedition report Hugo Baum did not only describe the flora, but also provided information on the geography, geology, climate, the local people encountered on the expedition, and some of their cus-

toms. The leader of the expedition was the Dutchman, Pieter van der Kellen, who was the representative of the Compagnie de Moçâmedes in Ediva.

On 11 August 1899, the expedition left Moçâmedes (presently Namibe) with three ox-wagons for the rivers Kunene, Kubango, Kuito, up to the Cuando, and on 26 June 1900 it returned to the place from which it departed (Figures 1, 2; refer to Appendix 1 for actual name and co-ordinates of localities, which are mentioned in this text with the original spelling). At the time Moçâmedes was a town of 1 500 inhabitants with a local economy dominated by the trade in dried fish.

The most common acacia species found between Ediva and Humbe was *Acacia verrucifera* Harms [= *Acacia kirkii* Oliv. subsp. *kirkii* var. *kirkii*] that provided the best transparent gum (*gummi arabica*) of great bonding strength. The distribution area of this acacia extended from the Chela Mountains to the Kunene River, and from the Chitanda and the Kubango Rivers downwards to the territory of the Kuangari tribe. Near Chihinde, Baum collected *Strophanthus amboensis* (Schinz) Engl. & Pax of which only a few plants were found. At the same location he found for the first time a plant that was referred to as *Gardenia thunbergia* Thunb. [of which the collected specimen is *Gardenia volkensii* K.Schum. subsp. *spathulifolia* (Stapf & Hutch.) Verdc.], which was called *stumpdorn*, the German version of the Afrikaans *stompdoring*, a name recorded by Smith (1966), and *mulavi* by the local Africans. This tree appeared frequently along the Kunene, Chitanda and Kubango Rivers, but also along the Longa and Kuito Rivers and grew predominantly in the low grounds of the rivers or on the river islands.

The expedition arrived at Ediva on 3 September and there they met the leader Van der Kellen and two Boers

and two Africans with horses, who had been hired by the Dutchman at Humpata as hunters to provide game meat for the expedition. Van der Kellen's brother Emil managed a large farm in Ediva. It was owned by the Compagnie de Moçâmedes, and cultivated various food and cash crops, and carried between 800 and 1 000 head of cattle.

After Ediva, the first place reached by the expedition on their way to Humbe was called Otjikutsie. Humbe used to have a trading post for cattle. However, it had lost importance since the outbreak of the cattle plague. The local population in Humbe cultivated sorghum, pennisetum, groundnuts, groundpeas and to a lesser extent beans, locally called *macundi*. From Humbe the expedition travelled on the same day to the Kunene River. On 12 September they crossed the Kunene with the support of the people of Humbe, of whom some 40 men had joined the expedition as porters. On the left bank of the Kunene the expedition headed upstream to the mouth of the Chitanda River.

At the Chitanda, the *houtbosch*, *Berlinia baumii* Harms [= *Julbernardia paniculata* (Benth.) Troupin], which they considered the most common tree in southern Angola, was noticed for the first time. The local population used the bark of this tree for the production of boats. In Goudkopje, on the banks of the Chitanda, a place also locally called Ompopo, the expedition spent several days searching for alluvial gold in the river; they did find a small quantity. In early October the expedition reached Kassinga, also on the banks of the Chitanda. From there, they went on to the Nambali stream which flows into the Kubango River.

On 8 October the explorers reached the Kubango at Linghonung, the first village they came across since Kassinga. Following the Kubango, on 15 October the expedition came to the village of Chirumbo, located on a river island to protect the population against assaults by the Kuinghama tribe (Kwanhama?) from Ovamboland. On 16 October they crossed the Kubango for the first time between the Kutsi River and Massaca, a fortified village inhabited by some 500 people. From Massaca the explorers travelled the Kubango downstream to a village called Kanjundu, where they left the Kubango to proceed to the Kuebe River, which they followed downstream to its confluence with the Kubango. Then they continued along the Kubango to the mouth of the Quatiri River. Downstream from the mouth of the Quatiri, the expedition passed through the village of Kavanga on the Kubango that was inhabited by the Kangella tribe. From there, the explorers followed the Kubango downstream along the border with German Southwest Africa (presently Namibia) to Imbala, the principal village of the Kuangaris. On 27 November, the expedition left Imbala accompanied by a dozen Kuangari guides following the Kubango upstream to the confluence with the Habungu and then along this stream further upstream.

From the Habungu the journey continued to the Bondo, a small stream that contained little water even during the rainy season, which they followed for only a small distance. From there the expedition went to the lake-like pan called Ungombekike from where some of the Kuangari guides returned home. After passing through two other pans the group reached the Kuito River. Moving upstream along the Kuito, after a few days the group reached the mouth of the stream Jonkoa and from there,

the nearby mouth of the Longa. On 26 December, the explorers arrived at the village Napalanka, situated in a valley between the Longa and inaccessible swamps. After following the Longa upstream for four days, the expedition arrived at a place called Minnesera, which is situated in the swampy area of the mouth of the Quiriri.

On 16 January 1900, the group crossed the Longa, of which the banks were so swampy that 80 oxen were needed to pull the wagons out of the swamp. Downstream from the mouth of the Quiriri the expedition erected a camp where they were visited by the chief of Minnesera and 30 of his people. A few kilometres downstream from Minnesera, the Longa was crossed again with a float. On 31 January the expedition reached the same location at the Longa where they had been on the 12th. Due to a lack of food supplies for the expedition, following the local population's refusal to barter for food supplies, sweet potatoes were simply taken in sacks from nearby fields to feed the carriers and the horses. The shortage of maize rations had weakened the horses, which forced the expedition to reduce the hunting parties, which, in turn, resulted in a lack of game meat.

Subsequently the expedition reached a ford at the Longa, which rubber dealers used as passage-way. At that place, several residing dealers exchanged root rubber, *Carpodinus chylorrhiza* K.Schum. [= *Landolphia thollonii* Dewèvre] for commodities. Two-wheeled carriages were also sent to collect the rubber in the surrounding region. The dealers kept considerable rubber stocks tied up in bundles of 40 finger-strong rubber strips (see below), which as an exchange unit were called *manga*. The weight of one *manga* was about one kilogram. The expedition managed to purchase eleven sacks of maize from a local Portuguese man. That became their only foodstuff and had to be rationed. Due to the food shortage, 17 of the porters were sent back to Humbe and Ediva.

One of the ox-wagons left the Longa for the Quiriri, while the two others remained at the Longa to trade. The expedition avoided contact with the Portuguese traders at the Quiriri, because '...the Portuguese in the colonies were often deported persons...' (Warburg 1903: 93). However, they associated with the Swedish trader Swanström who sent them freshly baked bread. Later the two ox-wagons that were left at the Longa rejoined the expedition at the Quiriri, where in a few days, 300 *mangas* would be exchanged for cotton cloth. From the Quiriri downstream the inhabitants of the many villages were busy with the preparation of rubber. In a village at the Quiriri called Sakkemecho, the expedition exchanged consumer goods and cattle for 297 *mangas* on credit that would be collected after a few months during the return journey.

In the rubber-producing area, rubber completely replaced money as local currency. Root rubber was predominantly found on large grass fields on sandy soils, called chanas (*sannas*), which were surrounded by forests. The plant did not grow near the streams and rivers, but on the waterless chanas between the streams. Formerly, the root rubber plant had occurred commonly at the Kutsi and the Kubango Rivers at Massaca, where it had now become completely extinct. However, the plant was said to exist in the territory of the Kuinghama tribe and occurred above the mouth of the Luassingua, reach-

ing the Longa, Quiriri, Kampuluve and Kuito Rivers. Its range went beyond the latter and extended even as far as the Cuando. After having been dug out with short hoes, the roots, tied up into stacks of ± 2 m tall, were watered regularly to soften the bark so that it later peeled off easily. Thereafter, the bales were again dried in the sun and the single roots were cut into 30 to 40 cm long pieces that were beaten on a board to remove the bark from the wood. The pieces of bark were then worked with a wooden hammer until they took the form of a cake. This cake was boiled and again beaten with clubs. Finally the cake was cut into square pieces, which were placed in boiling water and, while still hot, were shaped into cylindrical, finger- to thumb-thick strips, about the length of a span of the hand (± 22 cm) called *matali*, of which 40 pieces constituted one *manga*. There were a total of eleven traders in the entire rubber area, of whom nine were Portuguese, one was an Englishman and one a Swede.

The expedition continued the journey from Sakke-mecho, crossing a waterless and hilly area between the Quiriri stream and the Kampuluve, which ran into the Kuito River. The expedition reached the Kampuluve at its source in a swampy valley that extended for 25 to 30 km up to the mouth of the stream. They arrived there on 27 February 1900 and reached the Kuito River for the second time. At that point the Kuito was at most 150 m wide, but with very deep and fast-flowing water. On 14 March, the expedition crossed the Kuito with canoes and on the same day reached a stream called Chinpulu on foot. Due to the lack of grass for the oxen at the Kuito the wagons and oxen had been sent back with two people to the Onschingue River where the others were expected to arrive at the end of March. From the Chinpulu River the men reached a small stream called Miané that they followed up to its source. Then the march continued through waterless hills to the Kuisi stream in the Zambezi area. The expedition followed the Kuisi downstream, then crossed it and after several hours reached the village Konjongo at the Konjumbu, a small stream.

By the time the expedition reached Konjongo, Baum was weakened by fever and stomach pains and he decided to return with two porters to the Kuito River, which they crossed to the right bank. From there the group went to the Onschingue where on 1 April they met part of the expedition that had remained at the Cuando. On 4 April, the expedition initiated the return journey along the previous route, upstream along the Kuito and Kampuluve Rivers up to the Sakkemecho village, where they delivered to the local inhabitants part of the rubber they owed them from the previous transaction.

From the Sakkemecho village, the men followed the Quiriri upstream and then crossed the sandy hills to the Longa. From the Longa the expedition travelled to the Lazingua, and then westwards passing the Quatiri to the Bundju stream, where they remained for some time to allow the oxen some rest. The journey continued to the Kuebe and the Kulei, a tributary of the Kutsi. The passage across the Kutsi, which was rather deep, took three days. From there the journey went on to the Kubango. The crossing of the Kubango with more than a hundred head of cattle and the wagons that had to be disassembled to be ferried across the river, took another five days. The

group then followed the Cubango upstream and turned westward behind Kofi.

On 19 May, the expedition arrived at the Chitanga River and shortly afterwards at nearby Kassinga. After a half-day stay in Kassinga, the expedition followed the Chitanga downstream to Goudkopje. The Chitanga area was rich in game. On 29 May the expedition reached the Kunene at Kiteve. The local population provided eight large boats to help the expedition cross the Kunene within two days. From Kiteve the expedition followed the Kunene downstream. On 5 June the men arrived at Humbe where the porters from that place left the expedition after having been paid for their services. For the remaining journey to the coast the expedition recruited other local porters. On their way to Ediva at the Kaculo-var River that was reached after two and a half days, they met the Dutchman Emil van der Kellen who had come by horse from Ediva when he had heard about the expedition's return.

At a place called Kahama, the expedition crossed the Kaculo-var a second time and then followed it upstream. In the clay soils along the Kaculo-var, Baum again frequently found *Acacia kirkii* Oliv., which was said to produce the best gum. Within two days the expedition crossed the passage through the Chela Mountains. After leaving the mountains, the men went along a stream called Tschikutt passing consecutively through Pietfontain [Pietfontein in modern Afrikaans], the dry Olfantsrivier [Olifantsrivier], the Bumbo and the Kitibe. At Monino village they had a longer rest before they walked the long and dry way to the Giraul River. From there the expedition travelled the last part to Moçâmedes, where they arrived on 26 June 1900.

During the ten-month journey, members of the expedition killed 175 antelopes, 3 hippos, 2 boars, and 3 crocodiles. Baum collected a total of 1 016 plant collection numbers, of which more than 300 were later described as new taxa. More than 60 of the new species were named after Baum. Besides this haul, Baum caught more than 300 butterflies, prepared them and sent them to Europe.

With regard to the economic importance of southern Angola, Baum recommended the areas close to the coast at the small rivers Bero, Giraul, Monino, and Coroca for the establishment of plantations, particularly for the cultivation of cotton. In his opinion, the high plateau, predominantly constituted of heavy loamy or clay soils was suitable for the cultivation of maize, wheat, rye, oats, barley, and European vegetables, subtropical fruits such as citrus, and grapevines. According to Baum, there was much fertile land for colonization at the Cuando. The part of this area east of the Cuebe and north of the Lomba was characterized by a wealth of root rubber plants. He considered the region particularly rich in trees providing tanning agents, such as the *mopane*, *Colophospermum mopane* (J.Kirk ex Benth.) J.Léonard, and the *houtbosch*, *Julbernardia paniculata* (Benth.) Troupin. The distribution area of the acacia that provided the best gum was located in the region of the Kaculo-var and Kunene. Thanks to its large forests, southern Angola was considered very rich in timber; however, the cost of transport to the coast was very high. Although gold was panned in the Chitanda River at Goudkopje beneath

Cassinga, the main value of southern Angola was that it was very suitable for livestock. In Baum's opinion the transport of cattle to the coast was easy, given the availability of water and pastures along the whole way. Finally, he emphasized the abundance of fish resources at Moçâmedes (Namibe), Tiger Bay, and particularly Porto Alexandre (Tombua), where salterns that produced salt for the preservation of fish were located.

LIST OF BAUM TYPE COLLECTIONS GIVEN IN
WARBURG (1903)

All the holotypes (or syntypes) of the names published in Warburg (1903) were deposited at B. Information is available in the literature and on the internet concerning the families which survived the fire that consumed the herbarium during the Second World War (see www.bgbm.org). At the time of the bombardment, the staff of the herbarium was undertaking the task of transferring the type specimens to a safer location. Types belonging to certain families are therefore still extant at Berlin. Likewise, material on loan to other herbaria obviously also survived. The remaining material has been reported as lost. In the case of the Baum collections, out of the 311 type collection numbers of flowering plants cited in Warburg (1903), only 40 holotypes and four syntypes are confirmed to exist. There are 181 holotypes reported as destroyed, and 34 belonging to families for which type material apparently survived, could not be located in any of the databases cited above. In rare cases, types that were reported as destroyed in the literature were found to be extant as they are available in the Aluka database. This is the case for the holotype of *Lobelia minutidentata* Engl. & Gilg, that had been reported as destroyed (Thulin 1984). This was probably due to the misplacement of the specimen as the locality data provided to Aluka wrongly assigns it to Namibia. It was noticed that several Baum collections have been attributed to the wrong country, and depending on the arrangement of herbaria, this may be a reason for the material not having been found in the past. For instance, *Baum 894* (*Cephalaria retroseta* Engl. & Gilg), is represented in Aluka (accessed in February 2008) by three duplicates: the K duplicate is attributed to South Africa, the BM duplicate to the Democratic Republic of Congo and only the duplicate in E is correctly assigned to Angola. In other cases it was found that types belonging to families that were reported as destroyed still exist. For example, in the Rubiaceae, at least four Baum types are extant.

Note: duplicate specimens in bold were accessible in Aluka (accessed in February 2008); duplicate specimens not in bold were accessible in other databases or examined by one of the authors; the * sign is used for duplicates listed in the literature but not in databases. The original spelling of the localities is kept.

ACANTHACEAE

DUOSPERMA Dayton

quadrangulare (Klotzsch) Brummitt

32 Type of *Hygrophila affinis* Lindau (B, holo. †?; COI, G, K, W, iso.). Palmfontein, 28-8-1899, 1 000 m.

sessilifolium (Lindau) Brummitt

942 Type of *Hygrophila sessilifolia* Lindau (B, holo. †?; BR, COI, G, K, W, Z, iso.). Chitanda (left bank), 25-5-1900, 1 150 m.

LEPIDAGATHIS Willd.

macrochila Lindau

779 (B, holo. †?; COI, K, M, W, iso.). Kusisi, Likise, 16-3-1900, 1 225 m.

STROBILANTHOPSIS S.Moore

linifolia (T.Anderson ex C.B.Clarke) Milne-Redh.

830 Type of *Hygrophila glutinifolia* Lindau (B, holo. †?; COI, G, K, M, W, iso.). Longa-Lazingua, 18-4-1900, 1 350 m.

ALLIACEAE

TULBAGHIA L.

aequinoctialis Welw. ex Baker subsp. **monantha** (Engl. & Gilg) R.B.Burb.

351a Type of *Tulbaghia monantha* Engl. & Gilg (B, holo.). Kubango, Kabindere, 30-10-1899.

AMARYLLIDACEAE

AMMOCHARIS Herb.

baumii (Harms) Milne-Redh. & Schweick.

273 Type of *Crinum baumii* Harms (B, holo.; BR, COI, G, M, S, Z, iso.). Kubango, Chirumbu, 14-10-1899, 1 200 m.

ANACARDIACEAE

OZOROA Delile

argyrochrysea (Engl. & Gilg) R.Fern. & A.Fern.

892 Type of *Heeria benguelensis* Engl. var. *petrophila* Engl. & Gilg (B, holo. †; *BM, BR, *COI, *K, M, W, Z, iso.). Kutsi, Kapulo, 4-5-1900, 1 300 m. Reference: Exell & Mendonça (1954a: 122).

941 Type of *Heeria argyrochrysea* Engl. & Gilg (B, holo. †; K, lecto., designated by Fernandes (1966: 45); *BM, *COI, M, W, iso.). Chitanda (right bank), 24-5-1900, 1 150 m.

longipes (Engl. & Gilg) R.Fern. & A.Fern.

512 Type of *Heeria longipes* Engl. & Gilg (B, holo. †; BR, COI, K, M, W, Z, iso.). Ungombekike-Kuito, 7-12-1899, 1 200 m.

stenophylla (Engl. & Gilg) R.Fern. & A.Fern.

662 Type of *Heeria stenophylla* Engl. & Gilg (B, holo. †; *BM, W, Z, iso.). Longa (left bank), Lazingua, 20-1-1900, 1 250 m. Reference: Exell & Mendonça (1954a: 117).

xylophylla (Engl. & Gilg) R.Fern. & A.Fern.

664 Type of *Heeria xylophylla* Engl. & Gilg (B, holo. †; Z, lecto., designated by Fernandes (1966: 48); W, Z, iso.). Quiriri, Sakkemecho, 20-1-1900, 1 200 m.

SEARSIA F.A.Barkley

kirkii (Oliv.) Moffet

638 Type of *Rhus polyneura* Engl. & Gilg (B, holo. †; *BM, *COI, K, M, W, Z, iso.). Lazingua (near mouth), 6-1-1900, 1 200 m. Reference: Exell & Mendonça (1954a: 103).

638a Type of *Rhus polyneura* Engl. & Gilg var. *hylophila* Engl. & Gilg (B, holo. †). Longa, Minnesera, 1-1900, 1 200 m.

tenuinervis (Engl.) Moffet

744 Type of *Rhus commiphoroides* Engl. & Gilg (B, holo. †; *BM, *COI, K, M, W, Z, iso.). Kuito, Onschingue-Kutue, 1-3-1900, 1 200 m. References: Exell & Mendonça (1954a: 102); Kokwaro (1986: 33).

ANISOPHYLLEACEAE

ANISOPHYLLEA R.Br. ex Sabine

quangensis Engl. ex Henriq.

808 Type of *Anisophyllea fruticulosa* Engl. & Gilg (B, holo. †; *BM, fragment). Quiriri, Sakkemecho, 9/11?4-1900, 1 200 m. Reference: Mendes (1970: 41).

ANTHERICACEAE

ANTHERICUM L.

liliagastrum Engl. & Gilg

461 (B, holo. †?). Kubango (left bank), Kuimarva (left bank), 11-1899, 1 100 m.

ANTHERICUM L. (cont.)

xylorrhizum Engl. & Gilg
530 (B, holo. †?). Kuito (near), 12-1899, 1 150 m.

CHLOROPHYTUM Ker Gawl.

colubrinum (Baker) Engl.
611 Type of *Chlorophytum dolichostachys* Engl. & Gilg (B, holo.). Longa, Napalanka, 1-1-1900, 1 150 m.

psammophilum Engl. & Gilg
517 (B, holo.; COI, M, K, Z, iso.). Ungombekike-Kuito, 9-12-1899, 1 200 m.

APIACEAE

DIPOLOPHIUM Turcz.

zambesianum Hiern
834 Type of *Physotrichia arenaria* Engl. & Gilg (B, holo. †; BM, *COI, G, *K, W, Z, iso.). Lazingua, 19-4-1900, 1 275 m. References: Cannon (1970: 350); Townsend (1989: 83).

APOCYNACEAE

ASCLEPIAS L.

baumii Schltr.
699a (B, holo. †). Longa, 3-2-1900, 1 250 m.

ASPIDOGLOSSUM E.Mey.

masaicum (N.E.Br.) Kupicha
413 Type of *Schizoglossum baumii* Schltr. ex N.E.Br. (K, holo.; COI, E, M, W, Z, iso.). Kubango, Kavanga, 17-11-1899, 1 100 m.

CRYPTOLEPIS R.Br.

producta N.E.Br.
457 Type of *Cryptolepis baumii* Schltr. (B, holo. †; BM, COI, K, M, W, Z, iso.). Kubango (left bank), Kuimarva (left bank), 23-11-1899, 1 100 m.

LANDOLPHIA P.Beauv.

campuloba (K.Schum.) Pichon
669 Type of *Carpodinus leucantha* K.Schum. (B, holo. †; W, lecto., designated by Persoon *et al.* (1992: 39); G, W, iso.). Longa, Lazingua, 23-1-1900, 1 250 m.

TACAZZEA Decne.

apiculata Oliv.
276 Type of *Tacazzea verticillata* K.Schum. (B, holo. †; COI, iso.). Kubango, Chirumbu, 10-1899, 1 200 m.

rosmarinifolia (Decne.) N.E.Br.
245 Type of *Tacazzea salicina* Schltr. (B, holo. †; G, lecto., designated by Venter, Verhoeven & Kotze (1990: 107); BM, COI, E, G, K, W, Z, iso.). Nambali, 6-10-1899, 1 280 m.

TYLOPHORA R.Br.

caffra Meisn.
526 Type of *Gymnema melananthum* K.Schum. (B, holo. †; BR, COI, K, M, W, Z, iso.). Kuito (near), 12-1899, 1 150 m.

XYSMALOBIMUM R.Br.

undulatum (L.) W.T.Aiton
332 Type of *Asclepias leucotricha* Schltr. (B, holo. †; E, W, Z, iso.). Kuebe, 28-10-1899, 1 150 m.

ARACEAE

ZANTEDESCHIA Spreng.

albomaculata (Hook.) Baill. subsp. **albomaculata**
398 Type of *Zantedeschia chloroleuca* Engl. & Gilg (B, holo. †?). Kubango (left bank), Kueio, 11-1899, 1 120 m.

ASPARAGACEAE

ASPARAGUS L.

altiscandens Engl. & Gilg
402 (B, holo.; COI, M, S, iso.). Kubango (left bank), Quatiri (left bank), 12-11-1899, 1 100 m.

baumii Engl. & Gilg

150 (B, holo.; COI, M, iso.). Okachitanda (right margin), 25-9-1899.

ASPHODELACEAE

ALOE L.

metallica Engl. & Gilg
891 (B, holo. †?). Kutsi, Kapulo, 5-1900, 1 300 m.

nuttii Baker

698 Type of *Aloe brunneo-punctata* Engl. & Gilg (B, holo.; B, BM, BR, COI, E, K, M, iso.). Longa, Quiriri, 2-2-1900, 1 250 m.

zebrina Baker

275 Type of *Aloe baumii* Engl. & Gilg (B, holo. †?; E, iso.). Kubango, Chirumbu, 14-10-1899, 1 200 m.

BULBINE Wolf

abyssinica A.Rich.

487 Type of *Bulbine xanthobotrys* Engl. & Gilg (B, syn.; W, iso-syn.). Habungu, 28-11-1899, 1 100 m.

731 Type of *Bulbine xanthobotrys* Engl. & Gilg (B, syn.; BR, K, M, S, W, iso.). Quiriri, Kampuluve, 22-2-1900, 1 350 m.

TRACHYANDRA Kunth

arvensis (Schinz) Oberm.

412 Type of *Anthericum pallidiflavum* Engl. & Gilg (B, holo. †?; BM, K, M, W, iso.). Kubango (left bank), Kavanga, 16-11-1899, 1 100 m.

ASTERACEAE

ANISOPAPPUS Hook. & Arn.

chinensis Hook. & Arn. subsp. **chinensis** var. **chinensis**

877 Type of *Anisopappus gracilis* O.Hoffm. (B, holo. †; *COI, K, M, S, W, Z, iso.). Kulei-Kutsi, 29-4-1900, 1 300 m. Reference: Mendonça (1943: 88).

801 Type of *Anisopappus subdiscoideus* O.Hoffm. (B, holo. †; *COI, K, M, S, W, Z, iso.). Kampuluve, 6-4-1900, 1 200 m. Reference: Mendonça (1943: 88).

ARTEMISIOPSIS S.Moore

villosa (O.Hoffm.) Schweick.

67 Type of *Amphidoxa lasiocephala* O.Hoffm. (B, holo. †; W, iso.). Ediva-Humbe, Kakulovar, 6-9-1899, 1 140 m. Reference: Mendonça (1943: 61).

BIDENS L.

baumii (O.Hoffm.) Sherff

883 Type of *Coreopsis baumii* O.Hoffm. (B, holo. †; W, lecto., designated by Rayner (1992: 89); BM, *COI, G, *K, M, Z, iso.). Kuma-Kutsi, 5-1900, 1 300 m. Reference: Mendonça (1943: 103).

flabellata O.Hoffm.

847 (B, holo. †; G, lecto., designated by Rayner (1992: 82); *BM, *BR, *K, W, Z, iso.). Manonge, Kuebe, 22-4-1900, 1 350 m. Reference: Mendonça (1943: 102).

CONYZA Less.

limosa O.Hoffm.

358 (B, syn. †; G, isosyn.). Kubango (right bank), Kueio, 1-11-1899, 1 300 m. Reference: Mendonça (1943: 51).

433 (B, syn. †; BM, *COI, G, K, M, W, Z, isosyn.). Maramba, Kalolo, 20-11-1899, 1 100 m. Reference: Mendonça (1943: 51).

welwitschii (S.Moore) Wild

342 Type of *Nidorella linearifolia* O.Hoffm. (B, holo. †). Kubango, Kabindere, 30-10-1899, 1 130 m. Reference: Mendonça (1943: 49).

CRASSOCEPHALUM Moench

uens (Hiern) S.Moore

354 Type of *Senecio telmatophilus* O.Hoffm. (B, holo. †; COI, BM, M, W, Z, iso.). Kubango (right bank), Kueio, 11-1899, 1 130 m. Reference: Mendonça (1943: 119).

DICOMA Cass.**anomala** Sond. subsp. **anomala**

804 Type of *Dicoma anomala* Sond. var. *latifolia* O.Hoffm. (B, holo. †; **W**, iso.). Quiriri, Sakkemecho, 9-4-1900, 1 200 m.

933 Type of *Dicoma anomala* Sond. var. *microphylla* O.Hoffm. (B, holo. †). Malolla Katumba–Chibia, 14-6-1900, 1 350 m. Reference: Mendonça (1943: 143).

antunesii O.Hoffm.

926 (B, holo. †; *COI). Kubango–Kassinga, Mundongo, 18-5-1900, 1 400 m. Reference: Mendonça (1943: 140).

EMILIA Cass.**baumii** (O.Hoffm.) S.Moore

707 Type of *Senecio baumii* O.Hoffm. (B, holo. †; **BM**, *COI, **K**, **M**, **W**, **Z**, iso.). Longa, Quiriri, 5-2-1900. Reference: Mendonça (1943: 112).

limosa (O.Hoffm.) C.Jeffrey

907 Type of *Senecio limosus* O.Hoffm. (B, holo. †; *COI, ***K**, **W**, **Z**, iso.). Kubango, Kohi, 14-5-1900, 1 350 m. Reference: Mendonça (1943: 118).

ERIGERON L.**baumii** O.Hoffm.

187 (B, holo. †; **BM**, *COI, **K**, **M**, **W**, **Z**, iso.). Goudkopje–Kakele, 2-10-1899, 1 210 m. Reference: Mendonça (1943: 46).

ERLANGEA Sch.Bip.**linearifolia** (O.Hoffm.) S.Moore

710 Type of *Bothriocline linearifolia* O.Hoffm. (B, syn. †; *COI, **W**, **Z**, isosyn.). Longa, Quiriri, 2-1900, 1 275 m. Reference: Mendonça (1943: 4).

784 Type of *Bothriocline linearifolia* O.Hoffm. (B, syn. †; *COI, **K**, **M**, **W**, **Z**, isosyn.). Onschingue, Kuito (near), 22-3-1900, 1 200 m. Reference: Mendonça (1943: 4).

GRANGEA Adans.**anthemoides** O.Hoffm.

126 (B, holo. †; **M**, lecto., designated by Fayed (1979: 472); *COI, **K**, **W**, iso.). Kunene and Chitanda, 21-9-1899, 1 100 m. Reference: Mendonça (1943: 43).

HELICHRYSUM Mill.**congolatum** Schltr. & O.Hoffm.

226 (B, holo. †; *COI, **K**, **M**, **W**, iso.). Kuelleis (Maramba), 5-10-1899, 1 400 m. Reference: Mendonça (1943: 69).

INULA L.**limosa** O.Hoffm.

474 (B, syn. †). Habungu, Maramba, 28-11-1899, 1 100 m. Reference: Mendonça (1943: 77).

630 (B, syn. †; **W**, **Z**, iso.). Longa, Chijija, 5-1-1900, 1 200 m. Reference: Mendonça (1943: 77).

paludosa O.Hoffm.

699 (B, holo. †; *COI, **K**, **W**, **Z**, iso.). Longa, Quiriri, 3-2-1900, 1 250 m. Reference: Mendonça (1943: 77).

MELANTHERA Rohr**triternata** (Klatt) Wild

197 Type of *Melanthera baumii* O.Hoffm. (B, holo. †; **BM**, **COI**, **K**, **W**, iso.). Goudkopje–Kakele, 3-10-1899, 1 238 m. Reference: Mendonça (1943: 97).

NICOLASIA S.Moore**felicoides** S.Moore

50 Type of *Laggera humilis* O.Hoffm. (B, holo. †; **BM**, *COI, **W**, **Z**, iso.). Chihinde, 2-9-1899, 1 270 m. Reference: Mendonça (1943: 57).

NIDORELLA Cass.**resedifolia** DC. subsp. **resedifolia**

47 Type of *Nidorella densiflora* O.Hoffm. (B, holo. †). Chihinde, 2-9-1899, 1 270 m. Reference: Mendonça (1943: 49).

PASACCARDOA Kuntze**baumii** O.Hoffm.

318 (B, holo. †; **K**, **W**, **Z**, iso.). Kuebe (near), 24-10-1899, 1 170 m. Reference: Mendonça (1943: 139).

SENECIO L.**cryphiactis** O.Hoffm.

68 (B, holo. †; COI, **K**, **W**, **Z**, iso.). Ediva–Humbe, Kakulovar, 6-9-1899, 1 140 m. Reference: Mendonça (1943: 120).

SPHAERANTHUS L.**flexuosus** O.Hoffm. ex De Wild.

184 Type of *Sphaeranthus humilis* O.Hoffm. (B, holo. †; *COI, **K**, **M**, **W**, iso.). Goudkopje–Kakele, 2-10-1899, 1 210 m. Reference: Mendonça (1943: 61).

VERNONIA Schreb.**brideliifolia** O.Hoffm.

610 (B, holo. †; **W**, **Z**, iso.). Longa, Napalanka, 1-1-1900, 1 150 m. Reference: Mendonça (1943: 30).

gerberiformis Oliv. & Hiem subsp. **macrocyanus** (O.Hoffm.) C.Jeffrey

134 Type of *Vernonia primulina* O.Hoffm. (B, holo. †; *COI, **M**, **W**, **Z**, iso.). Chitanda (left bank), Kunene, 23-9-1899, 1 108 m. Reference: Mendonça (1943: 29).

limosa O.Hoffm.

255 (B, syn. †; **G**, isosyn.). Nambali, Maramba, 7-10-1899, 1 250 m. Reference: Mendonça (1943: 27).

624 (B, syn. †; **G**, **W**, **Z**, isosyn.). Longa, Chijija, 4-1-1900, 1 200 m. Reference: Mendonça (1943: 27).

mesogramme O.Hoffm.

616 (B, holo. †). Kuairiri, 2-1-1900, 1 150 m. Reference: Mendonça (1943: 35).

pygmaea O.Hoffm.

235 (B, holo. †; **W**, iso.). Maramba, Kuelleis, 5-10-1899, 1 400 m. Reference: Mendonça (1943: 30).

subplumosa O.Hoffm.

703 (B, holo. †; **BM**, **W**, **Z**, iso.). Longa, Quiriri, 3-2-1900, 1 250 m. Reference: Mendonça (1943: 10).

temnolepis O.Hoffm.

929 Type of *Vernonia baumii* O.Hoffm. (B, syn. †; *COI, **K**, **M**, **W**, **Z**, isosyn.). Chitanda, Kassinga, 19-5-1900, 1 325 m. Reference: Mendonça (1943: 25).

929a Type of *Vernonia baumii* O.Hoffm. (B, syn. †; *COI, **W**, isosyn.). Chitanda, Kassinga, 19-5-1900, 1 325 m. Reference: Mendonça (1943: 25).

BORAGINACEAE**TRICHODESMA** R.Br.**baumii** Gürke

844 (B, holo. †; **BM**, **COI**, **E**, **M**, **W**, **Z**, iso.). Manonge, Kuebe, 22-4-1900, 1 350 m.

BRASSICACEAE**RORIPPA** Scop.**cryptantha** (A.Rich.) Robyns & Boutique

129 Type of *Nasturtium microcapsum* Engl. & Gilg (B, holo.; **BM**, **COI**, **K**, iso.). Okachitanda (left bank), 22-9-1899. Reference: Exell & Mendonça (1937a: 50).

BURMANNIACEAE**BURMANNIA** L.**madagascariensis** Mart.

619 Type of *Burmannia bicolor* Mart. var. *micrantha* Engl. & Gilg (B, holo.; **COI**, **S**, iso.). Longa, Chijija, 4-1-1900, 1 200 m.

726 Type of *Burmannia blanda* Engl. & Gilg (B, holo.; **B**, **K**, iso.). Quiriri, Sobi, 20-2-1900, 1 300 m. Reference: Cowley (1988: 2).

CAMPANULACEAE

WAHLENBERGIA Schrad. ex Roth

banksiana A.DC.

421 Type of *Wahlenbergia leucantha* Engl. & Gilg (B, holo. †; K, lecto., designated by Thulin (1975: 119); **BM**, **COL**, **G**, **K**, **M**, *S, **W**, **Z**, iso.). Kubango (left bank), Kavanga, 18-11-1899, 1 100 m.

denticulata (Burch.) A.DC.

837 Type of *Lightfootia laricifolia* Engl. & Gilg (B, holo. †; Z, lecto., designated by Thulin (1975: 116); **G**, **W**, *Z, iso.). Lazingua, 19-4-1900, 1 275 m.

undulata (L.f.) A.DC.

477 Type of *Wahlenbergia cyanea* Engl. & Gilg (B, holo. †; M, lecto., designated by Thulin (1975: 76); ***BM**, **COL**, **G**, **K**, *S, **W**, **Z**, iso.). Habungu, 28-11-1899, 1 100 m.

CAPPARACEAE

BOSCIA Lam.

welwitschii Gilg

999 Type of *Boscia suaveolens* Gilg (B, holo. †?; ***BM**, **COL**, *K, **M**, **W**, **Z**, iso.). Jau, 19-6-1900, 1 100 m. Reference: Exell & Mendonça (1937b: 65).

CARYOPHYLLACEAE

POLYCARPAEA Lam.

inaequalifolia Engl. & Gilg

816 (B, holo. †; ***BM**, **Z**, iso.). Quiriri, Sakkemecho, 4-1900, 1 200 m. Reference: Exell & Mendonça (1937c: 112).

CELASTRACEAE

GYMNOSPORIA (Wight & Arn.) Hook.f.

senegalensis (Lam.) Loes.

565 Type of *Gymnosporia baumii* Loes. (B, holo. †; **BM**, ***COL**, **K**, **W**, **Z**, iso.). Jonkoa, 21-12-1899, 1 150 m. Reference: Exell & Mendonça (1954b: 8).

SALACIA L.

bussei Loes.

480 Type of *Salacia rehmanii* Schinz var. *baumii* Loes. (B, holo. †?). Habungu, 11-1899, 1 100 m. Reference: Exell & Mendonça (1954b: 24).

COMBRETACEAE

COMBRETUM Loefl.

aureonitens Engl. & Gilg

53 (B, syn. †; **BM**, lecto., designated by Exell & Garcia (1970: 57), **BR**, ***COL**, **K**, **M**, **W**, **Z**, iso.). Chihinde-Ediva, 2-9-1899, 1 250 m.

113 (B, syn. †; **BM**, ***COL**, **K**, **W**, isosyn.). Hartebeest-Lövenpan, 18-9-1899, 1 100 m. Reference: Exell & Garcia (1970: 57).

982 (B, syn. †; ***BM**, ***COL**, **K**, **M**, **W**, isosyn.). Makopi, 11-6-1900. Reference: Exell & Garcia (1970: 57).

collinum Fresen.

54 Type of *Combretum monticola* Engl. & Gilg (B, syn. †; **BM**, lecto., designated by Exell & Garcia (1970: 58)). Chihinde-Ediva, 9-1899, 1 250 m.

56 Type of *Combretum monticola* Engl. & Gilg (B, syn. †; **W**, **Z**, isosyn.). Chihinde, 2-9-1899, 1 270 m.

981 Type of *Combretum pachycarpum* Engl. & Gilg (B, syn. †). Makopi, 6-1900, 1 200 m.

983 Type of *Combretum pachycarpum* Engl. & Gilg (B, syn. †; **BM**, lecto., designated by Exell & Garcia (1970: 58); **BR**, ***COL**, **K**, **M**, **S**, **W**, **Z**, iso.). Makopi, 11-6-1900, 1 200 m.

986 Type of *Combretum laeteviride* Engl. & Gilg (B, holo. †; **BM**, lecto., designated by Exell & Garcia (1970: 58); **BR**, ***COL**, **K**, **M**, **S**, **W**, **Z**, iso.). Meschekke-Katumba, 14-6-1900, 1 350 m.

molle R.Br. ex G.Don

127 Type of *Combretum arbuscula* Engl. & Gilg (B, syn. †; **BM**, **COL**, **K**, **W**, **Z**, isosyn.). Chitanda (left bank), 21-9-1899, 1 100 m.

155 Type of *Combretum arbuscula* Engl. & Gilg (B, syn. †; **BM**, **K**, **W**, isosyn.). Chitanda (right margin), 25-9-1899, 1 150 m.

947 Type of *Combretum arbuscula* Engl. & Gilg (B, syn. †; **BM**, **BR**, **COL**, **K**, **S**, **W**, isosyn.). Chitanda (left bank), 27-5-1900, 1 150 m.

platypetalum Welw. ex M.A.Lawson subsp. *baumii* (Engl. & Gilg) Exell

117 Type of *Combretum baumii* Engl. & Gilg (B, syn. †; **BM**, lecto., designated by Exell & Garcia (1970: 73); **BM**, **COL**, **K**, **M**, **W**, **Z**, iso.). Hartebeest-Lövenpan, 18-9-1899, 1 100 m.

119 Type of *Combretum baumii* Engl. & Gilg (B, syn. †). Hartebeest-Lövenpan, 9-1899, 1 100 m.

232 Type of *Combretum arenarium* Engl. & Gilg (B, holo. †; **BM**, lecto., designated by Exell & Garcia (1970: 72); **BM**, **K**, **W**, **Z**, iso.). Kuelleis (Kassinga-Kubango), 5-10-1899, 1 400 m.

232a Type of *Combretum argyrochryseum* Engl. & Gilg (B, holo. †; **BM**, fragment and drawing of holo. [cited by Exell & Garcia (1970: 72)], **W**, iso.). Kuelleis (Kassinga-Kubango), 5-10-1899, 1 400 m.

232b Type of *Combretum gnidioides* Engl. & Gilg (B, holo. †; **BM**, lecto., designated by Exell & Garcia (1970: 72); **W**, **Z**, iso.). Kuelleis (Kassinga-Kubango), 5-10-1899, 1 400 m.

psidioides Welw. subsp. *dinteri* (Schinz) Exell

722 Type of *Combretum quirirense* Engl. & Gilg (B, holo. †; **BM**, lecto., designated by Exell & Garcia (1970: 66); **BR**, ***COL**, ***K**, **S**, **W**, **Z**, iso.). Quiriri, Sobi, 19-2-1900, 1 300 m.

TERMINALIA L.

brachystemma Welw. ex Hiern

215 Type of *Terminalia baumii* Engl. & Gilg (B, holo. †; **BM**, lecto., designated by Exell & Garcia (1970: 89); ***COL**, **K**, **M**, **W**, **Z**, iso.). Kassinga-Kolove, 4-10-1899, 1 300 m.

COMMELINACEAE

ANEILEMA R.Br.

plagiocapsa K.Schum.

716 (B, holo.; **BM**, **COL**, **G**, **K**, **W**, iso.). Quiriri, Sobi, 18-2-1900, 1 300 m.

COMMELINA L.

milne-redheadii Faden

256 Type of *Commelina welwitschii* C.B.Clarke var. *glabra* K.Schum. (B, holo. †; **BM**, **K**, iso.). Nambali, 7-10-1899, 1 250 m.

subulata Roth

963 Type of *Commelina elegantula* K.Schum. (B, holo.; **BM**, **M**, iso.). Kitewe-Humbe, 3-6-1900, 1 100 m.

welwitschii C.B.Clarke

814 Type of *Commelina filifolia* K.Schum. (B, holo.; **K**, iso.). Quiriri, Sakkemecho, 15/16?4-1900, 1 200 m.

FLOSCOPA Lour.

flavida C.B.Clarke

915 Type of *Floscopa pusilla* K.Schum. (B, holo. †?; **BR**, **K**, **M**, **S**, iso.). Kubango, Kohi, 15-5-1900.

CONVOLVULACEAE

IPOMOEA L.

crassipes Hook.

151 Type of *Ipomoea crassipes* Hook. var. *hirta* Hallier f. (B, syn. †). Chitanda (right margin), 25-9-1899, 1 150 m.

454 Type of *Ipomoea crassipes* Hook. var. *hirta* Hallier f. (B, syn. †; **COL**, **M**, **W**, iso.). Kubango (left bank), Kuimarva, 23-11-1899, 1 100 m.

CRASSULACEAE

KALANCHOE Adans.

brachyloba Welw. ex Britten

938 Type of *Kalanchoe baumii* Engl. & Gilg (B, holo. †). Goudkopje, 22-5-1900, 1 300 m.

CUCURBITACEAE

TROCHOMERIA Hook.f.

baumiana Gilg

445 (B, holo. †). Kubango (left bank), Kalolo, 11-1899, 1 100 m.

CYPERACEAE

CYPERUS L.

chrysocephalus (K.Schum.) Kük.

311 Type of *Mariscus chrysocephalus* K.Schum. (B. syn. †?; K. isosyn.). Longa, Maschonge, 23-11-1899, 1 170 m.

311a Type of *Mariscus chrysocephalus* K.Schum. (B. syn. †?; COL. isosyn.). Longa, Maschonge, 31-12-1899, 1 150 m.

RHYNCHOSPORA Vahl**holoschoenoides** (Rich.) Herter

355 Type of *Rhynchospora dolichostyla* K.Schum. (B. holo. †?; K. iso.). Kubango (right bank), Kucio, 1-9-1899, 1 130 m.

DICHAPETALACEAE

DICHAPETALUM Thouars

cymosum (Hook.) Engl.

64 Type of *Dichapetalum venenatum* Engl. & Gilg (B. holo. †; M. lecto., designated by Breteler (1978: 32); **BM, BR, COL, E, K, M, S, W, Z, iso.**). Ediva-Humbe, 6-9-1899, 1 200 m.

DIPSACACEAE

CEPHALARIA Schrad.

retrosetosa Engl. & Gilg

894 (B. holo. †; **BM, COL, E, K, Z, iso.**). Kutsi, Kapulo, 5-5-1900, 1 300 m.

DIPTEROCARPACEAE

MONOTES A.DC.

dasyanthus Gilg

888 (B. holo. †; ***BM, *COL, K, M, W, Z, iso.**). Kutsi, 2-5-1900, 1 300 m. Reference: Bancroft (1937: 139).

EBENACEAE

DIOSPYROS L.

batocana Hiern

780 Type of *Diospyros xanthocarpa* Gürke (B. holo. †; **W, iso.**). Kuisi, Likise, 16-3-1900, 1 200 m.

kirkii Hiern

945 Type of *Diospyros baumii* Gürke (B. holo. †; **BR, K, M, W, Z, iso.**). Chitanda (left bank), 26-5-1900, 1 150 m.

virgata (Gürke) Brenan

792 Type of *Maba virgata* Gürke (B. holo. †; **G, iso.**). Onschingue, Kuito (near), 1-4-1900, 1 200 m.

EUCLEA Murray

crispa (Thunb.) Gürke

191 Type of *Euclea baumii* Gürke (B. holo. †; **COL, K, M, W, Z, iso.**). Goudkopje-Kakele, 10-1899, 1 210 m.

divinorum Hiern

33 Type of *Euclea huillensis* Gürke (B. holo. †; **BR, COL, K, M, S, W, Z, iso.**). Palmfontein, Ediva, 28-8-1899, 1 000 m.

ELATINACEAE

BERGIA L.

pentheriana Keissl.

98 Type of *Bergia pallide-rosea* Gilg (B. holo. †; ***BM, BR, COL, M, S, W, iso.**). Kunene (left bank), Humbe, 14-9-1899, 1 140 m. Reference: Exell & Mendonça (1937d: 118).

spathulata Schinz

110 Type of *Bergia erythroleuca* Gilg (B. holo. †; ***BM, BR, COL, K, M, S, W, Z, iso.**). Kunene (left bank), Soba Gongo, 17-9-1899, 1 115 m. Reference: Exell & Mendonça (1937d: 119).

EUPHORBIACEAE

JATROPHA L.

baumii Pax

122a (B. holo. †?). Löwenpan-Kunene, 19-9-1899, 1 100 m.

SCLEROCROTON Hochst.

oblongifolius (Müll.Arg.) Kruijt & Roebers

257 Type of *Sapium suffruticosum* Pax (B. holo. †?; **BR, COL, E, K, M, W, iso.**). Nambali, Maramba, 10-1899, 1 250 m.

FABACEAE

ADENODOLICHOS Harms

baumii Harms

848 (B. holo. †; **COL, lecto.**, designated by Torre (1966: 301); **BM, COL, *K, M, Z, iso.**). Manonge, 22-4-1900, 1 350 m.

rhomboideus (O.Hoffm.) Harms var. **rhomboideus**

872 Type of *Adenodolichos euryphyllus* Harms (B. holo. †; ***COL, BM, K, Z, iso.**). Kulei-Kutsi, 29-4-1900, 1 300 m. Reference: Torre (1966: 300).

AESCHYNOMENE L.

baumii Harms

810 (B. holo. †; **COL, lecto.**, designated by Torre (1966: 198); **BR, COL, *K, M, S, W, Z, iso.**). Quiriri, Sakkemecho, 10-4-1900, 1 200 m.

bracteosa Welw. ex Baker

252 Type of *Aeschynomene nambalensis* Harms (B. holo. †; **BM, *COL, *K, W, Z, iso.**). Nambali, 7-10-1899, 1 250 m. Reference: Torre (1966: 199).

BAIKIAEA Benth.

plurijuga Harms

428 (B. holo. †; ***BM, COL, K, M, W, Z, iso.**). Kubango (left bank), Kalolo, 20-11-1899, 1 100 m. Reference: Torre & Hillcoat (1956: 220).

BAPHIA Afzel. ex Lodd.**massaiensis** Taub. subsp. **obovata** (Schinz) Brummitt var. **cornifolia** (Harms) Soladoye

121 Type of *Baphia cornifolia* Harms (B. holo. †; K. lecto., designated by Hillcoat (1966: 376); **BM, *COL, *K, M, W, Z, iso.**). Löwenpan-Kunene, 18-9-1899, 1 100 m.

COPAIFERA L.

baumiana Harms

523 (B. holo. †; ***BM, COL, K, M, S, W, Z, iso.**). Ungombekike-Kuito, 10-12-1899, 1 200 m. References: Torre & Hillcoat (1956: 243).

CROTALARIA L.

angulicaulis Harms

740 (B. holo. †; **BM, iso.**). Kampuluve, 2-1900, 1 200 m.

baumii Harms

836 (B. holo. †; **BM, COL, K, W, M, S, Z, iso.**). Lazingua, 19-4-1900, 1 275 m. Reference: Torre (1962: 35).

densicephala Welw. ex Baker

670 Type of *Crotalaria lachnoclada* Harms (B. holo. †; **BM, COL, K, M, S, W, Z, iso.**). Longa, Lazingua, 23-1-1900, 1 250 m. Reference: Torre (1962: 63).

leptoclada Harms var. **leptoclada**

829 (B. holo. †; **BM, COL, K, LISC, M, W, Z, iso.**). Longa, 18-4-1900, 1 275 m. Reference: Torre (1962: 66).

psammophila Harms

741 (B. holo. †; **BM, COL, K, M, S, W, Z, iso.**). Kampuluve, Kuito (near), 27-2-1900, 1 200 m. Reference: Torre (1962: 29).

sericifolia Harms

483 (B. holo. †; **BM, COL, K, M, W, Z, iso.**). Habungu, 28-11-1899, 1 100 m. Reference: Torre (1962: 67).

subsessilis Harms

787 (B. holo. †; **BM, COL, K, M, W, Z, iso.**). Onschingue, Kuito (near), 29-3-1900, 1 200 m. Reference: Torre (1962: 67).

ENTADA Adans.

arenaria Schinz subsp. **arenaria**

471 Type of *Entada nana* Harms (B. holo. †; **W, Z, iso.**). Habungu, 28-11-1899, 1 100 m.

ERYTHRINA L.

baumii Harms

223 (B, holo. †; BM, lecto., designated by Torre (1966: 248); E, NY, W, iso.). Kuelleis (Maramba), 5-10-1899, 1 400 m.

INDIGOFERA L.

baumiana Harms

497 (B, syn. †; BM, BR, COI, E, K, M, W, Z, isosyn.). Habungu, 1-12-1899, 1 150 m. Note: Torre (1962: 118) referred to the B specimen as holotype (because it was the first of the two syntypes cited in the protologue) which would make it a lectotype. However, he did not see the specimen (having referred to it as n.v.). Therefore, we think this cannot be considered a lectotypification.

819 (B, syn. †). Quiriri, Sakkemecho, 4-1900, 1 200 m.

griseoides Harms

745 (B, holo. †; E, W, iso.). Kuito, Onschingue–Kutue, 1-3-1900, 1 200 m.

nambalensis Harms

254 (B, holo. †). Nambali, 10-1899, 1 250 m.

JULBERNARDIA Pellegr.

paniculata (Benth.) Troupin

732 Type of *Berlinia baumii* Harms (B, holo. †; BM, COI, K, M, iso.). Onschingue, Kuito, 22-2-1900, 1 200 m. Reference: Torre & Hillcoat (1956: 212).

PHYSOSTIGMA Balf.

mesoponticum Taub.

133 Type of *Physostigma mesoponticum* Taub. var. *baumii* Harms (B, holo. †; COI, lecto., designated by Torre (1966: 260); *BM, E, K, iso.). Chitanda (left bank), 23-9-1899, 1 108 m.

RHYNCHOSIA Lour.

baumii Harms

764 (B, holo. †; Z, lecto., designated by Torre (1965: 223); S, W, Z, iso.). Kuito, Kutue–Sobi, 4-3-1900, 1 200 m.

luteola (Hiern) K.Schum.

1005a Type of *Rhynchosia moninensis* Harms (B, holo. † *BM, *COI, *K, W, Z, iso.). Monino, Nevis, 23-6-1900, 350 m. Reference: Torre (1966: 316).

SESBANIA Scop.

coerulescens Harms

782 (B, holo. †; K, M, W, Z, iso.). Miané, Kavamba, 14-3-1900, 1 175 m. Reference: Sousa (1962: 184).

microphylla Harms

569 (B, holo. †; K, Z, iso.). Longa (mouth), 22-12-1899, 1 130 m. Reference: Sousa (1962: 186).

TEPHROSIA Pers.

cephalantha Welw. ex Baker

563 Type of *Tephrosia hypargyrea* Harms (B, holo. †; *BM, COI, *K, M, W, Z, iso.). Jonkoa, 20-12-1899, 1 150 m. Reference: Torre (1962: 164).

coronilloides Welw. ex Baker

612 Type of *Tephrosia longana* Harms (B, holo. †; BM, COI, K, W, Z, iso.). Longa, Napalanka, 1-1-1900, 1 150 m. Reference: Torre (1962: 155).

FLACOURTIACEAE

XYLOTHECA Hochst.

longipes (Gilg) Gilg

388 Type of *Oncoba longipes* Gilg (B, holo. †; G, iso.). Kubango (right bank), Kueio, 5-11-1899, 1 100 m. Reference: Sleumer (1937: 81).

GENTIANACEAE

CHIRONIA L.

baumiana Gilg

739 (B, holo. †; COI, E, K, M, W, Z, iso.). Kampuluve, 26-2-1900, 1 210 m.

NEUROTHECA Salisb. ex Benth.

congolana De Wild. & T.Durand

604 Type of *Neurotheca baumii* Gilg (B, holo. †; COI, E, K, M, S, W, Z, iso.). Longa, Napalanka, 1-1900, 1 150 m.

PYCNOSPHAERA Gilg

buchananii (Baker) N.E.Br.

752 Type of *Pycnosphaera trimera* Gilg (B, holo. †; COI, E, K, M, S, W, Z, iso.). Kuito, Kutue, 2-3-1900, 1 200 m.

SEBAEA Sol. ex R.Br.

baumiana (Gilg) Boutique

692 Type of *Belmontia baumiana* Gilg (B, holo. †; COI, E, W, Z, iso.). Longa, Quiriri, 2-2-1900, 1 250 m.

teusii (Schinz) P.Taylor

316 Type of *Belmontia chionantha* Gilg (B, syn. †; *K, isosyn.). Kuebe (near), 10-1899, 1 170 m. Reference: Nemomissa (2002: 18).

702 Type of *Belmontia chionantha* Gilg (B, syn. †; E, *K, W, isosyn.). Longa, Quiriri, 3-2-1900, 1 250 m. Reference: Nemomissa (2002: 18).

838 Type of *Belmontia chionantha* Gilg (B, syn. †; COI, E, K, M, W, Z, isosyn.). Lazingua, 19-4-1900, 1 300 m. Reference: Nemomissa (2002: 18).

HYACINTHACEAE

DIPCADI Medik.

longifolium (Lindl.) Baker

499 Type of *Dipcadi anthericoides* Engl. & Gilg (B, holo.; COI, K, M, iso.). Bondo, 2-12-1899, 1 150 m.

vaginatum Baker

349 Type of *Dipcadi baumii* Engl. & Gilg (B, holo.). Kubango, Kabindere, 30-10-1899, 1 150 m.

viride (L.) Moench

459 Type of *Dipcadi lividescens* Engl. & Gilg (B, holo.). Kubango (left bank), Kuimarva, 23-11-1899, 1 100 m.

LEDEBOURIA Roth

revoluta (L.f.) Jessop

203a Type of *Scilla lanceifolia* (Jacq.) Baker var. *longiracemosa* Engl. & Gilg (B, syn. †?). Kakele, Kassinga, 10-1899, 1 250 m.

447 Type of *Scilla lanceifolia* (Jacq.) Baker var. *longiracemosa* Engl. & Gilg (B, syn. †?). Kubango (left bank), Kalolo, 11-1899, 1 100 m.

SCHIZOCARPUS Van der Merwe

nervosus (Burch.) Van der Merwe

410 Type of *Scilla eriospermoides* Engl. & Gilg (B, holo.; COI, K, M, iso.). Kubango (left bank), Kavanga, 16-11-1899, 1 100 m.

SCILLA L.

baumiana Engl. & Gilg

122 (B, holo.; COI, K, Z, iso.). Lövenpan–Kunene, 19-9-1899, 1 100 m.

HYDROCHARITACEAE

OTTELIA Pers.

kunenensis (Gürke) Dandy

962 Type of *Boottia kunenensis* Gürke (B, holo. †?; COI, K, M, W, iso.). Kunene, Kitewe–Humbe, 3-6-1900, 1 100 m.

muricata (C.H.Wright) Dandy

772 Type of *Boottia aschersomiana* Gürke (B, holo. †?; COI, M, W, iso.). Kuito, Kutue–Sobi, 10-3-1900, 1 200 m.

ulvifolia (Planch.) Walp.

120 Type of *Ottelia benguelensis* Gürke (B, holo. †?; W, iso.). Lövenpan, 18-9-1899, 1 100 m.

858 Type of *Ottelia baumii* Gürke (B, holo. †?; COI, K, W, iso.). Manonge, 23-4-1900, 1 350 m.

HYDROSTACHYACEAE

HYDROSTACHYS Thouars

triaxialis Engl. & Gilg

263 (B. holo. †; **BM**, **COI**, **K**, **M**, **W**, **Z**, iso.). Kubango, Massaca, 8-10-1899, 1 200 m.

HYPERICACEAE

HYPERICUM L.

lalandii Choisy

909 Type of *Hypericum baumii* Engl. & Gilg (B. holo. †). Kubango, Kohi, 5-1900, 1 350 m. References: Exell & Mendonça (1937e: 120); Milne-Redhead (1953: 9).

IRIDACEAE

GLADIOLUS L.

benguellensis Baker

632 Type of *Gladiolus longanus* Harms (B. holo.; **BM**, **E**, **Z**, iso.). Longa, Chijija, 5-1-1900, 1 200 m.

magnificus (Harms) Goldblatt

651 Type of *Antholyza magnifica* Harms (B. holo.; **COI**, **M**, **W**, iso.). Longa, Minnesera, 11-1-1900, 1 250 m.

pallidus Baker

881 Type of *Gladiolus baumii* Harms (B. holo.). Kulei-Kutsi, 30-4-1900, 1 300 m.

898 Type of *Gladiolus kubangensis* Harms (B. holo.; **COI**, **E**, **M**, **S**, **Z**, iso.). Kubango (near), 8-5-1900, 1 450 m.

IXONANTHACEAE

PHYLLOCOSMUS Klotzsch

lemaireanus (De Wild. & T.Durand) T.Durand & H.Durand

712 Type of *Phyllocosmus candidus* Engl. & Gilg (B. holo. †; **BM**, **COI**, **K**, **W**, **Z**, iso.). Quiriri, Sakkemecho, 13-2-1900, 1 300 m. References: Exell & Mendonça (1951a: 247); Verdcourt (1984: 4).

LAMIACEAE

AEOLLANTHUS Mart. ex K.Spreng.

engleri Briq.

737 Type of *Aeolanthus paludosus* Gürke (B. holo. †; **COI**, **E**, **K**, **W**, **Z**, iso.). Kampuluve, 26-2-1900, 1 210 m.

866 Type of *Aeolanthus uliginosus* Gürke (B. holo. †; **COI**, **E**, **K**, **M**, **S**, **W**, iso.). Chimpungu, 25-4-1900, 1 400 m.

BENGUELLIA G.Taylor

lanceolata (Gürke) G.Taylor

910 Type of *Orthosiphon lanceolatus* Gürke (B. holo. †; **COI**, **M**, **W**, iso.). Kubango, Kohi, 15-5-1900, 1 350 m.

CLERODENDRUM L.

baumii Gürke

661 (B. holo. †; **E**, **W**, **Z**, iso.). Longa (left bank), Lazingua, 20-1-1900, 1 250 m.

PLATOSTOMA P.Beauv.

strictum (Hiern) A.J.Paton

644 Type of *Geniosporum baumii* Gürke (B. holo. †; **BM**, **COI**, **K**, **M**, **S**, **W**, iso.). Lazingua, near Longa, 7-1-1900, 1 130 m.

PLECTRANTHUS L'Hér.

baumii Gürke

283 (B. holo. †; **COI**, **W**, **Z**, iso.). Kubango, Massaca, 19-10-1899, 1 150 m.

betonicifolius Baker

544 Type of *Coleus baumii* Gürke (B. holo. †; **BM**, **COI**, **K**, **M**, **S**, **W**, **Z**, iso.). Kuito, 14-12-1899, 1 150 m.

guerkei Briq.

789 Type of *Hyptis baumii* Gürke (B. holo. †; **COI**, **E**, **M**, **W**, **Z**, iso.). Onschingue, Kuito (near), 1-4-1900, 1 200 m.

TINNEA Kotschy & Peyr.

benguellensis Gürke

697 (B. holo. †; **BM**, **COI**, **E**, **K**, **M**, **W**, **Z**, iso.). Longa, Quiriri, 2-2-1900, 1 250 m.

coerulea Gürke var. *coerulea*

857 (B. holo. †; **BM**, **G**, **K**, **M**, **W**, **Z**, iso.). Manonge, Kuebe, 23-4-1900, 1 350 m.

vestita Baker

695 Type of *Tinnea fusco-luteola* Gürke (B. holo. † **BM**, **COI**, **E**, **G**, **K**, **M**, **W**, **Z**, iso.). Longa, Quiriri, 2-2-1900, 1 250 m.

LENTIBULARIACEAE

UTRICULARIA L.

spiralis Sm.

307 Type of *Utricularia baumii* Kamienski (B. holo. †; ***BM**, ***BR**, **COI**, **G**, ***HBG**, **K**, ***M**, ***S**, **W**, **Z**, iso.). Kuebe (near), 23-10-1899, 1 170 m. Reference: Taylor (1973: 8).

subulata L.

691 Type of *Utricularia angolensis* Kamienski (B. holo. †; **K**, iso.). Longa, Quiriri, 2-2-1900, 1 250 m.

LOBELIACEAE

LOBELIA L.

angolensis Engl. & Diels ex Diels

43 Type of *Lobelia minutidentata* Engl. & Gilg (B. holo.; ***BM**, **COI**, **G**, ***K**, **M**, ***S**, **W**, **Z**, iso.). Chihinde, 2-9-1899, 1 270 m. Note: although the holotype has been reported as destroyed, e.g. Thulin (1984: 45), it has recently been found.

MONOPSIS Salisb.

zeyheri (Sond.) Thulin

144 Type of *Lobelia fonticola* Engl. & Gilg (B. holo. †; **G**, lecto., designated by Thulin (1979: 135); ***BM**, **COI**, **K**, **M**, **S**, **W**, iso.). Chitanda (left bank), 24-9-1899. Reference: Thulin (1984: 49).

LORANTHACEAE

AGELANTHUS Tiegh.

terminaliae (Engl. & Gilg) Polhill & Wiens

519 Type of *Loranthus terminaliae* Engl. & Gilg (B. holo.; **K**, **Z**, iso.). Ungombekike-Kuito, 9-12-1899, 1 200 m. Reference: Gebauer (1993).

PHRAGMANTHERA Tiegh.

baumii (Engl. & Gilg) Polhill & Wiens

217 Type of *Loranthus baumii* Engl. & Gilg (B. holo.; **COI**, **K**, **Z**, iso.). Kassinga-Kolove, 4-10-1899, 1 300 m. Reference: Gebauer (1993).

LYTHRACEAE

NESAEA Kunth

baumii Koehne

204 (B. holo. †; **COI**, lecto., designated by Fernandes & Fernandes (1970: 185); **K**, **M**, **W**, **Z**, iso.). Kakele, 3-10-1899, 1 250 m.

MALPIGHIACEAE

SPHEDAMNOCARPUS Planch. ex Benth. & Hook.f.

angolensis (A.Juss.) Planch. ex Oliv.

588 Type of *Sphedamnocarpus pulcherrimus* Engl. & Gilg (B. holo. †; ***BM**, **BR**, ***COI**, **K**, **M**, **W**, **Z**, iso.). Longa, Napalanka, 28-12-1899, 1 150 m. Reference: Exell & Mendonça (1951b: 252).

MALVACEAE

PAVONIA Cav.

senegalensis (Cav.) Leistner

760 Type of *Hibiscus baumii* Gürke (B. holo. †; **BM**, **COI**, ***K**, **M**, **W**, **Z**, iso.). Kuito, Kutue-Sobi, 4-3-1900, 1 200 m. Reference: Exell & Mendonça (1937f: 157).

MELIACEAE

ENTANDROPHRAGMA C.DC.

ekebergioides (Harms) Sprague

88 Type of *Wulforstia ekebergioides* Harms (B, holo. †; *BM, COI, E, K, M, W, iso.). Humbe, 10-9-1899, 1 200 m. Reference: Exell & Mendonça (1951c: 309).

MENISPERMACEAE

TINOSPORA Miers

caffra (Miers) Troupin

540 Type of *Desmonema pallide-aurantiacum* Engl. & Gilg (B, holo.; *BM, BR, COI, E, G, K, M, S, Z, iso.). Kuito, Onjimba, 13-12-1899, 1 150 m. Reference: Exell & Mendonça (1937g: 39).

NYMPHAEACEAE

NYMPHAEA L.

sulphurea Gilg

325 (B, syn.; Z, isosyn.). Kuebe (near), 26-10-1899, 1 150 m. Reference: Exell & Mendonça (1937h: 48).

657 (B, syn.; *BM, *COI, K, isosyn.). Longa (left bank), Minnesera, 17-1-1900, 1 250 m. Reference: Exell & Mendonça (1937h: 48).

OCHNACEAE

OCHNA L.

arenaria De Wild. & T.Durand

813 Type of *Ochna roseiflora* Engl. & Gilg (B, lecto., designated by Exell & Mendonça (1951d: 285)†; K, W, isolecto.). Chimpungu-Kulei, 11-4-1900, 1 350 m. Note: Exell & Mendonça (1951d: 285) cited the two syntype collections 813 and 813a, but referred to the B duplicate of no. 813 as type, which is thus the lectotype. However, this specimen was destroyed. Verdcourt (2005) cited Baum 813 (B) as holotype.

813a Type of *Ochna roseiflora* Engl. & Gilg (B, syn. †; BM, E, isosyn.). Quiriri, Sakkemecho, 11-4-1900, 1 200 m. Reference: Exell & Mendonça (1951d: 285).

cinnabarina Engl. & Gilg

550 (B, holo. †; E, W, Z, iso.). Kuito, Longa, 16-12-1899, 1 150 m. Reference: Exell & Mendonça (1951d: 292).

pulchra Hook.

114 ? Type of *Ochna antunesii* Engl. & Gilg (B, holo. †; COI, K, P, W, Z, iso.). Hartebeest-Lövenpan, 18-9-1899, 1 100 m. Note: although the description in Warburg (1903) is based on this collection, the name had been previously considered a synonym by Tieghem (see Exell & Mendonça 1951d: 291) and the type may be a specimen collected by Antunes.

145 Type of *Ochna brunnescens* Engl. & Gilg (B, holo. †; BM, COI, E, K, P, Z, iso.). Chitanda (left bank), 24-9-1899, 1 150 m. Note: the name had been previously considered a synonym by Tieghem (see Exell & Mendonça 1951d: 291).

pygmaea Hiern

172 Type of *Ochna hoepfneri* Engl. & Gilg (B, lecto., designated by Exell & Mendonça (1951d: 287)†; BM, BR, *COI, K, M, P, W, iso.). Chitanda (right margin), 27-9-1899, 1 150 m. Note: Exell & Mendonça (1951d: 287) cite the two syntypes 172 and 220 but designate the B duplicate of the former as type (i.e. lectotype). This was apparently destroyed.

220 Type of *Ochna hoepfneri* Engl. & Gilg (B, syn. †; BM, COI, K, M, P, W, Z, isosyn.). Kuelleis (Maramba), 5-10-1899, 1 400 m. Reference: Exell & Mendonça (1951d: 287).

SAUVAGESIA L.

africana (Baill.) Bamps

620 Type of *Vausagesia bellidifolia* Engl. & Gilg (B, holo. †; BM, COI, E, G, K, M, W, Z, iso.). Longa, Chijija, 4-1-1900, 1 200 m. Reference: Exell & Mendonça (1951d: 284).

ONAGRACEAE

LUDWIGIA L.

senegalensis (DC.) J.Troch.

97 Type of *Ludwigia pulvinaris* Gilg (B, holo. †; COI, lecto., designated by Fernandes & Fernandes (1970: 196); G, K, M, W, Z, iso.). Kunene (left bank), Humbe, 12-9-1899, 1 066 m.

ORCHIDACEAE

BRACHYCORYTHIS Lindl.

angolensis (Schltr.) Schltr.

326 Type of *Platanthera angolensis* Schltr. (B, holo. †; BM, *COI, E, K, M, S, W, iso.).

Kuebe, 26-10-1899, 1 150 m. Reference: Summerhayes (1968: 21).

614 Type of *Brachycorythis oligophylla* Kraenzl. (B, holo. †; BM, W, iso.). Longa, Napalanka, 1-1-1900, 1 150 m.

rhodostachys (Schltr.) Summerh.

381 Type of *Platanthera rhodostachys* Schltr. (B, syn. †; *BM, E, W, isosyn.). Kubango, Kueio, 4-11-1899, 1 120 m. Note: Summerhayes (1968: 18) cited the collection 381 at B as holotype. In fact, there were two syntypes, 381 and 629. The 381 duplicate cited as holotype was also reported as destroyed, therefore this is not considered a lectotypification.

629 Type of *Platanthera rhodostachys* Schltr. (B, syn. †; W, iso-syn.). Longa, Chijija, 5-1-1900, 1 200 m.

EULOPHIA R.Br. ex Lindl.

adenoglossa (Lindl.) Rchb.f.

505 Type of *Eulophia baumiana* Kraenzl. (B, holo. †; K, W, iso.). Ungombekike, 5-12-1899, 1 200 m. Note: the holotype is cited by Cribb (1989: 455) as seen; however, it is not available in Aluka nor in the B website.

arenicola Schltr.

384 (B, holo. †; COI, E, K, M, W, iso.). Kubango, Kueio, 11-1899, 1 120 m.

calantha Schltr.

382 Type of *Eulophia calantha* Schltr. var. *kubangensis* Schltr. (B, holo. †). Kubango, Kueio, 4-11-1899, 1 120 m. Reference: Cribb (1989: 435).

631 (B, holo. †; BM, COI, E, *G, *K, M, S, W, iso.). Longa, Chijija, 5-1-1900, 1 200 m. Reference: Cribb (1989: 434).

coeloglossa Schltr.

367 (B, holo. †; BM, COI, E, *G, K, M, S, W, iso.). Kubango, Kueio, 11-1899, 1 120 m. Reference: Cribb (1989: 435).

corymbosa Schltr.

377 (B, holo. †; E, K, M, S, W, iso.). Kubango, Kueio, 4-11-1899, 1 120 m.

gonychila Schltr.

261 (B, holo. †). Nambali, Kubango (near), 7-10-1899, 1 200 m. Reference: Cribb (1989: 471).

malangana (Rchb.f.) Summerh.

496 Type of *Eulophia warburgii* Schltr. (B, holo. †; COI, E, K, M, S, W, iso.). Habungu, 30-11-1899, 1 100 m. Reference: Cribb (1989: 434).

rofeana Kraenzl.

369 (B, holo. †). Kubango (right bank), Kueio (mouth), 3-11-1899.

tricristata Schltr.

357 (B, holo. †; COI, K, M, S, W, iso.). Kubango, Kabindere, 30-11-1899, 1 130 m.

trilamellata De Wild.

341 Type of *Eulophia macra* Schltr., *nom. illeg.* (B, holo. †; COI, K, M, S, W, *Z, iso.). Kubango, Kabindere, 10-1899, 1 130 m. Note: the holotype is cited by Cribb (1989: 455) as seen; however, it is not available in Aluka nor in the B website.

HABENARIA Willd.

holothrix Schltr.

578 (B, holo. †; BM, COI, K, M, *S, W, Z, iso.). Longa, Napalanka, 12-1899, 1 150 m. Reference: Summerhayes (1968: 122).

holubii Rolfe

598 Type of *Habenaria rhopaloceras* Schltr. (B, holo. †; BM, *COI, K, M, W, Z, iso.). Maschonge, Napalanka, 28-12-1899, 1 150 m. Reference: Summerhayes (1968: 110).

huillensis Rchb.f.

425 Type of *Habenaria kubangensis* Schltr. (B, holo. †; BM, M, S, W, Z, iso.). Kubango, Kavanga-Kalolo, 19-11-1899, 1 100 m.

macroplectron Schltr.

603 (B, holo. †; BM, K, M, S, W, Z, iso.). Longa, Napalanka, 1-1-1900, 1 150 m.

HABENARIA Willd. (cont.)**verdickii** (De Wild.) Schltr.

561 Type of *Habenaria monophylla* Schltr., *nom. illeg.* (B. holo. †; **BM, K, M, S, W, Z**, iso.). Jonkoa, 20-12-1899, 1 150 m.

PHAIUS Lour.**occidentalis** Schltr.

374 (B. holo. †). Kubango, Kueio, 3-11-1899, 1 120 m. Reference: Cribb (1984: 281).

POLYSTACHYA Hook.**dendrobiiflora** Rehb.f.

839 Type of *Polystachya holochila* Schltr. (B. holo. †; **COL, G, K, M, S, W**, iso.). Lazingua, 20-4-1900, 1 300 m. Reference: Cribb (1984: 286).

SATYRIUM Sw.**oliganthum** Schltr.

383 Type of *Satyrium paludosum* Rehb.f. var. *parvibracteatum* Schltr. (B. holo. †; **K, W**, iso.). Kubango, Kueio, 4-11-1899, 1 120 m.

OROBANCHACEAE**BUCHNERA** L.**baumii** Engl. & Gilg

225 (B. holo. †; **COL, G, K, M, W, Z**, iso.). Kuelleis (Maramba), 5-10-1899, 1 400 m.

prorepens Engl. & Gilg

875 (B. holo. †; **COL, G, K, M, W**, iso.). Kulei-Kutsi, 29-4-1900, 1 300 m.

strictissima Engl. & Gilg

734 (B. holo. †; **BM, COL, K, M, W**, iso.). Kampuluve (at source), 25-2-1900, 1 210 m.

CYCNIUM E.Mey. ex Benth. emend. Engl.**tubulosum** (L.f.) Engl. subsp. **tubulosum**

403 Type of *Cycnium hamatum* Engl. & Gilg (B. holo. †; **BM**, lecto., designated by Jansen (1978: 34); **COL, HBG, K, W**, iso.). Quatiri (mouth), 13-11-1899, 1 100 m.

HARVEYA Hook.**andongensis** Hiern

869 Type of *Harveya macrantha* Engl. & Gilg (B. holo. †; **COL, E, K, M, W**, iso.). Kulei, 26-4-1900, 1 300 m.

SOPUBIA Buch.-Ham. ex D.Don**mannii** Skan

475 Type of *Sopubia dregeana* Benth. var. *tenuifolia* Engl. & Gilg (B. holo. †; **COL, E, G, K, M, W**, iso.). Habungu, Maramba, 28-11-1899, 1 100 m.

PASSIFLORACEAE**BASANANTHE** Peyr.**baumii** (Harms) W.J.de Wilde

391 Type of *Trypsothema baumii* Harms (B. holo. †?; ***BM, *COL, G, *K, M, W, Z**, iso.). Kubango (right bank), Kueio (right bank), 7-11-1899, 1 120 m.

PEDALIACEAE**SESAMUM** L.**calycinum** Welw. subsp. **repens** (Engl. & Gilg) Seidenst.

660 Type of *Sesamum repens* Engl. & Gilg (B. holo. †; **K, W**, iso.). Longa (left bank), Lazingua, 20-1-1900, 1 250 m.

POACEAE**ELYTROPHORUS** P.Beauv.**globularis** Hack.

112 Type of *Elytrophorus interruptus* Pilg. (B. holo. †?; **BM, K, M, W**, iso.). Kunene (left bank), Soba Gongo (near), 17-9-1899, 1 115 m.

SPOROBOLUS R.Br.**welwitschii** Rendle

511 Type of *Sporobolus baumianus* Pilg. (B. holo. †?; **M**, iso.). Ungombekike, 5-12-1899, 1 200 m.

PODOSTEMACEAE**LEDERMANNIELLA** Engl.**warmingiana** (Gilg) C.Cusset

904 Type of *Sphaerostylax warmingiana* Gilg (B. holo. †; **BM, COL, K, M, W, Z**, iso.). Kubango, Menemprem, 11-5-1900, 1 300 m.

POLYGALACEAE**POLYGALA** L.**arenicola** Gürke

301 (B. holo. †; **BM**, lecto., designated by Paiva (1998: 235); ***COL, E, K, M, W, Z**, iso.). Kuebe, 23-10-1899, 1 170 m. Reference: Exell & Mendonça (1937i: 107).

baumii Gürke

815 (B. holo. †; **BM**, lecto., designated by Paiva (1998: 231); **BR, *COL, E, K, M, W, Z**, iso.). Quiriri, Sakkemecho, 16-4-1900, 1 200 m. Reference: Exell & Mendonça (1937i: 106).

kalaxariensis Schinz

287 Type of *Polygala kubangensis* Gürke (B. holo. †; **BM, *COL, E, *K, M, W**, iso.). Kubango, Massaca, 19-10-1899, 1 150 m. References: Exell & Mendonça (1937i: 106); Paiva (1998: 234).

nambalensis Gürke

244 (B. holo. †; **BM**, iso.). Nambali (Maramba), 6-10-1899, 1 275 m. Reference: Exell & Mendonça (1937i: 99).

817 Type of *Polygala psammophila* Gürke, *nom. illeg.* (B. syn. † **BM, *COL, *K, W**, isosyn.). Quiriri, Sakkemecho, 16-4-1900, 1 200 m. Reference: Exell & Mendonça (1937i: 99).

871 Type of *Polygala psammophila* Gürke, *nom. illeg.* (B. lecto., designated by Exell & Mendonça (1937i: 99) †; **BM, *COL, K, M, W**, iso.). Kulei-Kutsi, 29-4-1900, 1 300 m. Note: Exell & Mendonça (1937i) cited the two syntypes 817 and 871, but they indicated the B duplicate of the latter as type, making it a lectotype. This specimen was later destroyed.

paludicola Gürke

315a (B. syn. †). Kuebe, 23-10-1899, 1 170 m.

373 (B. lecto., designated by Exell & Mendonça (1937i:100) †; **BM**, lecto., designated by Paiva (1998: 209) without collection number; **E, K, W**, isolecto.). Kubango (right bank), Kueio (mouth), 3-11-1899, 1 120 m. Note: Exell & Mendonça (1937i: 100) cited the three syntype collections, 373, 373a and 315a, referring to the B duplicate of the first as type. However, this duplicate was later destroyed. Paiva (1998) indicated as lectotype the duplicate at **BM** of a Baum collection from R.Cubango but the number was omitted. It is assumed that it is no. 373, since the other two syntype collections are from other localities.

373a (B. syn. †; **BM, *COL, E, *K, W, Z**, isosyn.). Longa, Maschonge, 30-12-1899, 1 120 m. Reference: Exell & Mendonça (1937i: 100).

rivularis Gürke

595 (B. syn. †; ***BM, *COL, K, W, Z**, isosyn.). Maschonge, Napa-lanka, 28-12-1899, 1 150 m. Reference: Exell & Mendonça (1937i: 105).

911 (**BM**, lecto., designated by Paiva (1998: 224); ***COL, E, K, W, Z**, iso.). Kubango, Kohi, 15-5-1900, 1 350 m. Note: Exell & Mendonça (1937i: 105) cited the two syntype collections 595 and 911, referring to the B duplicate of the latter as type. This specimen was later destroyed. The **BM** duplicate was later designated as lectotype by Paiva (1998).

robusta Gürke

704 Type of *Polygala robusta* Gürke var. *coerulea* Gürke (B. holo. †; **BM**, lecto., designated by Paiva (1998: 230); **BM, BR, *COL, E, K, M, W, Z**, iso.). Longa, Quiriri, 3-2-1900, 1 275 m. Reference: Exell & Mendonça (1937i: 106). Note: this is the lectotype of *P. robusta*.

704a Type of *Polygala robusta* Gürke var. *rubra* Gürke (B. holo. †). Quiriri, Sakkemecho, 15-4-1900, 1 200 m. References: Exell & Mendonça (1937i: 106); Paiva (1998: 230).

POLYGALA L. (cont.)

schinziana Chodat

554 Type of *Polygala benguellensis* Gürke (B, holo. †; BM, *COI, *K, W, Z, iso.). Jonkoa, 17-12-1899, 1 150 m. References: Exell & Mendonça (1937i: 104); Paiva (1998: 219).

PRIMULACEAE

ANAGALLIS L.

filifolia Engl. & Gilg

906 (B, holo. †; COI, E, M, S, W, Z, iso.). Kubango, Kofi, 14-5-1900, 1 350 m.

PROTEACEAE

FAUREA Harv.

intermedia Engl. & Gilg

912 (B, holo.; *BR, COI, E, K, M, iso.). Kubango, Kofi, 15-5-1900, 1 350 m. Reference: Brummitt & Mamer (1993: 7).

PROTEA L.

angolensis Welw. var. *angolensis*

863 Type of *Protea chionantha* Engl. & Gilg var. *typica* Engl. & Gilg (B, holo. [of *P. chionantha*]; BM, COI, E, G, K, M, Z, iso.). Chimpungu-Kulei, 25-4-1900, 1 400 m.

angolensis Welw. var. *divaricata* (Engl. & Gilg) Beard

920 Type of *Protea chionantha* Engl. & Gilg var. *divaricata* Engl. & Gilg (B, holo.; BM, COI, E, G, K, M, Z, iso.). Kubango-Kassinga, 17-5-1900, 1 400 m.

baumii Engl. & Gilg subsp. *baumii*

375 (B, holo.; BM, E, G, M, Z, iso.). Kubango (right bank), Kueio (mouth), 3-11-1899, 1 100 m.

gaguedi J.F.Gmel.

272 Type of *Protea chrysolepis* Engl. & Gilg (B, holo.; BM, COI, E, G, M, Z, iso.). Kubango, Chirumbu, 14-10-1899, 1 200 m.

lemairei De Wild. subsp. *trichophylla* (Engl. & Gilg) Beard

918 Type of *Protea trichophylla* Engl. & Gilg (B, holo.; BM, COI, E, G, K, M, Z, iso.). Kubango-Kassinga, 17-5-1900, 1 400 m.

poggei Engl. subsp. *haemantha* Chisumpa & Brummitt

709 Type of *Protea haemantha* Engl. & Gilg (B, holo.; BM, COI, E, G, K, M, Z, iso.). Longa, Quiriri, 6-2-1900, 1 275 m.

welwitschii Engl.

653 Type of *Protea melliodora* Engl. & Gilg (B, holo.; BM, COI, E, G, M, Z, iso.). Longa, Minnesera, 11-1-1900, 1 250 m.

903 Type of *Protea myrsinifolia* Engl. & Gilg (B, holo.; COI, G, K, M, S, Z, iso.). Kubango, Menemprem, 8-5-1900, 1 450 m.

RUBIACEAE

CALANDA K.Schum.

rubricaulis K.Schum. var. *rubricaulis*

899 (B, holo. †; BR, COI, K, M, W, Z, iso.). Menemprem, Kubango (near), 14-5-1900, 1 450 m.

FADOGIA Schweinf.

chlorantha K.Schum. var. *chlorantha*

482 (B, holo. †; E, W, Z, iso.). Habungu, 28-11-1899, 1 100 m.

chlorantha K.Schum. var. *thamnus* (K.Schum.) Verdc.

491 Type of *Fadogia thamnus* K.Schum. (B, holo. †; BM, E, K, M, S, W, Z, iso.). Habungu, 22-11-1899, 1 100 m.

chrysantha K.Schum.

210 (B, holo.; BM, M, S, W, Z, iso.). Kassinga, 4-10-1899, 1 290 m.

GARDENIA Ellis

brachythamnus (K.Schum.) Launert

389 Type of *Randia brachythamnus* K.Schum. (B, holo. †; BM, COI, M, W, Z, iso.). Kubango (right bank), Kueio, 5-11-1899, 1 100 m.

LEPTACTINA Hook.f.

pretrophylax K.Schum.

137 (B, holo. †; BM, E, G, W, Z, iso.). Chitanda (left bank), 23-9-1899, 1 105 m.

prostrata K.Schum.

713 (B, holo. †; E, G, W, iso.). Quiriri, Sakkemecho, 13-2-1900, 1 300 m.

NEOPENTANISIA Verdc.

annua (K.Schum.) Verdc.

659 Type of *Pentania annua* K.Schum. (B, holo. †; BM, K, M, W, Z, iso.). Longa (left bank), Lazingua, 20-1-1900, 1 250 m.

PAVETTA L.

arenicola K.Schum.

522 (B, holo. †; E, W, iso.). Ungombekike-Kuito, 10-12-1899, 1 200 m.

paupercula K.Schum.

805 (B, holo. †; BM, E, K, W, Z, iso.). Quiriri, Sakkemecho, 9-4-1900, 1 200 m.

stipulopallium K.Schum.

948 (B, holo.; BM, E, K, M, W, Z, iso.). Chitanda (left bank), 28-5-1900, 1 150 m.

RYTIGYNIA Blume

orbicularis (K.Schum.) Robyns

581 Type of *Plectronia orbicularis* K.Schum. (B, holo.; BM, E, K, M, W, Z, iso.). Longa, Napalanka, 25-12-1899, 1 150 m.

VANGUERIA Juss.

proschii Briq.

446 Type of *Vangueria lasiocladus* K.Schum. (B, holo.; COI, E, K, M, W, Z, iso.). Kubango (left bank), Kalolo, 20-11-1899.

SANTALACEAE

THESIUM L.

leucanthum Gilg

218 (B, holo. †?; COI, E, K, W, iso.). Kassinga-Kolove, 4-10-1899, 1 300 m.

lycopodioides Gilg

879 (B, holo. †?; E, K, W, iso.). Kulei-Kutsi, 29-4-1900, 1 300 m.

SCROPHULARIACEAE

BAUMIA Engl. & Gilg

angolensis Engl. & Gilg

785 (B, holo. †?; S, iso.). Onschingue, Kuito (near), 29-3-1900, 1 200 m.

DOPATRIUM Benth.

stachytarphetoides Engl. & Gilg

923 (B, holo. †?; COI, E, M, S, W, iso.). Kubango-Kassinga, 17-5-1900, 1 400 m.

LIMNOPHILA R.Br.

ceratophylloides (Hiern) Skan

750 Type of *Ambulia baumii* Engl. & Gilg (B, holo. †?; COI, K, M, S, W, Z, iso.). Kutue, 2-3-1900, 1 200 m.

dasyantha (Engl. & Gilg) Skan

729 Type of *Ambulia dasyantha* Engl. & Gilg (B, holo. †?; COI, K, M, S, W, iso.). Quiriri, Sobi, 2-1900, 1 285 m.

SIMAROUBACEAE

KIRKIA Oliv.

acuminata Oliv.

966 p.p. quoad fructus, Type of *Kirkia glauca* Engl. & Gilg (B, holo. †?). Makopi-Gambos, 8-6-1900, 1 200 m. Reference: Exell & Mendonça (1951e: 276).

QUASSIA L.

undulata (Guill. & Perr.) D.Dietr.

674 Type of *Hannoa chlorantha* Engl. & Gilg (B, holo. †; *BM, COI, K, M, S, W, iso.). Longa, Lazingua, 23-1-1900, 1 250 m. Reference: Exell & Mendonça (1951c: 278); Stannard (2000: 11).

STERCULIACEAE

HERMANNIA L.

eenii Baker f.

514 Type of *Hermannia angolensis* K.Schum. (B, holo. †; *BM, COI, E, G, K, M, W, Z, iso.). Ungombekike-Kuito, 9-12-1899, 1 200 m. Reference: Exell & Mendonça (1951f: 195).

STRYCHNACEAE

STRYCHNOS L.

cocculoides Baker

290 Type of *Strychnos schumanniana* Gilg (B, holo. †; BM, E, K, W, Z, iso.). Kubango, Massaca, 19-10-1899, 1 150 m.

THYMELAEACEAE

GNIDIA L.

baumiana Gilg

211 (B, holo. †; COI, M, W, iso.). Chitanda, Kassinga, 4-10-1899, 1 290 m.

pleurocephala Gilg

828 (B, holo. †; W, iso.). Longa, 18-4-1900, 1 275 m.

TILIACEAE

GREWIA L.

avellana Hiern

289 Type of *Grewia perennans* K.Schum. (B, holo. †; G, iso.). Kubango, Massaca, 19-10-1899, 1 150 m. Reference: Exell & Mendonça (1951g: 218).

535 Type of *Grewia hydrophila* K.Schum. (B, holo. †; *BM, COI, E, G, *K, M, Z, iso.). Kuito (near), 12-12-1899. Reference: Exell & Mendonça (1951g: 218).

falcistipula K.Schum.

353 (B, holo. †; COI, E, G, K, M, S, W, Z, iso.). Kubango (right bank), Kueio, 1-11-1899, 1 300 m. Reference: Exell & Mendonça (1951g: 216).

schinzii K.Schum.

420 Type of *Grewia pinacostigma* K.Schum. (B, holo. †; BM, E, G, W, iso.). Kubango (left bank), Kavanga, 18-11-1899, 1 100 m. Reference: Exell & Mendonça (1951g: 217).

suffruticosa K.Schum.

189 Type of *Grewia brevicaulis* K.Schum. (B, holo. †; *BM, COI, E, G, *K, M, S, Z, iso.). Goudkopje-Kakele, 3-10-1899, 1 210 m. Reference: Exell & Mendonça (1951g: 224).

VERBENACEAE

LIPPIA L.

baumii Gürke var. **baumii**

515 (B, holo. †; *BM, COI, G, K, M, W, iso.). Ungombekike-Kuito, 9-12-1899, 1 200 m. Reference: Verdecourt (1992: 32).

VITACEAE

AMPELOCISSUS Planch.

brunneo-rubra Gilg

509 (B, holo. †; *BM, COI, G, K, W, iso.). Ungombekike, 5-12-1899, 1 200 m. Reference: Exell & Mendonça (1954c: 38).

CISSUS L.

jatrophioides (Welw. ex Baker) Planch.

278 Type of *Cissus chlorantha* Gilg (B, holo. †; G, W, iso.). Kubango, Chirumbu, 14-10-1899, 1 200 m.

CYPHOSTEMMA (Planch) Alston

chloroleucum (Welw. ex Baker) Desc. ex Wild & R.B.Drumm.

361 Type of *Cissus hypargyrea* Gilg (B, holo. †; *BM, COI, G, *K, W, iso.). Kubango (left bank), Kabindere, 2-11-1899, 1 150 m. Reference: Exell & Mendonça (1954c: 60).

fugosioides (Gilg) Desc. ex Wild & R.B.Drumm.

174 (B, holo. †; *BM, COI, G, *K, M, W, iso.). Chitanda (right margin), 27-9-1899, 1 150 m. Reference: Exell & Mendonça (1954c: 58).

violaceo-glandulosum (Gilg) Desc.

270 (B, lecto., designated by Exell & Mendonça (1954c: 56)†; *BM, COI, G, *K, M, S, isolecto.). Kubango, Chirumbu, 11-10-1899, 1 200 m. Note: Exell & Mendonça (1954c) cited the two syntypes but only 270 is referred to as 'type'. This is considered a lectotypification.

276a (B, syn. †). Kubango, Chirumbu, 10-1899, 1 200 m. Reference: Exell & Mendonça (1954c: 56).

XYRIDACEAE

XYRIS L.

congensis Büttner

333 Type of *Xyris baumii* L.A.Nilsson (B, holo.; BM, BR, K, M, iso.). Kuebe and Kubango (confl.), 28-10-1899, 1 150 m.

ACKNOWLEDGEMENTS

The authors would like to thank: Ms Hester Steyn and Ms Sandra Turck, SANBI, for the map; Dr Eurico Martins, for information on collecting localities; Dr David Goyder and Dr Henk Beentje, for information on types.

REFERENCES

- BANCROFT, H. 1937. Dipterocarpaceae. *Conspectus florum angolensis* 1: 132-142. Junta de Investigações do Ultramar, Lisboa.
- BRETELIER, F.J. 1978. The African Dichapetalaceae IV. *Mededelingen Landbouwhogeschool Wageningen* 78-10: 1-84.
- BRUMMITT, R.K. & MARNER, S.K. 1993. Proteaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- CANNON, J.F.M. 1970. Umbelliferae. *Conspectus florum angolensis* 4: 334-360. Junta de Investigações do Ultramar and Instituto de Investigação Científica de Angola, Lisboa.
- COWLEY, E.J. 1988. Burmanniaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- CRIBB, P.J. 1984. Orchidaceae, Part 2. *Flora of tropical East Africa*. Balkema, Rotterdam.
- CRIBB, P.J. 1989. Orchidaceae, Part 3. *Flora of tropical East Africa*. Balkema, Rotterdam.
- EXELL, A.W. & GARCIA, J. 1970. Combretaceae. *Conspectus florum angolensis* 4: 44-93. Junta de Investigações do Ultramar and Instituto de Investigação Científica de Angola, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937a. Cruciferae. *Conspectus florum angolensis* 1: 49-52. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937b. Capparidaceae. *Conspectus florum angolensis* 1: 53-68. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937c. Caryophyllaceae. *Conspectus florum angolensis* 1: 108-113. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937d. Elatinaceae. *Conspectus florum angolensis* 1: 118, 119. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937e. Hypericaceae. *Conspectus florum angolensis* 1: 119-124. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937f. Malvaceae. *Conspectus florum angolensis* 1: 146-176. Junta de Investigações do Ultramar, Lisboa.

- EXELL, A.W. & MENDONÇA, F.A. 1937g. Menispermaceae. *Conspectus florum angolensis* 1: 32–45. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937h. Nymphaeaceae. *Conspectus florum angolensis* 1: 45–48. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1937i. Polygalaceae. *Conspectus florum angolensis* 1: 87–108. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951a. Ixonanthaceae. *Conspectus florum angolensis* 1: 246–248. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951b. Malpighiaceae. *Conspectus florum angolensis* 1: 250–254. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951c. Meliaceae. *Conspectus florum angolensis* 1: 305–320. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951d. Ochnaceae. *Conspectus florum angolensis* 1: 283–297. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951e. Simaroubaceae. *Conspectus florum angolensis* 1: 276–279. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951f. Sterculiaceae. *Conspectus florum angolensis* 1: 184–208. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1951g. Tiliaceae. *Conspectus florum angolensis* 1: 208–241. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1954a. Anacardiaceae. *Conspectus florum angolensis* 2: 95–134. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1954b. Celastraceae. *Conspectus florum angolensis* 2: 1–27. Junta de Investigações do Ultramar, Lisboa.
- EXELL, A.W. & MENDONÇA, F.A. 1954c. Vitaceae. *Conspectus florum angolensis* 2: 35–71. Junta de Investigações do Ultramar, Lisboa.
- FAYED, A. 1979. Revision der Grangeinae (Asteraceae–Astereae). *Mitteilungen der Botanischen Staatssammlung München* 15: 425–576.
- FERNANDES, R. 1966. Estudo das Anacardiaceae africanas. I. Contribuição para o conhecimento do género *Ozoroa* Del. *Garcia de Orta* 14,1: 19–60.
- FERNANDES, R. & FERNANDES, A. 1970. Onagraceae. *Conspectus florum angolensis* 4: 190–203. Junta de Investigações do Ultramar and Instituto de Investigação Científica de Angola, Lisboa.
- FIGUEIREDO, E. & SMITH, G.F. 2008. Plants of Angola—Plantas de Angola. *Strelitzia* 22. South African National Biodiversity Institute, Pretoria.
- GEBAUER, R. 1993. The type specimens of African *Loranthus* taxa (Loranthaceae) described by Engler and kept in the general herbarium at Berlin-Dahlem (B). *Willdenowia* 23: 257–289.
- HEINTZE, B. 2007. *Deutsche Forschungsreisende in Angola—Ethnografische Aneignungen*. Verlag Otto Lembeck, Frankfurt-Main.
- HIEPKO, P. 1987. The collections of the Botanical Museum Berlin-Dahlem (B) and their history. *Englera* 7: 219–252.
- HILLCOAT, D. 1966. Sophoreae. *Conspectus florum angolensis* 3,2: 372–384. Junta de Investigações do Ultramar, Lisboa.
- HOLMGREN, P.K., HOLMGREN, N.H. & BARNETT, L.C. 1990. *Index herbariorum*. Part I: The Herbaria of the World. New York Botanical Garden, Bronx, New York.
- JANSEN, O.J. 1978. The genus *Cycnium* Benth. emend. Engl. (Scrophulariaceae). A taxonomic revision. *Dansk Botanisk Arkiv* 32,3: 1–72.
- KOKWARO, J.O. 1986. Anacardiaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- LANJOUW, J. & STAFLEU, F.A. 1954. *Index Herbariorum*. Part II. Collectors A–D. *Regnum Vegetabile* 2: 1–174. International Bureau for Plant Taxonomy and Nomenclature, Utrecht.
- MANSFELD, P. 1983. *Hugo Baum, eine Biographie*. <http://baum.petermansfeld.de>.
- MENDES, E. 1970. *Anisophyllea*. *Conspectus florum angolensis* 4: 40–44. Junta de Investigações do Ultramar and Instituto de Investigação Científica de Angola, Lisboa.
- MENDONÇA, F.A. 1943. *Contribuições para o conhecimento da flora de Angola. I. Compositae*. Junta das Missões Geográficas e de Investigações Coloniais, Lisboa.
- MILNE-REDHEAD, E. 1953. Hypericaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- NEMOMISSA, S. 2002. Gentianaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- PAIVA, J. 1998. Polygalarum Africanarum et Madagascariensium Prodrum atque gerontogaei generis *Heterosamara* Kuntze, a genere *Polygala* L. segregati et a nobis denuo recepti, synopsis monographica. *Fontqueria* 50: 1–346.
- PERSOON, J.G.M., VAN DILST, F.J.H., KUIJPERS, R.P., LEEUWENBERG, A.J.M. & VONK, G.J.A. (eds). 1992. The African species of *Landolphia* P. Beauv. *Wageningen Agricultural University Papers* 92-2: 1–250.
- RAYNER, T.G.J. 1992. Studies on the genus *Bidens* L. (Compositae) from the eastern hemisphere. 3. Typification of names of *Bidens*, *Coreopsis* L., *Guizotia* Cass., and *Microlecanium* (Sch.Bip.) Benth. & Hook.f. from Africa. *Phytologia* 73: 77–97.
- SLEUMER, H. 1937. Flacourtiaceae. *Conspectus florum angolensis* 1: 78–87. Junta de Investigações do Ultramar, Lisboa.
- SMITH, C.A. 1966. Common names of South African plants. *Memoirs of the Botanical Survey of South Africa* No. 35.
- SOUSA, E.P. 1962. *Sesbania*. *Conspectus florum angolensis* 3,1: 180–186. Junta de Investigações do Ultramar, Lisboa.
- STANNARD, B. 2000. Simaroubaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- SUMMERHAYES, V.S. 1968. Orchidaceae, Part 1. *Flora of tropical East Africa*. Balkema, Rotterdam.
- TAYLOR, P. 1973. Lentibulariaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- THULIN, M. 1975. The genus *Wahlenbergia* s.lat. (Campanulaceae) in tropical Africa and Madagascar. *Symbolae Botanicae Upsalienses* 21: 1–223.
- THULIN, M. 1979. *Monopsis* (Lobeliaceae) in tropical Africa. *Botaniska Notiser* 132: 131–137.
- THULIN, M. 1984. Lobeliaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- TORRE, A.R. 1962. Papilionoideae: Genisteae–Galegeae. *Conspectus florum angolensis* 3,1: 1–187. Junta de Investigações do Ultramar, Lisboa.
- TORRE, A.R. 1965. Taxa angolensia nova vel minus cognita–IV. *Boletim da Sociedade Broteriana*, sér. 2, 39: 207–229.
- TORRE, A.R. 1966. Papilionoideae: Hedysareae–Sophoreae. *Conspectus florum angolensis* 3,2: 188–401.
- TORRE, A.R. & HILLCOAT, D. 1956. Caesalpinioideae. *Conspectus florum angolensis* 2,2: 162–253. Junta de Investigações do Ultramar, Lisboa.
- TOWNSEND, C.C. 1989. Umbelliferae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- VENTER, H.J.T., VERHOEVEN, R.L. & KOTZE, J.D.S. 1990. A monograph of *Tacazzea* (Periplocaceae). *South African Journal of Botany* 56: 93–112.
- VERDCOURT, B. 1984. Ixonanthaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- VERDCOURT, B. 1992. Verbenaceae. *Flora of tropical East Africa*. Balkema, Rotterdam.
- VERDCOURT, B. 2005. Ochnaceae. *Flora of tropical East Africa*. Royal Botanic Gardens, Kew.
- WARBURG, O. 1903. *Kunene–Sambesi–Expedition. H. Baum*. Kolonial-Wirtschaftliches Komitee, Berlin.
- Website addresses:
 Aluka: www.aluka.org
 Berlin Herbarium (B): www.bgbm.org
<http://www.bgbm.org/BGBM/research/colls/herb/phanerog.htm>
 List of families including extant collections of B before 1943 (accessed 2007).
 Kew Herbarium (K): www.kew.org/herbat
 Zurich Herbarium (Z): www.zuerich-herbarien.unizh.ch

INDEX TO PLANT NAMES

Note: synonyms in italics, accepted names in bold.

Adenodolichos

- baumii** Harms, 195
euryphyllus Harms, 195
rhomboideus (O.Hoffm.) Harms var. **rhomboideus**, 195

Aeollanthus

- engleri** Briq., 197
paludosus Gürke, 197
uliginosus Gürke, 197

Aeschynomene

- baumii** Harms, 195
bracteosa Welw. ex Baker, 195
nambalensis Harms, 195

Agelanthus terminaliae (Engl. & Gilg) Polhill & Wiens, 197**Aloe**

- baumii* Engl. & Gilg, 192
brunneo-punctata Engl. & Gilg, 192
metallica Engl. & Gilg, 192
nuttii Baker, 192
zebrina Baker, 192

Ambulia

- baumii* Engl. & Gilg, 200
dasyantha Engl. & Gilg, 200

Ammocharis baumii (Harms) Milne-Redh. & Schweick., 191**Ampelocissus brunneo-rubra** Gilg, 201*Amphidoxa lasiocephala* O.Hoffm., 192**Anagallis filifolia** Engl. & Gilg, 200**Ancilema plagiocapsa** K.Schum., 194**Anisopappus**

- chinensis** Hook. & Arn. subsp. **chinensis** var. **chinensis**, 192
gracilis O.Hoffm., 192
subdiscoideus O.Hoffm., 192

Anisophyllea

- fruticulosa* Engl. & Gilg, 191
quangensis Engl. ex Henriq., 191

Anthericum

- liliagastrum** Engl. & Gilg, 191
pallidiflavum Engl. & Gilg, 192
xylorrhizum Engl. & Gilg, 192

Antholyza magnifica Harms, 197**Artemisiopsis villosa** (O.Hoffm.) Schweick., 192**Asclepias**

- baumii** Schltr., 192
leucotricha Schltr., 192

Asparagus

- altiscandens** Engl. & Gilg, 192
baumii Engl. & Gilg, 192

Aspidoglossum masaicum (N.E.Br.) Kupicha, 192**Baikiaea plurijuga** Harms, 195**Baphia**

- cornifolia* Harms, 195
massaiensis Taub. subsp. **obovata** (Schinz) Brummitt var. **cornifolia** (Harms) Soladoye, 195

Basananthe baumii (Harms) W.J.de Wilde, 199**Baumia angolensis** Engl. & Gilg, 200**Belmontia**

- baumiana* Gilg, 196
chionantha Gilg, 196

Benguellia lanceolata (Gürke) G.Taylor, 197**Bergia**

- erythroleuca* Gilg, 195
pallide-rosea Gilg, 195
pentheriana Keissl., 195
spathulata Schinz, 195

Berlinia baumii Harms, 196**Bidens**

- baumii** (O.Hoffm.) Sherff, 192
flabellata O.Hoffm., 192

Boottia

- aschersoniana* Gürke, 196
kunenensis Gürke, 196

Boscia

- suaveolens* Gilg, 194
welwitschii Gilg, 194

Bothriocline linearifolia O.Hoffm., 193**Brachycorythis**

- angolensis** (Schltr.) Schltr., 198
oligophylla Kraenzl., 198
rhodostachys (Schltr.) Summerh., 198

Buchnera

- baumii** Engl. & Gilg, 199
prorepens Engl. & Gilg, 199
strictissima Engl. & Gilg, 199

Bulbine

- abyssinica** A.Rich., 192
xanthobotrys Engl. & Gilg, 192

Burmanna

- bicolor* Mart. var. *micrantha* Engl. & Gilg, 193
blanda Engl. & Gilg, 193
madagascariensis Mart., 193

Calanda rubricaulis K.Schum. var. **rubricaulis**, 200*Carpodinus leucantha* K.Schum., 192**Cephalaria retrosetosa** Engl. & Gilg, 195**Chironia baumiana** Gilg, 196**Chlorophytum**

- colubrinum** (Baker) Engl., 192
dolichostachys Engl. & Gilg, 192
psammophilum Engl. & Gilg, 192

Cissus

- chlorantha* Gilg, 201
fugosioides Gilg, 201
hypargyrea Gilg, 201
jatrophioides (Welw. ex Baker) Planch., 201

Clerodendrum baumii Gürke, 197*Coleus baumii* Gürke, 197**Combretum**

- arbuscula* Engl. & Gilg, 194
arenarium Engl. & Gilg, 194
argyrochryseum Engl. & Gilg, 194
aureonitens Engl. & Gilg, 194
baumii Engl. & Gilg, 194
collinum Fresen., 194
gnidioides Engl. & Gilg, 194
laeteviride Engl. & Gilg, 194
molle R.Br. ex G.Don, 194
monticola Engl. & Gilg, 194
pachycarpum Engl. & Gilg, 194
platypetalum Welw. ex M.A.Lawson subsp. **baumii** (Engl. & Gilg) Exell, 194

- psidioides** Welw. subsp. **dinteri** (Schinz) Exell, 194
quirirensis Engl. & Gilg, 194

Commelina

- elegantula* K.Schum., 194
filifolia K.Schum., 194
milne-redheadii Faden, 194
subulata Roth, 194
welwitschii C.B.Clarke, 194
welwitschii C.B.Clarke var. *glabra* K.Schum., 194

Conyza

- limosa** O.Hoffm., 192
welwitschii (S.Moore) Wild, 192

Copaifera baumiana Harms, 195*Coreopsis baumii* O.Hoffm., 192**Crassocephalum uvens** (Hiern) S.Moore, 192*Crinum baumii* Harms, 191**Crotalaria**

- angulicaulis** Harms, 195
baumii Harms, 195
densicephala Welw. ex Baker, 195
lachnoclada Harms, 195
leptoclada Harms var. **leptoclada**, 195
psammophila Harms, 195
sericifolia Harms, 195
subsessilis Harms, 195

Cryptolepis

- baumii* Schltr., 192
producta N.E.Br., 192

Cyrenium

- hamatum* Engl. & Gilg, 199
tubulosum (L.f.) Engl. subsp. **tubulosum**, 199

- Cyperus chrysocephalus** (K.Schum.) Kük., 195
- Cyphostemma**
chloroleucum (Welw. ex Baker) Desc. ex Wild & R.B.Drumm., 201
fugosoides (Gilg) Desc. ex Wild & R.B.Drumm., 201
violaceo-glandulosum (Gilg) Desc., 201
Desmonema pallide-aurantiacum Engl. & Gilg, 198
- Dichapetalum**
cymosum (Hook.) Engl., 195
venenatum Engl. & Gilg, 195
- Dicoma**
anomala Sond., 193
 subsp. **anomala**, 193
 var. *latifolia* O.Hoffm., 193
 var. *microphylla* O.Hoffm., 193
antunesii O.Hoffm., 193
- Diospyros**
batocana Hiern, 195
baumii Gürke, 195
kirkii Hiern, 195
virgata (Gürke) Brenan, 195
xanthocarpa Gürke, 195
- Dipcadi**
anthericoides Engl. & Gilg, 196
baumii Engl. & Gilg, 196
lividescens Engl. & Gilg, 196
longifolium (Lindl.) Baker, 196
vaginatum Baker, 196
viride (L.) Moench, 196
- Diplophium zambesianum** Hiern, 192
- Dopatrium stachytarphetoides** Engl. & Gilg, 200
- Duosperma**
quadrangulare (Klotzsch) Brummitt, 191
sessilifolium (Lindau) Brummitt, 191
- Elytrophorus**
globularis Hack., 199
interruptus Pilg., 199
- Emilia**
baumii (O.Hoffm.) S.Moore, 193
limosa (O.Hoffm.) C.Jeffrey, 193
- Entada**
arenaria Schinz subsp. **arenaria**, 195
nana Harms, 195
- Entandrophragma ekebergioides** (Harms) Sprague, 198
- Erigeron baumii** O.Hoffm., 193
- Erlangea linearifolia** (O.Hoffm.) S.Moore, 193
- Erythrina baumii** Harms, 196
- Euclea**
baumii Gürke, 195
crispa (Thunb.) Gürke, 195
divinorum Hiern, 195
huillensis Gürke, 195
- Eulophia**
adenoglossa (Lindl.) Rchb.f., 198
arenicola Schltr., 198
baumiana Kraenzl., 198
calantha Schltr., 198
calantha Schltr. var. *kubangensis* Schltr., 198
coeloglossa Schltr., 198
corymbosa Schltr., 198
gonychila Schltr., 198
macra Schltr., 198
malangana (Rchb.f.) Summerh., 198
rolfeana Kraenzl., 198
tricristata Schltr., 198
trilamellata De Wild., 198
warburgii Schltr., 198
- Fadogia**
chlorantha K.Schum., 200
 var. **chlorantha**, 200
 var. **thamnus** (K.Schum.) Verdc., 200
chrysantha K.Schum., 200
thamnus K.Schum., 200
- Faurea intermedia** Engl. & Gilg, 200
- Floscopa**
flavida C.B.Clarke, 194
pusilla K.Schum., 194
- Gardenia brachythamnus** (K.Schum.) Launert, 200
- Geniosporum baumii* Gürke, 197
- Gladiolus**
baumii Harms, 197
benguellensis Baker, 197
kubangensis Harms, 197
longanus Harms, 197
magnificus (Harms) Goldblatt, 197
pallidus Baker, 197
- Gnidia**
baumiana Gilg, 201
pleurocephala Gilg, 201
- Grangea anthemoides** O.Hoffm., 193
- Grewia**
avellana Hiern, 201
brevicaulis K.Schum., 201
falcistipula K.Schum., 201
hydrophila K.Schum., 201
peremans K.Schum., 201
pinacostigma K.Schum., 201
schinzii K.Schum., 201
suffruticosa K.Schum., 201
Gymnema melananthum K.Schum., 192
- Gymnosporia**
baumii Loes., 194
senegalensis (Lam.) Loes., 194
- Habenaria**
holothrix Schltr., 198
holubii Rolfe, 198
huillensis Rchb.f., 198
kubangensis Schltr., 198
macroplectron Schltr., 198
monophylla Schltr., 199
rhopaloceras Schltr., 198
verdieckii (De Wild.) Schltr., 199
Hannoa chlorantha Engl. & Gilg, 201
- Harveya**
andongensis Hiern, 199
macrantha Engl. & Gilg, 199
- Heeria**
argyrochrysea Engl. & Gilg, 191
benguellensis Engl. var. *petrophila* Engl. & Gilg, 191
longipes Engl. & Gilg, 191
stenophylla Engl. & Gilg, 191
xylophylla Engl. & Gilg, 191
- Helichrysum congolanum** Schltr. & O.Hoffm., 193
- Hermannia**
angolensis K.Schum., 201
eenii Baker f., 201
Hibiscus baumii Gürke, 197
- Hydrostachys triaxialis** Engl. & Gilg, 197
- Hygrophila**
affinis Lindau, 191
glutinifolia Lindau, 191
sessilifolia Lindau, 191
- Hypericum**
baumii Engl. & Gilg, 197
lalandii Choisy, 197
Hyptis baumii Gürke, 197
- Indigofera**
baumiana Harms, 196
griseoides Harms, 196
namhalensis Harms, 196
- Inula**
limosa O.Hoffm., 193
paludosa O.Hoffm., 193
- Ipomoea**
crassipes Hook., 194
 var. *hirta* Hallier f., 194
- Jatropha baumii** Pax, 195
- Julbernardia paniculata** (Benth.) Troupin, 196
- Kalanchoe**
baumii Engl. & Gilg, 194
brachyloba Welw. ex Britten, 194
- Kirkia**
acuminata Oliv., 200
glauca Engl. & Gilg, 200
Laggera humilis O.Hoffm., 193
- Landolphia camptoloba** (K.Schum.) Pichon, 192
- Ledebouria revoluta** (L.f.) Jessop, 196
- Ledermanniella warmingiana** (Gilg) C.Cusset, 199
- Lepidagathis macrochila** Lindau, 191

- Leptactina**
pretrophylax K.Schum., 200
prostrata K.Schum., 200
Lightfootia laricifolia Engl. & Gilg, 194
- Limnophila**
ceratophylloides (Hiern) Skan, 200
dasyantha (Engl. & Gilg) Skan, 200
- Lippia baumii** Gürke var. **baumii**, 201
- Lobelia**
angolensis Engl. & Diels ex Diels, 197
fonticola Engl. & Gilg, 197
minutidentata Engl. & Gilg, 197
- Loranthus*
baumii Engl. & Gilg, 197
terminaliae Engl. & Gilg, 197
- Ludwigia**
pulvinaris Gilg, 198
senegalensis (DC.) J.Troch., 198
Maba virgata Gürke, 195
Mariscus chrysocephalus K.Schum., 195
- Melanthera**
baumii O.Hoffm., 193
triternata (Klatt) Wild, 193
- Monopsis zeyheri** (Sond.) Thulin, 197
- Monotes dasyanthus** Gilg, 195
Nasturtium microcapsum Engl. & Gilg, 193
- Neopentania annua** (K.Schum.) Verdc., 200
- Nesaea baumii** Koehne, 197
- Neurotheca**
baumii Gilg, 196
congolana De Wild. & T.Durand, 196
- Nicolasia felicioides** S.Moore, 193
- Nidorella**
densiflora O.Hoffm., 193
linearifolia O.Hoffm., 192
resedifolia DC. subsp. **resedifolia**, 193
- Nymphaea sulphurea** Gilg, 198
- Ochna**
antunesii Engl. & Gilg, 198
arenaria De Wild. & T.Durand, 198
brunnescens Engl. & Gilg, 198
cinnabarina Engl. & Gilg, 198
hoepfneri Engl. & Gilg, 198
pulchra Hook., 198
pygmaea Hiern, 198
roseiflora Engl. & Gilg, 198
- Oncoba longipes* Gilg, 196
Orthosiphon lanceolatus Gürke, 197
- Ottelia**
baumii Gürke, 196
benguellensis Gürke, 196
kunenensis (Gürke) Dandy, 196
muricata (C.H.Wright) Dandy, 196
ulvifolia (Planch.) Walp., 196
- Ozoroa**
argyrochrysea (Engl. & Gilg) R.Fern. & A.Fern., 191
longipes (Engl. & Gilg) R.Fern. & A.Fern., 191
stenophylla (Engl. & Gilg) R.Fern. & A.Fern., 191
xylophylla (Engl. & Gilg) R.Fern. & A.Fern., 191
- Pasaccardoa baumii** O.Hoffm., 193
- Pavetta**
arenicola K.Schum., 200
paupercula K.Schum., 200
stipulopallium K.Schum., 200
- Pavonia senegalensis** (Cav.) Leistner, 197
Pentania annua K.Schum., 200
- Phaius occidentalis** Schltr., 199
- Phragmanthera baumii** (Engl. & Gilg) Polhill & Wiens, 197
- Phyllocosmus**
candidus Engl. & Gilg, 197
lemaireanus (De Wild. & T.Durand) T.Durand & H.Durand, 197
- Physostigma**
mesoponticum Taub., 196
var. **baumii** Harms, 196
- Physotrichia arenaria* Engl. & Gilg, 192
- Platanthera*
angolensis Schltr., 198
rhodostachys Schltr., 198
- Platostoma strictum** (Hiern) A.J.Paton, 197
- Plectranthus**
baumii Gürke, 197
betonicifolius Baker, 197
guerkei Briq., 197
Plectronia orbicularis K.Schum., 200
- Polycarpaea inaequalifolia** Engl. & Gilg, 194
- Polygala**
arenicola Gürke, 199
baumii Gürke, 199
benguellensis Gürke, 200
kalaxariensis Schinz, 199
kubangensis Gürke, 199
nambalensis Gürke, 199
paludicola Gürke, 199
psammophila Gürke, 199
rivularis Gürke, 199
robusta Gürke, 199
var. **coerulea** Gürke, 199
var. **rubra** Gürke, 199
schinziana Chodat, 200
- Polystachya**
dendrobiiflora Rechb.f., 199
holochila Schltr., 199
- Protea**
angolensis Welw., 200
var. **angolensis**, 200
var. **divaricata** (Engl. & Gilg) Beard, 200
baumii Engl. & Gilg subsp. **baumii**, 200
chionantha Engl. & Gilg, 200
var. **divaricata** Engl. & Gilg, 200
var. **typica** Engl. & Gilg, 200
chrysolepis Engl. & Gilg, 200
gaguedi J.F.Gmel., 200
haemantha Engl. & Gilg, 200
lemairei De Wild. subsp. **trichophylla** (Engl. & Gilg) Beard, 200
melliodora Engl. & Gilg, 200
mysinifolia Engl. & Gilg, 200
poggei Engl. subsp. **haemantha** Chisumpa & Brummitt, 200
trichophylla Engl. & Gilg, 200
welwitschii Engl., 200
- Pycnosphaera**
buchananii (Baker) N.E.Br., 196
trimera Gilg, 196
- Quassia undulata** (Guill. & Perr.) D.Dietr., 201
Randia brachythamnus K.Schum., 200
- Rhus**
commiphoroides Engl. & Gilg, 191
polyneura Engl. & Gilg, 191
var. **hylophila** Engl. & Gilg, 191
- Rhynchosia**
baumii Harms, 196
luteola (Hiern) K.Schum., 196
moninensis Harms, 196
- Rhynchospora**
dolichostyla K.Schum., 195
holoschoenoides (Rich.) Herter, 195
- Rorippa cryptantha** (A.Rich.) Robyns & Boutique, 193
- Rytigynia orbicularis** (K.Schum.) Robyns, 200
- Salacia**
bussei Loes., 194
rehmanni Schinz. var. **baumii** Loes., 194
Sapium suffruticosum Pax, 195
- Satyrium**
oliganthum Schltr., 199
paludosum Rechb.f. var. **parvibracteatum** Schltr., 199
- Sauvagesia africana** (Baill.) Bamps, 198
- Schizocarpus nervosus** (Burch.) Van der Merwe, 196
Schizoglossum baumii Schltr. ex N.E.Br., 192
- Scilla**
baumiana Engl. & Gilg, 196
ertospermoides Engl. & Gilg, 196
lanceifolia (Jacq.) Baker var. **longiracemosa** Engl. & Gilg, 196
- Sclerocroton oblongifolius** (Müll.Arg.) Kruijt & Roebbers, 195
- Searsia**
kirkii (Oliv.) Moffet, 191
tenuinervis (Engl.) Moffet, 191
- Sebaea**
baumiana (Gilg) Boutique, 196
teuszii (Schinz) P.Taylor, 196
- Senecio**
baumii O.Hoffm., 193
cryphiactis O.Hoffm., 193

- Senecio** (cont.)
limosus O.Hoffm., 193
telmatophilus O.Hoffm., 192
- Sesamum**
calycinum Welw. subsp. **repens** (Engl. & Gilg) Seidenst., 199
repens Engl. & Gilg, 199
- Sesbania**
coerulescens Harms, 196
microphylla Harms, 196
- Sopubia**
dregeana Benth. var. *tenuifolia* Engl. & Gilg, 199
mannii Skan, 199
- Sphaeranthus**
flexuosus O.Hoffm. ex De Wild., 193
humilis O.Hoffm., 193
Sphaerotherylax warmingiana Gilg, 199
- Sphedamnocarpus**
angolensis (A.Juss.) Planch. ex Oliv., 197
pulcherrimus Engl. & Gilg, 197
- Sporobolus**
baumianus Pilg., 199
welwitschii Rendle, 199
- Strobilanthopsis** **linifolia** (T.Anderson ex C.B.Clarke) Milne-Redh., 191
- Strychnos**
cocculoides Baker, 201
schumanniana Gilg, 201
- Tacazzea**
apiculata Oliv., 192
rosmarinifolia (Decne.) N.E.Br., 192
salicina Schltr., 192
verticillata K.Schum., 192
- Tephrosia**
cephalantha Welw. ex Baker, 196
coronilloides Welw. ex Baker, 196
hypargyrea Harms, 196
longana Harms, 196
- Terminalia**
baumii Engl. & Gilg, 194
brachystemma Welw. ex Hiern, 194
- Thesium**
leucanthum Gilg, 200
lycopodioides Gilg, 200
- Tinnea**
benguellensis Gürke, 197
coerulea Gürke var. *coerulea*, 197
fusco-luteola Gürke, 197
vestita Baker, 197
- Tinospora** **caffra** (Miers) Troupin, 198
- Trachyandra** **arvensis** (Schinz) Oberm., 192
- Trichodesma** **baumii** Gürke, 193
- Trochomeria** **baumiana** Gilg, 194
- Tryphostemma* **baumii** Harms, 199
- Tulbaghia**
aequinoctialis Welw. ex Baker subsp. **monantha** (Engl. & Gilg) R.B.Burb., 191
monantha Engl. & Gilg, 191
- Tylophora** **caffra** Meisn., 192
- Utricularia**
angolensis Kamienski, 197
baumii Kamienski, 197
spiralis Sm., 197
subulata L., 197
- Vangueria**
lasioclados K.Schum., 200
proschii Briq., 200
Vausagea **bellidifolia** Engl. & Gilg, 198
- Vernonia**
baumii O.Hoffm., 193
brideliifolia O.Hoffm., 193
gerberiformis Oliv. & Hiern subsp. **macrocyanus** (O.Hoffm.) C.Jeffrey, 193
limosa O.Hoffm., 193
mesogramme O.Hoffm., 193
primulina O.Hoffm., 193
pygmaea O.Hoffm., 193
subplumosa O.Hoffm., 193
temnolepis O.Hoffm., 193
- Wahlenbergia**
banksiana A.DC., 194
cyanea Engl. & Gilg, 194
denticulata (Burch.) A.DC., 194
leucantha Engl. & Gilg, 194
undulata (L.f.) A.DC., 194
Wulfhorstia **ekebergioides** Harms, 198
- Xylotheca** **longipes** (Gilg) Gilg, 196
- Xyris**
baumii L.A.Nilsson, 201
congensis Büttner, 201
- Xysmalobium** **undulatum** (L.) W.T.Aiton, 192
- Zantedeschia**
albomaculata (Hook.) Baill. subsp. **albomaculata**, 192
chloroleuca Engl. & Gilg, 192

INDEX OF BAUM COLLECTION NUMBERS CITED AND TAXON UNDER WHICH THEY ARE CITED IN THIS PAPER

- 32 *Duosperma quadrangulare* (Klotzsch) Brummitt
33 *Euclea divinorum* Hiern
43 *Lobelia angolensis* Engl. & Diels ex Diels
47 *Nidorella resedifolia* DC. subsp. *resedifolia*
50 *Nicolasia felicioides* S.Moore
53 *Combretum aureonitens* Engl. & Gilg
54, 56 *Combretum collinum* Fresen.
64 *Dichapetalum cymosum* (Hook.) Engl.
67 *Artemisiopsis villosa* (O.Hoffm.) Schweick.
68 *Senecio cryphiactis* O.Hoffm.
88 *Entandrophragma ekebergioides* (Harms) Sprague
97 *Ludwigia senegalensis* (DC.) J.Troch.
98 *Bergia pentheriana* Keissl.
110 *Bergia spathulata* Schinz
112 *Elytrophorus globularis* Hack.
113 *Combretum aureonitens* Engl. & Gilg
114 *Ochna pulchra* Hook.
117, 119 *Combretum platypetalum* Welw. ex M.A.Lawson subsp. *baumii* (Engl. & Gilg) Exell
120 *Ottelia ulvifolia* (Planch.) Walp.
121 *Baphia massaiensis* Taub. subsp. *obovata* (Schinz) Brummitt var. *cornifolia* (Harms) Soladove
122 *Scilla baumiana* Engl. & Gilg
122a *Jatropha baumii* Pax
126 *Grangea anthemoides* O.Hoffm.
127 *Combretum molle* R.Br. ex G.Don
129 *Rorippa cryptantha* (A.Rich.) Robyns & Boutique
133 *Physostigma mesopotanicum* Taub.
134 *Vernonia gerberiformis* Oliv. & Hiern subsp. *macrocyanus* (O.Hoffm.) C.Jeffrey
137 *Leptactina pretrophylax* K.Schum.
144 *Monopsis zeyheri* (Sond.) Thulin
145 *Ochna pulchra* Hook.
150 *Asparagus baumii* Engl. & Gilg
151 *Ipomoea crassipes* Hook.
155 *Combretum molle* R.Br. ex G.Don
172 *Ochna pygmaea* Hiern
174 *Cyphostemma fugosoides* (Gilg) Desc. ex Wild & R.B.Drumm.
184 *Sphaeranthus flexuosus* O.Hoffm. ex De Wild.
187 *Erigeron baumii* O.Hoffm.
189 *Grewia suffruticosa* K.Schum.
191 *Euclea crispa* (Thunb.) Gürke
197 *Melanthera triternata* (Klatt) Wild
203a *Ledebouria revoluta* (L.f.) Jessop
204 *Nesaea baumii* Koehne
210 *Fadogia chrysantha* K.Schum.
211 *Gnidia baumiana* Gilg
215 *Terminalia brachystemma* Welw. ex Hiern
217 *Phragmanthera baumii* (Engl. & Gilg) Polhill & Wiens
218 *Thesium leucanthum* Gilg
220 *Ochna pygmaea* Hiern
223 *Erythrina baumii* Harms
225 *Buchnera baumii* Engl. & Gilg
226 *Helichrysum congolanum* Schltr. & O.Hoffm.
232, 232a, 232b *Combretum platypetalum* Welw. ex M.A.Lawson subsp. *baumii* (Engl. & Gilg) Exell
235 *Vernonia pygmaea* O.Hoffm.
244 *Polygala nambalensis* Gürke
245 *Tacazzea rosmarinifolia* (Decne.) N.E.Br
252 *Aeschynomene bracteosa* Welw. ex Baker

- 254 Indigofera nambalensis Harms
 255 Vernonia limosa O.Hoffm.
 256 Commelina milne-redheadii Faden
 257 Sclerocroton oblongifolius (Müll.Arg.) Kruijt & Roebers
 261 Eulophia gonychila Schltr.
 263 Hydrostachys triaxialis Engl. & Gilg
 270 Cyphostemma violaceo-glandulosum (Gilg) Desc.
 272 Protea gaguedi J.F.Gmel.
 273 Ammocharis baumii (Harms) Milne-Redh. & Schweick.
 275 Aloe zebrina Baker
 276 Tacazzea apiculata Oliv.
 276a Cyphostemma violaceo-glandulosum (Gilg) Desc.
 278 Cissus jatrophioides (Welw. ex Baker) Planch.
 283 Plectranthus baumii Gürke
 287 Polygala kalaxariensis Schinz
 289 Grewia avellana Hiern
 290 Strychnos coccoloides Baker
 301 Polygala arenicola Gürke
 307 Utricularia spiralis Sm.
 311, 311a Cyperus chrysocephalus (K.Schum.) Kük.
 315a Polygala paludicola Gürke
 316 Sebaea teuszii (Schinz) P.Taylor
 318 Pasaccardoa baumii O.Hoffm.
 325 Nymphaea sulphurea Gilg
 326 Brachycorythis angolensis (Schltr.) Schltr.
 332 Xysmalobium undulatum (L.) W.T.Aiton
 333 Xyris congensis Büttner
 341 Eulophia trilamellata De Wild.
 342 Conyza welwitschii (S.Moore) Wild
 349 Dipcadi vaginatum Baker
 351a Tulbaghia aequinoctialis Welw. ex Baker subsp. monantha (Engl. & Gilg) R.B.Burb.
 353 Grewia falcistipula K.Schum.
 354 Crassocephalum uvens (Hiern) S.Moore
 355 Rhynchospora holoschoenoides (Rich.) Herter
 357 Eulophia tricristata Schltr.
 358 Conyza limosa O.Hoffm.
 361 Cyphostemma chloroleucum (Welw. ex Baker) Desc. ex Wild & R.B.Drumm.
 367 Eulophia coeloglossa Schltr.
 369 Eulophia rolfeana Kraenzl.
 373, 373a Polygala paludicola Gürke
 374 Phaius occidentalis Schltr.
 375 Protea baumii Engl. & Gilg subsp. baumii
 377 Eulophia corymbosa Schltr.
 381 Brachycorythis rhodostachys (Schltr.) Summerh.
 382 Eulophia calantha Schltr.
 383 Satyrium oliganthum Schltr.
 384 Eulophia arenicola Schltr.
 388 Xylothea longipes (Gilg) Gilg
 389 Gardenia brachythamnus (K.Schum.) Launert
 391 Basananthe baumii (Harms) W.J.de Wilde
 398 Zantedeschia albomaculata (Hook.) Baill. subsp. albomaculata
 402 Asparagus altiscandens Engl. & Gilg
 403 Cynenium tubulosum (L.f.) Engl. subsp. tubulosum
 410 Schizocarpus nervosus (Burch.) Van der Merwe
 412 Trachyandra arvensis (Schinz) Oberm.
 413 Aspidoglossum masaicum (N.E.Br.) Kupicha
 420 Grewia schinzii K.Schum.
 421 Wahlenbergia banksiana A.DC.
 425 Habenaria huillensis Rchb.f.
 428 Baikiaea plurijuga Harms
 433 Conyza limosa O.Hoffm.
 445 Trochomeria baumiana Gilg
 446 Vangueria proscii Briq.
 447 Ledebouria revoluta (L.f.) Jessop
 454 Ipomoea crassipes Hook.
 457 Cryptolepis producta N.E.Br.
 459 Dipcadi viride (L.) Moench
 461 Anthericum liliagstrum Engl. & Gilg
 471 Entada arenaria Schinz subsp. arenaria
 474 Inula limosa O.Hoffm.
 475 Sopubia mannii Skan
 477 Wahlenbergia undulata (L.f.) A.DC.
 482 Fadogia chlorantha K.Schum. var. chlorantha
 483 Crotalaria sericifolia Harms
 487 Bulbine abyssinica A.Rich.
 491 Fadogia chlorantha K.Schum. var. thamnus (K.Schum.) Verdc.
 496 Eulophia malangana (Rchb.f.) Summerh.
 497 Indigofera baumiana Harms
 499 Dipcadi longifolium (Lindl.) Baker
 505 Eulophia adenoglossa (Lindl.) Rchb.f.
 509 Ampelocissus brunneo-rubra Gilg
 511 Sporobolus welwitschii Rendle
 512 Ozoroa longipes (Engl. & Gilg) R.Fern. & A.Fern.
 514 Hermannia eenii Baker f.
 515 Lippia baumii Gürke var. baumii
 517 Chlorophytum psammophilum Engl. & Gilg
 519 Agelanthus terminaliae (Engl. & Gilg) Polhill & Wiens
 522 Pavetta arenicola K.Schum.
 523 Copaifera baumiana Harms
 526 Tylophora caffra Meisn.
 530 Anthericum xylothezium Engl. & Gilg
 535 Grewia avellana Hiern
 540 Tinospora caffra (Miers) Troupin
 544 Plectranthus betonicifolius Baker
 550 Ochna cinnabarina Engl. & Gilg
 554 Polygala schinziana Chodat
 561 Habenaria verdickii (De Wild.) Schltr.
 563 Tephrosia cephalantha Welw. ex Baker
 565 Gymnosporia senegalensis (Lam.) Loes.
 569 Sesbania microphylla Harms
 578 Habenaria holothrix Schltr.
 581 Rytigynia orbicularis (K.Schum.) Robyns
 588 Sphegamnocarpus angolensis (A.Juss.) Planch. ex Oliv.
 595 Polygala rivularis Gürke
 598 Habenaria holubii Rolfe
 603 Habenaria macroplectron Schltr.
 604 Neurotheca congolana De Wild. & T.Durand
 610 Vernonia brideliifolia O.Hoffm.
 611 Chlorophytum colubrinum (Baker) Engl.
 612 Tephrosia coronilloides Welw. ex Baker
 614 Brachycorythis angolensis (Schltr.) Schltr.
 616 Vernonia mesogramme O.Hoffm.
 619 Burmannia madagascariensis Mart.
 620 Sauvagesia africana (Baill.) Bamps
 624 Vernonia limosa O.Hoffm.
 629 Brachycorythis rhodostachys (Schltr.) Summerh.
 630 Inula limosa O.Hoffm.
 631 Eulophia calantha Schltr.
 632 Gladiolus benguellensis Baker
 638, 638a Searsia kirkii (Oliv.) Moffet
 644 Platostoma strictum (Hiern) A.J.Paton
 651 Gladiolus magnificus (Harms) Goldblatt
 653 Protea welwitschii Engl.
 657 Nymphaea sulphurea Gilg
 659 Neopentania annua (K.Schum.) Verdc.
 660 Sesamum calycinum Welw. subsp. repens (Engl. & Gilg) Seidenst.
 661 Clerodendrum baumii Gürke
 662 Ozoroa stenophylla (Engl. & Gilg) R.Fern. & A.Fern.
 664 Ozoroa xylophylla (Engl. & Gilg) R.Fern. & A.Fern.
 669 Landolphia campitoba (K.Schum.) Pichon
 670 Crotalaria densicephala Welw. ex Baker
 674 Quassia undulata (Guill. & Perr.) D.Dietr.
 691 Utricularia subulata L.
 692 Sebaea baumiana (Gilg) Boutique
 695 Tinnea vestita Baker
 697 Tinnea benguellensis Gürke
 698 Aloe nuttii Baker
 699 Inula paludosa O.Hoffm.
 699a Asclepias baumii Schltr.
 702 Sebaea teuszii (Schinz) P.Taylor
 703 Vernonia subplumosa O.Hoffm.
 704 Polygala robusta Gürke
 707 Emilia baumii (O.Hoffm.) S.Moore
 709 Protea poggei Engl. subsp. haemantha Chisumpa & Brummitt
 710 Erlangea linearifolia (O.Hoffm.) S.Moore
 712 Phyllocosmus lemaireanus (De Wild. & T.Durand) T.Durand & H.Durand
 713 Leptactina prostrata K.Schum.
 716 Aneilema plagiocapsa K.Schum.
 722 Combretum psidioides Welw. subsp. dinteri (Schinz) Exell
 726 Burmannia madagascariensis Mart.
 729 Limnophila dasyantha (Engl. & Gilg) Skan
 731 Bulbine abyssinica A.Rich.
 732 Julbernardia paniculata (Benth.) Troupin
 734 Buchnera strictissima Engl. & Gilg
 737 Acoellanthus engleri Briq.

- 739 *Chironia baumiana* Gilg
 740 *Crotalaria angulicaulis* Harms
 741 *Crotalaria psammophila* (Harms) N.E.Br
 744 *Searsia tenuinervis* (Engl.) Moffet
 745 *Indigofera griseoides* Harms
 750 *Limnophila ceratophylloides* (Hiern) Skan
 752 *Pycnosphaera buchananii* (Baker) N.E.Br
 760 *Pavonia senegalensis* (Cav.) Leistner
 764 *Rhynchosia baumii* Harms
 772 *Ottelia muricata* (C.H.Wright) Dandy
 779 *Lepidagathis macrochila* Lindau
 780 *Diospyros batocana* Hiern
 782 *Sesbania coerulescens* Harms
 784 *Erlangea linearifolia* (O.Hoffm.) S.Moore
 785 *Baumia angolensis* Engl. & Gilg
 787 *Crotalaria subsessilis* Harms
 789 *Plectranthus guerkei* Briq.
 792 *Diospyros virgata* (Gürke) Brenan
 801 *Anisopappus chinensis* Hook. & Arn. subsp. chinensis var. chinensis
 804 *Dicoma anomala* Sond. subsp. anomala
 805 *Pavetta paupercula* K.Schum.
 808 *Anisophyllea quangensis* Engl. ex Henriq.
 810 *Aeschynomene baumii* Harms
 813, 813a *Ochna arenaria* De Wild. & T.Durand
 814 *Commelina welwitschii* C.B.Clarke
 815 *Polygala baumii* Gürke
 816 *Polycarpha inaequalifolia* Engl. & Gilg
 817 *Polygala nambalensis* Gürke
 819 *Indigofera baumiana* Harms
 828 *Gnidia pleurocephala* Gilg
 829 *Crotalaria leptoclada* Harms var. leptoclada
 830 *Strobilanthis linifolia* (T.Anderson ex C.B.Clarke) Milne-Redh.
 834 *Diplolophium zambesianum* Hiern
 836 *Crotalaria baumii* Harms
 837 *Wahlenbergia denticulata* (Burch.) A.DC.
 838 *Sebaea teuszii* (Schinz) P.Taylor
 839 *Polystachya dendrobiiflora* Rech.f.
 844 *Trichodesma baumii* Gürke
 847 *Bidens flabellata* O.Hoffm.
 848 *Adenodolichos baumii* Harms
 857 *Tinnea coerulea* Gürke var. coerulea
 858 *Ottelia ulvifolia* (Planch.) Walp.
 863 *Protea angolensis* Welw. var. angolensis
 866 *Aeollanthus engleri* Briq.
 869 *Harveya andongensis* Hiern
 871 *Polygala nambalensis* Gürke
 872 *Adenodolichos rhomboideus* (O.Hoffm.) Harms var. rhomboideus
 875 *Buchnera prorepens* Engl. & Gilg
 877 *Anisopappus chinensis* Hook. & Arn. subsp. chinensis var. chinensis
 879 *Thesium lycopodioides* Gilg
 881 *Gladiolus pallidus* Baker
 883 *Bidens baumii* (O.Hoffm.) Sherff
 888 *Monotes dasyanthus* Gilg
 891 *Aloe metallica* Engl. & Gilg
 892 *Ozoroa argyrocrysea* (Engl. & Gilg) R.Fern. & A.Fern.
 894 *Cephalaria retrosetosa* Engl. & Gilg
 898 *Gladiolus pallidus* Baker
 899 *Calanda rubricaulis* K.Schum. var. rubricaulis
 903 *Protea welwitschii* Engl.
 904 *Ledermanniella warmingiana* (Gilg) C.Cusset
 906 *Anagallis filifolia* Engl. & Gilg
 907 *Emilia limosa* (O.Hoffm.) C.Jeffrey
 909 *Hypericumalandii* Choisy
 910 *Benguellia lanceolata* (Gürke) G.Taylor
 911 *Polygala rivularis* Gürke
 912 *Faurea intermedia* Engl. & Gilg
 915 *Floscopa flavida* C.B.Clarke
 918 *Protea lemairei* De Wild. subsp. trichophylla (Engl. & Gilg) Beard
 920 *Protea angolensis* Welw. var. divaricata (Engl. & Gilg) Beard
 923 *Dopatrium stachytarphetoides* Engl. & Gilg
 926 *Dicoma antunesii* O.Hoffm.
 929, 929a *Vernonia temnolepis* O.Hoffm.
 933 *Dicoma anomala* Sond. subsp. anomala
 938 *Kalanchoe brachyloba* Welw. ex Britten
 941 *Ozoroa argyrocrysea* (Engl. & Gilg) R.Fern. & A.Fern.
 942 *Duosperma sessilifolium* (Lindau) Brummitt
 945 *Diospyros kirkii* Hiern
 947 *Combretum molle* R.Br. ex G.Don
 948 *Pavetta stipulopallium* K.Schum.
 962 *Ottelia kunenensis* (Gürke) Dandy
 963 *Commelina subulata* Roth
 966 p.p. *quoad fructus* *Kirkia acuminata* Oliv.
 981 *Combretum collinum* Fresen.
 982 *Combretum aureonitens* Engl. & Gilg
 983, 986 *Combretum collinum* Fresen.
 999 *Boscia welwitschii* Gilg
 1005a *Rhynchosia luteola* (Hiern) K.Schum.

APPENDIX 1.—Main geographical names cited in Warburg (1903) as collecting localities or shown on his map [included in book], with corresponding actual name and geographical co-ordinates

Original name in Warburg (1903)	Portuguese names on maps consulted	S	E	Source*	Notes
Alixandre	Fazenda do Alexandre; Alexandre	15.52 (15.48)	12.09 (12.06)	[4] Sheet no. 3; [5] Sheet no. 1	
Andara	Andara	18.03	21.25	[2]	
Bindi	Lagoa Bindi	17.05	18.40	[2]	
Buraco	Buraco	15.35 (15.37)	12.12 (12.11)	[2]; [5] Sheet no. 1	
Cabindere	Cavindera; Cabindele	15.50 (15.52)	17.36 (17.35)	[2]; [3] Sheet no. 385	
Cacimba	Cacimba	15.32	12.02	[5] Sheet no. 1	
Camelungu	Lagoa Camelungu	16.58	18.44	[2]	
Canongofiepfanne	Lagoa Canangossi	16.01	15.24	[5] Sheet no. 2	This lake has apparently disappeared as it is not shown on recent maps examined. Baum's itinerary follows paths marked on map [5].
Carvalho	Lagoa do Carvalho	15.45	12.06	[3] Sheet no. 374	
Chibia	Chibia; Vila João de Almeida	15.11	13.42	[3] Sheet no. 356; [2]; [5]	
Chihinde	Chindinde	16.32	14.05	[3] Sheet no. 421	

* Publications and maps consulted:

- [1] Warburg, O. 1903. *Kunene-Sambesi-Expedition*. H. Baum. Kolonial-Wirtschaftliches Komitee, Berlin.
 [2] Carta da Colônia de Angola (Esboço), Ministério das Colônias, Junta das Missões Geográficas e de investigações Coloniais. 1935. Esc. 1: 1.500.000.
 [3] Carta de Angola, Ministério do Ultramar, Junta das Missões Geográficas e de investigações Coloniais. Esc. 1: 100.000.
 [4] Carta da Colônia de Angola, Ministério das Colônias, Junta das Missões Geográficas e de investigações Coloniais. 1947. Esc. 1: 2.000.000.
 [5] Carta do Sul de Angola, Ministério das Colônias, Comissão de Cartografia. 1929–1932. Esc. 1: 500.000.
 [6] Carta dos Districtos de Benguela e Mossamedes, Província de Angola, Comissão de Cartografia. 1895. Esc. 1: 1.000.000.
 [7] Carta de Angola, Junta de Investigações do Ultramar. 1973. Esc. 1: 2 000 000.
 [8] Angola Gazetteer. USGS.

APPENDIX 1.—Main geographical names cited in Warburg (1903) as collecting localities or shown on map included in book, with corresponding actual name and geographical co-ordinates (cont.)

Original name in Warburg (1903)	Portuguese names on maps consulted	S	E	Source*	Notes
Chijija (Chỹya on map)	Chicungo	15.47	18.38	[3] Sheet no. 387	Location in [1] coincides with Chicungo.
Chitanda	R. Chitanda; R. Calonga			[2]; [3]	As Chitanda R. in [2] and Calonga R. in [3].
Cicalele-Calilile	Calalele	15.08	20.18	[2]	
Ediva	Ediva	16.20	14.15	[3] Sheet no. 399; [5] Sheet no. 2; [2]	
Fort Tschimbemba	Chibemba; Chivemba	15.45	14.05	[3] Sheet no. 378; [2]; [5] Sheet no. 2; [4] Sheet no. 3	
Goudkopje		15.19	15.55	[3] Sheet no. 360	Exact location may be near these co-ordinates.
Habungu				[7]	Appears to be Chissombo R.
Hadjon Longa (3 dots N on map)		16.06	19.07	[3] Sheet no. 409	There is no indication of settlement in this location. Co-ordinates given here represent a medium location between Palai R. (Palé) and Cuma R. (Mocuma).
Hadjon Longa (3 dots S on map)		16.15	19.07	[3] Sheet no. 409	Co-ordinates given here represent a medium location between Cuma R. (Mocuma) and Cacito R. (Cafito), on left bank of Cuito R.
Hai	Hae; Haii	15.27	13.50	[5] Sheet no. 2; [3] Sheet no. 356; [2]	
Hartebeestpfanne		16.04	15.27	[5] Sheet no. 2; [3] Sheet no. 401	These may be three lakes that have been mapped with the name Etalas Camunhandi. Co-ordinates are those given on map [5].
Humbe	Humbe	16.41	14.54	[3] Sheet no. 422; [4] Sheet no. 3; [2]; [5]	
Jai	Jai	14.42	17.38	[3] Sheet no. 344	
Kafa	Cafu; Cáfu	16.27	15.07	[3] Sheet no. 401; [5] Sheet no. 2; [4] Sheet no. 3; [2]	Co-ordinates correspond to a location on left bank and not to place named Cafu (Cafu) on map.
Kahama	Cahama	15.17	14.18	[3] Sheet no. 399; [2]; [5] Sheet no. 2; [4] Sheet no. 3	
Kakele	Calima	15.14	16.02	[3] Sheet no. 361	
Kakulovar	R. Caculovar			[7]	
Kalolo	Calola	17.08	18.14	[3] Sheet no. 452	
Kamba	Pecuária da Camba; Embala da Camba; Camba	16.16	15.15	[3] Sheet no. 401; [5] Sheet no. 2; [2]; [4] Sheet no. 3	
Kampuluve	R. Cumpulua			[7]	
Kanjundu	Caiundo	15.42	17.27	[3] Sheet no. 384; [5] Sheet no. 2; [2]; [4] Sheet no. 3; [6]	
Kapengombe	Capangombe	15.07 (15.06)	13.07 (13.08)	[5] Sheet no. 1; [2]; [3] Sheet no. 355	
Kassinga	Cassinga	15.07	16.05	[3] Sheet no. 361; [2]; [5] Sheet no. 2; [4] Sheet no. 3	
Katholische Mission (Kassinga)	Missão Católica de Cassinga	15.06	16.05	[6] Sheet no. 3	On this map, the mission appears mapped south of Cassinga, not north as it appears on [1].
Katumba	Catomba	15.20	13.37	[3] Sheet no. 356	
Kavumba		15.31	19.15	[3] Sheet no. 367	No village could be located. Co-ordinates correspond to a location near source of Chiova R. (Vijowa).
Kawanga	Cabanga	17.04	18.10	[2]	
Kingu	Quengue?	16.36	15.07	[6] Sheet no. 3	

* Publications and maps consulted:

[1] Warburg, O. 1903. *Kunene-Sambesi-Expedition*. H. Baum. Kolonial-Wirtschaftliches Komitee, Berlin.

[2] Carta da Colónia de Angola (Esboço), Ministério das Colónias, Junta das Missões Geográficas e de investigações Coloniais. 1935. Esc. 1: 1.500.000.

[3] Carta de Angola, Ministério do Ultramar, Junta das Missões Geográficas e de investigações Coloniais. Esc. 1: 100.000.

[4] Carta da Colónia de Angola, Ministério das Colónias, Junta das Missões Geográficas e de investigações Coloniais. 1947. Esc. 1: 2.000.000.

[5] Carta do Sul de Angola, Ministério das Colónias, Comissão de Cartografia. 1929–1932. Esc. 1: 500.000.

[6] Carta dos Districtos de Benguela e Mossamedes, Província de Angola, Comissão de Cartografia. 1895. Esc. 1: 1.000.000.

[7] Carta de Angola, Junta de Investigações do Ultramar. 1973. Esc. 1: 2 000 000.

[8] Angola Gazetteer. USGS.

APPENDIX 1.—Main geographical names cited in Warburg (1903) as collecting localities or shown on map included in book, with corresponding actual name and geographical co-ordinates (cont.)

Original name in Warburg (1903)	Portuguese names on maps resources	S	E	Source*	Notes
Kiteve	Quiteve; Chiteve	16.01	15.11	[3] Sheet no. 401; [2]; [5] Sheet no. 2; [4] Sheet no. 3	
Kohi	Vila da Ponte; Vila Artur de Paiva	14.28	16.18	[3] Sheet no. 321; [2]; [5] Sheet no. 2; [4] Sheet no. 3	As Vila da Ponte on [2] and Vila Artur de Paiva on [3] Sheet no. 321.
Konjongo	Caiongo	15.33	19.50	[2]	
Kubango	R. Cubango			[7]	
Kuebe	R. Cuebe			[7]	
Kueio	R. Cueio			[7]	
Kuelleis	R. Colui?			[7]	
Kuimara		17.36	18.37	[3] Sheet no. 463; [2]; [5] Sheet no. 2; [4] Sheet no. 3	This name could not be found but it appears to correspond to Cuangar, since Habungu R. [1] appears to be Bungo R. or Puca R. [2] and Chis-sombo [7].
Kuito	R. Cuito			[7]	
Kulei	R. Cuelei			[7]	
Kunene	R. Cunene			[7]	
Kusisi	R. Cuzizi			[7]	
Kutsi	R. Cuchi			[7]	
Lazingua	R. Luassingua			[7]	
Lihurma ("Destroyed by Kuangaris")		15.12	19.23	[3] Sheet no. 367	Co-ordinates are for Sampuloto, which corresponds to the point given on [1].
Likise (Agent C.D.M.)		15.29	19.38	[3] Sheet no. 368	Co-ordinates refer to an unnamed native village which is located in same place as this name on [1].
Lupembe	Lupembe	16.39	14.52	[5] Sheet no. 2	
Makopi	Macope	15.54	14.09	[6] Sheet no. 3	
Makuju	Macujo; Lagoa Maconguele	16.26 (16.57)	18.47 (18.50)	[2]; [3] Sheet no. 430	Even though the latitude of this lake is different from that on [1], there are no other lakes mapped in the area.
Manonge	Serpa Pinto; Menongue	14.39	17.41	[3] Sheet no. 344; [2]; [4] Sheet no. 3	
Manonge I		14.42	17.39	[3] Sheet no. 344	Near Tucuve R. On [3] Sheet no. 344 corresponds to Muanangombe.
Maschonge	R. Massongue			[7]	
Massaca	Massaca	15.35	17.24	[4] Sheet no. 3; [2]	
Matonga	Matonga; Malonga	15.30	20.17	[2]; [4] Sheet no. 6	This locality is east of Ngombé R., whereas on [1] it appears west of that river (Ongombe R.). Taking into account the tracks mapped on [2] which Baum most probably followed, we suppose this is the same Matonga.
Matukua	Mutucua	16.28	14.35	[5] Sheet no. 2	
Menemprem		14.42	16.36	[3] Sheet no. 342	There is a Mema Grande R., south of Vulumba R., that is also a tributary of Cubango R. Co-ordinates given here are those of the confluence of Mema Grande-Cubango Rivers.
Meschekke	Área de Muchequecheque	15.36	13.47	[3] Sheet no. 377	Co-ordinates of Tomba village, which is located in Muchequecheque area.
Minjanja (Norte)		15.35	19.41	[3] Sheet no. 389	Location of an unnamed village, based on the point mapped on [1].

* Publications and maps consulted:

[1] Warburg, O. 1903. *Kunene-Sambesi-Expedition*. H. Baum. Kolonial-Wirtschaftliches Komitee, Berlin.

[2] Carta da Colónia de Angola (Esboço), Ministério das Colónias, Junta das Missões Geográficas e de investigações Coloniais. 1935. Esc. 1: 1.500.000.

[3] Carta de Angola, Ministério do Ultramar, Junta das Missões Geográficas e de investigações Coloniais. Esc. 1: 100.000.

[4] Carta da Colónia de Angola, Ministério das Colónias, Junta das Missões Geográficas e de investigações Coloniais. 1947. Esc. 1: 2.000.000.

[5] Carta do Sul de Angola, Ministério das Colónias, Comissão de Cartografia. 1929-1932. Esc. 1: 500.000.

[6] Carta dos Districtos de Benguela e Mossamedes, Província de Angola, Comissão de Cartografia. 1895. Esc. 1: 1.000.000.

[7] Carta de Angola, Junta de Investigações do Ultramar. 1973. Esc. 1: 2 000 000.

[8] Angola Gazetteer. USGS.

APPENDIX 1.—Main geographical names cited in Warburg (1903) as collecting localities or shown on map included in book, with corresponding actual name and geographical co-ordinates (cont.)

Original name in Warburg (1903)	Portuguese names on maps consulted	S	E	Source*	Notes
Minjanja (Sul)		15.37	19.44	[3] Sheet no. 389	Location of the Mucoboto village, based on the point mapped on [1]. Not listed in sources searched, it is situated at confluence of Longa and Cuiriri Rivers [1].
Minnesera				[7]	
Mitjelaga	Michelaga	15.14	20.18	[2]	
Mossamedes	Moçâmedes; Mossamedes; Mossâmedes	15.12	12.09	[3] Sheet no. 353; [2]; [5]; [4] Sheet no. 3	
Mukuma	Mucuma	15.00	13.34	[3] Sheet no. 356; [2]; [5]	
Mundongo	Indungo	14.49	16.16	[3] Sheet no. 341; [2]; [4] Sheet no. 3; [5] Sheet no. 2	
Nambali	R. Bale			[7]	
Napalanka		16.15	18.52	[3] Sheet no. 408	There is no village with this name. Co-ordinates refer to an approximate location considering the course of the rivers mapped on [1].
Nevis	Neves	15.07	12.54	[5] Sheet no. 1; [2]	
Ondongi-Liwingi	Ondongi	15.23	20.17	[2]	
Onjimba		16.36	19.05	[3] Sheet no. 431	Taking into account the course of the rivers on [1], these co-ordinates correspond to approximate location of an unnamed village.
Onschingue					Tributary of Cuito R., south of Campulua [1].
Otjenjau	Otchinjau	16.30	13.55	[3] Sheet no. 420; [2]; [5] Sheet no. 2; [4] Sheet no. 3	
Otjicutsie	Chicusse; Tchicusse	16.22	14.27	[3] Sheet no. 399; [2]; [5] Sheet no. 2; [4] Sheet no. 3	
Palmfontein	Oncócu; Ongogoa; Fonte das Palmeiras; Uncocua	16.39	13.25	[3] Sheet no. 419; [2]; [5]; [4] Sheet no. 3	
Petri Grande	Pedra Grande	15.00	12.36	[5] Sheet no. 1; [2]	
Pokolo	Pocolo	16.24	15.14	[3] Sheet no. 401; [5] Sheet no. 2	
Port Alexandre	Porto Alexandre	15.48	11.51	[3] Sheet no. 373; [2]; [5]	
Quatiri	R. Cuatir			[7]	
Quiriri	R. Cuiriri			[7]	
Sakkemecho		14.42	18.39	[3] Sheet no. 346	Co-ordinates are for Masseca, in the Micango area. This is based on the actual track [2] which Baum may have followed.
Sambento do Sul	São Bento do Sul	15.48 (15.49)	12.06 (12.06)	[2]; [5] Sheet no. 1	
Subida	Subida	15.22	12.08	[5] Sheet no. 1	
Tjimbanda	Chimbanda	14.59	20.18	[2]	
Tjipelongo	Tchipelongo; Chipelongo	16.29	14.37	[3] Sheet no. 400; [4] Sheet no. 3; [2]; [5] Sheet no. 2	
Tondiva	Tuandiva	16.33	14.44	[3] Sheet no. 422; [5] Sheet no. 2	
Tschiculecandi	Lagoa Chiculecondi	16.53	18.46	[2]	
Umpupe	Ompupa; Umpupa	16.16	13.29	[3] Sheet no. 397; [2]; [5]	
Wolombo		14.39	16.31	[3] Sheet no. 342	Co-ordinates refer to confluence of Vulumba and Cubango Rivers.

* Publications and maps consulted:

[1] Warburg, O. 1903. *Kunene-Sambesi-Expedition*. H. Baum. Kolonial-Wirtschaftliches Komitee, Berlin.

[2] Carta da Colónia de Angola (Esboço), Ministério das Colónias, Junta das Missões Geográficas e de investigações Coloniais. 1935. Esc. 1: 1.500.000.

[3] Carta de Angola, Ministério do Ultramar, Junta das Missões Geográficas e de investigações Coloniais. Esc. 1: 100.000.

[4] Carta da Colónia de Angola, Ministério das Colónias, Junta das Missões Geográficas e de investigações Coloniais. 1947. Esc. 1: 2.000.000.

[5] Carta do Sul de Angola, Ministério das Colónias, Comissão de Cartografia. 1929–1932. Esc. 1: 500.000.

[6] Carta dos Districtos de Benguela e Mossamedes, Província de Angola, Comissão de Cartografia. 1895. Esc. 1: 1.000.000.

[7] Carta de Angola, Junta de Investigações do Ultramar. 1973. Esc. 1: 2 000 000.

[8] Angola Gazetteer. USGS.