

Typification of *Chlorophytum* (Asparagaceae) taxon names from Angola: a critical reappraisal and new combinations

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Short title : Typification of *Chlorophytum* from Angola

Abstract Fifty-one names of plants now recognised as *Chlorophytum* that are based on type materials from Angola are reviewed. Twenty-three of these names are based on Welwitsch's collections for which there is generally no holotype. All the original materials have been critically reviewed. For eight names, some of the original materials did not match the protologue or comprised several taxa. For nine names, erroneous application of the term holotype is corrected to lectotype ("inadvertent lectotypifications"). For 21 names, lectotypifications are provided, including a new lectotype for *Chlorophytum limosum* (Baker) Nordal and three second-step lectotypifications. A lectotype is also designated for *Chlorophytum subpetiolatum* (Baker) Kativu based on materials from Mozambique. Eleven new synonyms and six new combinations are proposed (*Chlorophytum benguellense* (Baker) Meerts, *Chlorophytum fernandesii* (Poelln.) Meerts, *Chlorophytum orchideum* (Baker) Meerts, *Chlorophytum molle* (Baker) Meerts, *Chlorophytum sphacelatum* var. *arenarium* (Baker) Meerts, *Chlorophytum ustulatum* (Baker) Meerts). Current accepted names are provided for all taxa. Seven accepted taxa are endemic to Angola. Ten names remain unplaced because no material was found.

Keywords *Anthericum*; endemic; lectotypification; Welwitsch; Zambebian.

INTRODUCTION

The genus *Chlorophytum* Ker Gawl. (Ker Gawler 1808: 1071) (Asparagaceae in APG IV (2016)) comprises rhizomatous, mostly white-flowered, lilies widespread in tropical regions of Africa, Asia and Oceania (Conran, 1998). In Africa, *Chlorophytum* is present throughout most of the continent, except the Mediterranean region, occurring in a broad range of vegetation types, including rainforests, tropical dry forests, savannas and grasslands (Lebrun & Stork, 2014). The circumscription of the genus *Chlorophytum* has been considerably altered by Obermeyer (1962), Marais & Reilly (1978), Nordal & al. (1990) and Kativu & Nordal (1993) to include all the species formerly included in *Acrospira* Baker, *Debesia* Kuntze, *Dasystachys* Baker, *Verdickia* De Wild. and most of the African species formerly included in *Anthericum* L. These changes are supported by molecular phylogeny (Bjorå & al., 2017).

Several regional revisions of the genus for tropical Africa have been published in the last twenty-five years (Kativu, 1994; Nordal, 1997; Nordal & al., 1997; Kativu & al., 2008; Bjorå & Nordal, 2010, 2015; Meerts & Bjorå, 2012; Meerts, 2015). However, due to the recent changes in the circumscription of the genus, many names in the genus *Anthericum* remain unplaced (Lebrun & Stork, 2014). This is especially true for Angola, for which *Chlorophytum* has not been revised recently and in which Figueiredo & Smith (2008) reported 21 unplaced names.

The typification of names relevant to *Chlorophytum* in Angola is not straightforward. First, a substantial proportion of the type specimens were collected by Welwitsch, whose collection was distributed to several herbaria. Albuquerque & al. (2009) highlighted the specific difficulties for typification of taxa based on Welwitsch's collections. "In most cases there are no holotypes, and lectotypifications have to be made. It has not been generally realised that Welwitsch lumped together under one number all the collections which he considered to be conspecific, which means that designation of isolectotypes is open to serious misinterpretation." (Albuquerque & al., 2009). For most names based on Welwitsch's materials, holotypes were mentioned in previous revisions by error. In the case of species published validly without citation of a holotype prior to 1958, any citation of a holotype done before 1st January 2001 constitutes an inadvertent lectotypification sensu Prado & al. (2015). Following Art. 9.9 of ICN (McNeill & al., 2012), the erroneous application of the term "isotype" or "holotype" has to be treated as an error to be corrected to lectotype.

Also, recent revisions have failed to cite the materials deposited in LISU, which holds the main set and original notes of Welwitsch collections (Albuquerque & al., 2009). It is clear that many of the type designations in the aforementioned revisions need to be critically reexamined.

Another difficulty arises from the destruction or disappearance of (some of) the original materials. Thus, many names in *Anthericum* and *Chlorophytum* published for Angola (Engler, 1892; Engler & Gilg, 1903; Poellnitz, 1943) are based on materials that were deposited in B, which may have been destroyed during World War II. In such cases, it may be necessary to designate lectotypes.

Many species of *Chlorophytum* widely distributed in tropical Africa are based on type materials collected in Angola; therefore, typification of those names may have implications at a broader geographic scale.

In this paper, I have critically examined all the type materials from Angola relevant to *Chlorophytum*. My objectives are i) to locate type specimens for all names based on Angolan materials; ii) to assess the status of all known type specimens and to designate lectotypes whenever necessary; iii) to assign all specimens to an accepted taxon name, iv) to propose new combinations for hitherto unplaced names if necessary.

MATERIALS AND METHODS

A checklist of names based on materials collected in Angola was established as follows. The search included all genus names now included (entirely or in part) in *Chlorophytum*, i.e. *Acrospira* Welw. ex Baker, *Anthericum* L., *Dasystachys* Baker, *Debesia* Kuntze. The following online databases were explored: the African Plant Database (<http://www.ville-ge.ch/musinfo/bd/cjb/africa/recherche.php>), the International Plant Names Index (<http://www.ipni.org/>), Tropicos (<http://www.tropicos.org/>), the World Checklist of Selected Plant families (<http://apps.keew.org/wcsp/advanced.do>). The following publications were screened: Baker (1878), Engler (1892), Engler & Gilg (1903), Poellnitz (1943), Rendle (1899), Figueiredo & Smith (2008). Sixty-three names came out of this first phase of the work. Secondly, online databases of herbaria were searched for the corresponding names. Third, the original materials were studied in the following herbaria: B, BM, BR, COI, K, LISC, LISU, P. Additional materials were examined online (G, HBG, M, WAG, Z).

The materials kept in Angolan herbaria (LUA, LUAI, LUBA) have not been seen and are not available online. Duplicates of (part of) Gossweiler's collections are deposited in LUA and LUBA (Smith & Willis, 1999), which might therefore hold isotypes of some of the names cited in the present paper. The functioning of Angolan herbaria has been strongly disturbed by political instability and the civil war in the 1990's. Collections of LUA were moved to LUAI in 1995 for safe-keeping, but are now back in Huambo. See Martins & al. (1997) and Martins & Martins (2002) for further information on Angolan herbaria.

Our guidelines to determine type specimens were as follows. For original materials in Welwitsch's collection, the specific recommendations of Albuquerque & al. (2009) have been carefully followed. Twenty-one names were published by Baker in 1878. Baker did not cite collection numbers then, but the numbers were cited later by him in *Flora of Tropical Africa* (Baker, 1898) and soon after by Rendle (1899). Since Baker (1878) completed his work in March 1877 before Welwitsch's collections were divided (Baker, 1878, p. 245), the typification of Baker's names should consider the whole Welwitsch collection, not only the materials now deposited in K and BM. Since Welwitsch often grouped different collections that in his judgment belonged in the same taxon, specimens stored under the same collection number in different herbaria may actually not be duplicates. In selecting lectotypes from Welwitsch's collections, I have carefully checked conformity of the materials with the description in the protologue, including locality and date. Isolectotypes are cited only when the following criteria were fulfilled: i) a single collecting date is mentioned in both the protologue and on the labels, ii) materials are at the same phenological state. In all other cases, and in particular when materials were collected from different locations and/or at different dates, or when collecting date and location were not specified on labels, we have refrained from citing isolectotypes and all the original materials except the lectotype are referred to as "remaining syntypes".

Welwitsch's materials have labels with full locality data only on specimens deposited at BM and LISU, while specimens distributed to other herbaria generally lack such information. It is therefore justified to choose lectotypes from materials at BM and LISU for names published by Baker (1878) and other authors working from London before the distribution of the duplicates to other herbaria. Duplicates in other collections, without or with fragmentary information on the label are here considered as "possible isolectotypes". Specimens which bear ambiguous collection numbers (e.g. "*Welwitsch 3777-3778*"), and specimens in which different localities and/or collecting dates may have been mixed are referred to as "remaining syntypes".

For taxa published after the division of Welwitsch's collections, the author's affiliation was an important criterion to designate the lectotype. Thus, for taxa published by Engler (1892) and by Engler and Gilg (1903), I have assumed that the type specimen deposited in B is the holotype. For names published by von Poellnitz (1943), a holotype is generally explicitly mentioned in the protologue (deposited at B or COI depending on species). When the holotype has not been found, duplicates have been systematically tracked. Such duplicates, if any, have been critically examined for conformity with the protologue; the specimen best matching the protologue is designated as the lectotype.

Any lectotype previously designated (including inadvertent lectotypifications) was confirmed, unless the materials were found not to match the protologue; unique identifiers are provided if necessary. For three names, second-step lectotypification was necessary because the previously designated lectotype consisted of more than one specimen (Art. 9.17.).

In the following account, accepted taxa that needed typification are ordered alphabetically and written in bold. Under these names, synonyms are listed according to their publication date in italics and for those newly proposed as such "syn. nov." was added in bold. For each typified name the place of publication, type information, as well as herbaria location and unique identifiers (i.e. barcodes), when known, are provided. For the type specimens that have not been found (indicated by "†"), the indications of locality and habitat are those given in the protologues. In a separate paragraph under each accepted species I locate remaining syntypes, and provide a discussion and a brief taxonomic justification for new synonyms.

I focused our attention on a total of 51 names. For 9 names, erroneous application of the term holotype by previous authors is corrected to lectotype. Lectotypifications are provided for 21 names, including three second-step lectotypification. Furthermore, it was necessary to lectotypify *Chlorophytum subpetiolatum* (Baker) Kativu, not based on materials from Angola. Eleven new synonyms are listed and six new combinations are proposed. Current accepted names are provided for all taxa. Seven accepted taxa are endemic to Angola. Ten names remain unplaced because no material was found and the descriptions do not provide enough information to allow for the selection of a neotype.

The taxonomic concepts followed in this note are those of Meerts & BJORÅ (2012) and Meerts (2015).

TAXONOMIC TREATMENT AND TYPIFICATIONS

Based on the examined type materials, eight names originally published in *Anthericum* appear to belong in *Trachyandra* Kunth (Asphodelaceae in APGIV) (i.e. *Anthericum angustovittatum* Poelln., *Anthericum basilanatum* Poelln., *Anthericum breviantheratum* Poelln., *Anthericum filiforme* Thunb. var. *longifolium* Rendle, *Anthericum gambuense* Poelln., *Anthericum pallidiflavum* Engl. & Gilg, *Anthericum pyrenicarpum* Welw. ex Baker, *Anthericum tostum* Poelln.). For two other names, no original materials were found, but the protologue clearly indicates that they belong in *Trachyandra* as well (*Anthericum incohatum* Poelln. and *Anthericum incohatum* var. *pilosum* Poelln.). These ten names are not considered further in the present work. Two further names ("*Chlorophytum bracteosum* Welw." and "*Chlorophytum leucolepis* Welw.") are excluded as they were cited by Baker (1878) only as synonyms and have thus not been validly published (Art. 36.1).

Fifty-one *Chlorophytum* names typified by materials collected in Angola were found, of which 21 are based on Welwitsch's collections. Materials were located for 41 of these names. For ten names, no material was found. Eight holotypes deposited in B have not been found.

These materials could have been lost or destroyed during World War II, even though many type specimens of *Chlorophytum* are still extant in B.

Much more intriguingly, none of the thirteen type specimens deposited in COI and cited by von Poellnitz (1943) could be found. The corresponding materials may have been on loan for study by von Poellnitz in Germany, where they could have been destroyed during World War II. However, another hypothesis is that those specimens were part of a pack returned long after the war, that was lost in a ship wreck (J. Paiva, Coimbra, pers. comm.). Fortunately, duplicates have been found in other herbaria for eight of those names. Because these holotypes have not been seen for more than 75 years, I consider they are no longer extant and designate lectotypes.

Chlorophytum africanum (Baker) Engl. in Bot. Jahrb. Syst. 15: 470. 1892 var. *africanum* ≡ *Caesia africana* Baker in Trans. Linn. Soc. London 29(3): 160. 1875 (excl. *Kirk s.n.*) – Lectotype designated by Bentham & Hooker (1883): Tanzania. Tabora distr., Rubuga (Rubugwa), in boggy ground, 1860, *Speke & Grant s.n.* (K barcode K000365093!). = *Chlorophytum densiflorum* Engl. in Bot. Jahrb. Syst. 15: 470. 1892 – Holotype: Angola. Malandsche, auf zerfallenen termitenhaufen, Sept 1879, *Mechow 313* (B without barcode!), **syn. nov.**

The type specimen has leaf margins with a fringe of reddish hairs typical of *Chlorophytum africanum* var. *africanum*.

Chlorophytum andongense Baker in Trans. Linn. Soc. London, Bot. 1(5): 260. 1878 – First-step lectotype inadvertently designated by Kativu (1994), corrected from “holotype”: Angola. Pungo Andongo, *Welwitsch 3770* (BM). **Second-step lectotype designated here:** Angola, Pungo Andongo, in dumetosis rupestribus omnibus supr. gig. Praesidii, Dec 1856 (BM barcode BM000911747!; isolectotype: LISU barcode LISU222159!); possible isolectotype : Welw. Iter Ang., *Welwitsch 3770* (K barcode K000256944!). = *Anthericum gossweileri* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 67. 1943 – Holotype: Angola. Malange, *Gossweiler 943* (B barcode B 10 0166928!; isotype: K barcode K000256943!).

Remaining syntypes of *Chlorophytum andongense*: *Welwitsch 3770* (BM, flowering specimens, without barcode!; LISU barcode LISU222158!).

There is no collection number cited in the protologue. Only one Welwitsch number is known for this name, as cited by Baker (1898) and Rendle (1899). *Welwitsch 3770* is mounted on two sheets in LISU (flowering: barcode LISU222158, fruiting: barcode LISU222159) and in BM (flowering: without barcode; fruiting: barcode BM000911747), corresponding to the two collecting dates mentioned on the labels “Fl. Dec 1856; Fr. Jan 1857”. Fruits are more important than flowers in the taxonomy of the *C. andongense*-*C. macrosporum* complex (Meerts & Bjora, 2012). Therefore, the fruiting specimen is chosen as the lectotype. The inadvertent lectotypification by Kativu (1994) mentioned a holotype in “B”, presumably a typo for BM because there is no original material of *Welwitsch 3770* in B.

Chlorophytum benguellense (Baker) Meerts, **comb. nov.** ≡ *Anthericum benguellense* Baker in Trans. Linn. Soc. London, Bot. 1(5): 257. 1878 – **Lectotype designated here:** Angola. Huilla, in sylvis claris et pascuis dumosis circa Lopollo et Humpata, Jan 1860, *Welwitsch 3794* (BM barcode BM000911725!; isolectotype: LISU barcode LISU222140 left-hand specimen excluded!); possible isolectotypes: *Welwitsch 3794* (G barcode G00428628 !), Welw. Iter Ang., Huilla, in pastures around Lopollo and Humpata, *Welwitsch 3794* (K barcode K000256960!).

There is no collection number cited in the protologue. Only one Welwitsch number is known for this name, as cited by Baker (1898) and Rendle (1899).

The materials in LISU are an admixture: the specimen on the left is *Chlorophytum calyptrocarpum* (Baker) Kativu. The original materials examined in BM and LISU show an original combination of characters, combining characters of *C. fasciculatum* (Baker) Kativu (rough stamen filaments, ciliate leaves) and *C. galpinii* (Baker) Kativu (branched inflorescence, aristate papillose bracts, dark-striped tepals). This taxon is endemic to Angola.

Chlorophytum calyptrocarpum (Baker) Kativu in Nordic J. Bot. 13(1): 62. 1993 ≡ *Anthericum calyptrocarpum* Baker in Trans. Linn. Soc. London, Bot. 1(5): 258. 1878 – Lectotype inadvertently designated by Kativu (1994), corrected from “holotype”: Angola. Huilla, in pascuis petrosis tempore pluvii inundatis, inter Mumpula et Lopollo, Dec 1859, *Welwitsch 3786* (BM barcode BM000911752!; isolectotype: LISU barcode LISU222137!); possible isolectotype: Welw. Iter Ang., *Welwitsch 3786* (K barcode K000256917!).

= *Anthericum tenellum* Welw. ex Baker in Trans. Linn. Soc. London, Bot. 1(5): 256. 1878 – Lectotype inadvertently designated by Kativu (1994), corrected from ‘holotype’: Huilla, Welw. Iter Ang., *Welwitsch 3796* (K barcode K000256918!); possible isolectotypes: Angola. Huilla, in pascuis humidiusculis subarenosis parce dumetis juxta basin de Morro Monimo et in editioribus de Morro de Lopollo, Dec 1859, *Welwitsch 3796* (BM barcode BM000911751!, LISU barcode LISU222136!); Welw. Iter Ang., *Welwitsch 3796* (G barcode G00359561!).

For *Anthericum calyptrocarpum* and for *A. tenellum* there are no collection numbers cited in the protologue. For those two names only one Welwitsch number is known, as cited by Baker (1898) and Rendle (1899).

Materials of *Anthericum tenellum* have been found in BM, G, K, LISU. In the protologue only Morro Monino is cited as locality. This should be the type but unfortunately as the material of the two localities is mixed it is not possible to determine which are the specimens from Morro Monino. However, all specimens are very similar and match the protologue.

Chlorophytum cameronii (Baker) Kativu var. *pterocaulon* (Baker) Nordal in Fl. Trop. E. Africa, Antheric. 32. 1997 ≡ *Anthericum pterocaulon* Welw. ex Baker in Trans. Linn. Soc. London, Bot. 1(5): 258. 1878 – Lectotype inadvertently designated by Kativu (1994), corrected from “holotype”: Angola. Pungo Andongo in dumetis inter Calundo et Petras de Guinza, Mar 1857, *Welwitsch 3795* (BM barcode BM000580069!; isolectotype: LISU barcode LISU222144, right-hand specimen only!); possible isolectotype: Welw. Iter Ang., *Welwitsch 3795* (K barcode K000256912!).

There is no collection number cited in the protologue. Only one Welwitsch number is known for this name, as cited by Baker (1898) and Rendle (1899). The materials in LISU are an admixture, the left-hand specimen being *Chlorophytum sphacelatum* (Baker) Kativu (hairy rachis and bracts).

Chlorophytum colubrinum (Baker) Engl. in Abh. Königl. Ges. Wiss. Göttingen 1891: 162. 1892 ≡ *Dasystachys colubrina* Baker in Trans. Linn. Soc. London, Bot. 1(5): 256. 1878. Plate XXXV figs 1-6 – Lectotype inadvertently designated by Kativu (1994), corrected from ‘holotype’: Angola, Huilla, Welw. Iter Ang., *Welwitsch 3784* (K barcode K000256926!); isolectotypes: Angola, Huilla, In pascuis rupestribus breve herbidis de Empalanca ad 5500 ped., Jan 1860, *Welwitsch 3784* (BM barcode BM000911758!, LISU barcode LISU222167!); possible isolectotypes: Welw. Iter Angolense, Huilla, bei

Empalanca, *Welwitsch 3784* (B barcode B 10 0166896!), Iter Angolense, *Welwitsch 3784* (BM barcode BM000911755!, P barcode P00446306!).

- = *Dasystachys pleiostachya* Welw. ex Baker in Trans. Linn. Soc. London, Bot. 1(5): 255. 1878 – First-step lectotype, inadvertently designated by Kativu (1994), corrected from “holotype”: Angola, Pungo Andongo, banks of Cuanza River, *Welwitsch 3785* (BM). **Second-step lectotype designated here:** Angola. Pungo Andongo in pratis altegraminosis prope Vansarmanda, ad flumen Cuanza, 30 Apr 1857, *Welwitsch 3785* (BM barcode BM00911757!; isolectotypes: LISU barcode LISU222163!, LISU barcode LISU222162!); possible isolectotypes: Welw. Iter Ang., *Welwitsch 3785* (B barcode B 10 0166897!, BM without barcode!, COI!, G barcode G00359562!, K barcode K000256928!, P barcode P00446307!).
- = *Dasystachys campanulata* Baker in Trans. Linn. Soc. London, Bot. 1(5): 256 & Plate XXXV, Figs. 7-10. 1878 – Lectotype, inadvertently designated by Kativu (1994), corrected from “holotype”: Welw. Iter Ang., *Welwitsch 3783* (K barcode K000256927!); isolectotypes: In pratis altiis herbis inter Lopollo et lacum Ivantala, Mar 1860, *Welwitsch 3783* (BM barcode BM000911756!, LISU barcode LISU222168! & LISU222169!); possible isolectotype: *Welwitsch 3783* (BM barcode BM000911754!).
- = *Chlorophytum dolichostachys* Engl. & Gilg in Kunene-Sambesi Exped. 188. 1903 – Holotype: Angola. Am Longa oberhalb Napalanka. Auf Sandboden im geschlossenen Wald. Alt.: 1150 m. 01 Jan 1900, *Baum 611* (B barcode B 10 0166886!).
- For *Dasystachys campanulata* Baker, *Dasystachys colubrina* Baker, *Dasystachys pleiostachya* Baker, there is no collection number cited in the protologue. For each of those three names only one Welwitsch number is known, as cited by Baker (1898) and Rendle (1899).

For *Chlorophytum colubrinum*, Kativu (1994) chose as the lectotype a specimen in K without a precise locality, assuming that Baker, who worked in Kew, had based his description on the specimen deposited in K (I. Nordal, pers. comm.). However, one of the sheets in BM (barcode BM000911755) bears a handwritten note: “Specimen figured for Baker”, and the corresponding specimen is indeed a very good match of Plate XXXV, figs. 1-6 in the protologue. However, the lectotype is not in conflict with the protologue and there is no reason to supersede Kativu’s lectotypification (art. 9.19 of the ICN).

Concerning *Dasystachys campanulata*, original materials have been found in BM, K and LISU. One sheet in BM (barcode BM000911754) bears a handwritten note “Specimen figured for Baker”, and that specimen is indeed a very good match of Plate XXXV, Figs. 7-10 in the protologue. However, there is no reason to supersede Kativu’s inadvertent lectotypification because the material in K is not in contradiction with the protologue (art. 9.19 of the ICN).

Chlorophytum debile Baker in Trans. Linn. Soc. London, Bot. 1(5): 260. 1878 – **Lectotype designated here:** Angola. Ad rupes inter Ambriz et Quisembo, Nov 1858, *Welwitsch 3769* (BM barcode BM000911759!; isolectotype: LISU barcode LISU222160!); possible isolectotypes: Welw. Iter Ang., *Welwitsch 3769* (COI!, G barcode G00428678, K barcode K000256964!, P barcode P01848083!).

There is no collection number cited in the protologue. Only one Welwitsch number is known, as cited by Baker (1898) and Rendle (1899).

A holotype was mentioned by Meerts & Bjora (2012) in error.

Chlorophytum fernandesii (Poelln.) Meerts, **comb. nov.** ≡ *Anthericum fernandesii* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 65. 1943 – Holotype: Angola. Bié, zwischen den Flüssen

Cuelai und Luasenha (Serpa Pinto), in der Duriherbosa-Formation, jährlich Steppenbränden ausgesetzt, Nov 1906, *Gossweiler 4019* (COI†) – **Lectotype designated here:** Angola. Entre Cuelai e Luasenha (Serpa Pinto, Bié), 30 Nov 1906, *Gossweiler 4019* (LISC barcode LISC063114!); isolectotype: Benguella, country of the Ganguellas and Ambuellas, *Gossweiler 4019* (K barcode K000256962!, fruits and left-hand inflorescence excluded).

The holotype has not been found at COI. A duplicate exists in LISC, which matches the protologue. The material shows an original combination of traits including distichous phyllotaxy, glabrous leaves with thickened margins and a pseudopetiole. Another duplicate was found in K (K000256962), comprising one rootstock, three detached leaves, two detached inflorescences and fruits in an envelope. That material is heterogeneous; the left-hand inflorescence has hairy bracts and must be excluded; the fruits in the envelope most likely do not belong here, since the protologue does not describe fruits. This taxon is endemic to Angola.

Chlorophytum filipendulum Baker in Trans. Linn. Soc. London, Bot. 1(5): 260. 1878 subsp. *filipendulum* – First-step lectotype inadvertently designated by Kativu (1994), corrected from “holotype”: Angola, *Welwitsch 3776* (BM). **Second-step lectotype designated here:** Angola. Golungo Alto, in umbrosis ad rivulos in Montes de Queta, Dec 1853, *Welwitsch 3776* (BM barcode BM000911743!, isolectotypes: BM without barcode!, LISU barcode LISU222154!; LISU barcode LISU222155!); *Welw. Iter Ang., Welwitsch 3776* (COI!, K barcode 000256963!, P barcode P00711224!).

There is no collection number cited in the protologue. Only one Welwitsch number is known, as cited by Baker (1898) and Rendle (1899). Rendle (1899, p. 54) mentions “a single specimen with almost withered flowers”. The materials labelled *Welwitsch 3776* in COI, K, LISU, P, comprise both fruiting and flowering specimens, apparently collected at the same time.

Chlorophytum gallabatense Schweinf. ex Baker in J. Linn. Soc., Bot. 15: 325. 1876 var. *gallabatense* – Lectotype designated by Marais & Reilly (1978): Sudan/Ethiopian border. Gallabat, Matamma, 1865, *Schweinfurth 10* (K barcode K000256867!; isolectotypes: B barcode B 10 0367560!, P barcode P00442262!).

= *Chlorophytum psammophilum* Engl. & Gilg in Kunene-Sambesi Exped. 188. 1903 – Holotype: Angola. Zwischen Ungombekike und Kuito, 09 Dec 1899, *Baum 517* (B barcode B 10 0165843!; isotypes: COI!, HBG barcode HBG528385!, K barcode K000256939!, Z barcode Z000023934!).

= *Anthericum fallax* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 83. 1943 – Holotype: Angola. Bié, Ufer des Cubango, Vila da Ponte, in der Petrideserta-Formation, Jan 1906, *Gossweiler 4014* (COI†) – **Lectotype designated here:** Angola. Vila da Ponte, *Gossweiler 4014* (LISC barcode LISC063113!; possible isolectotype: BM barcode BM001209357!), **syn. nov.**

The holotype of *Anthericum fallax* has not been found in COI. Two duplicates have been found in BM and LISC, respectively, which match the protologue. The locality mentioned on the specimen in LISC is the same as in the protologue and that specimen is therefore chosen as the lectotype. The specimen in BM has for locality “Fort Princess Amelia”; it is a possible isolectotype. The materials come close to the type of *Chlorophytum psammophilum*, an extreme narrow-leaved variant of the polymorphic *C. gallabatense*.

Chlorophytum galpinii (Baker) Kativu in Nordic J. Bot. 13: 63. 1993 var. *galpinii* ≡ *Anthericum galpinii* Baker in Fl. Cap. (Harvey) 6(3): 385. 1897 – Holotype: Transvaal,

Grassy plain around Barberton, 1890, *Galpin 1160* (K barcode K000256973!); isotypes: BOL barcode BOL140099!, GRA barcode GRA0000349-0!, PRE barcode PRE0100758-0!, SAM barcode SAM0022912-0!, Z barcode Z-000086838!).

= *Anthericum exellii* var. *angustifolium* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 64. 1943 – Holotype: Angola. Bié, Vila da Ponte, sehr zerstreut in der Hiemifruticeta formation, Dec 1905, *Gossweiler 2493* (COI†) – **Lectotype designated here:** Ganguelas, Huila, Vila da Ponte, Hiemifruticeta, 30 Dec 1905, *Gossweiler 2493* (LISC barcode LISC063111!), **syn. nov.**

= *Anthericum exellii* var. *papillosum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 65. 1943 – Holotype: Angola. Bié, Vila da Ponte, in der Hiemifruticeta formation, Dec 1905, *Gossweiler 4016* (COI†) – **Lectotype designated here:** Angola. Terrenos argilosos de Vila da Ponte, Dec 1906, *Gossweiler 4016* (LISC barcode LISC063112!), **syn. nov.**

The holotype of *Anthericum exellii* var. *angustifolium* was not found in COI. A duplicate was found in LISC, which matches the protologue except for the racemose inflorescence (“Blütenstand 3-ästig” in the protologue). The large anthers (4 mm), the subulate bracts and the pubescent cataphylls suggest this taxon is a form of *Chlorophytum galpinii* var. *galpinii*.

The holotype of *Anthericum exellii* var. *papillosum* was not found in COI. A duplicate exists in LISC, which matches the protologue; it is here chosen as the lectotype.

Chlorophytum lancifolium Welw. ex Baker in Trans. Linn. Soc. London, Bot. 1(5): 260.

1878 subsp. *lancifolium* – Lectotype designated by Kativu (1994): Angola. Pungo Andongo, in umbrosis ad cataractas rupium ipsius Praesidii, Nov 1856, *Welwitsch 3772* (BM barcode BM000911741!; isolectotype: LISU barcode LISU222157!); possible isolectotypes: Welw. Iter Ang., *Welwitsch 3772* (COI!, K barcode K000256941!).

Remaining syntypes: Angola. In sylvaticis umbrosis ad rivulos inter Quisonde et Condo, Mar 1857, *Welwitsch 3773* (BM barcode BM000911742!, LISU barcode LISU222156!); Welw. Iter Ang., *Welwitsch 3773* (G barcode G00428676!, K barcode K000256941!).

There is no collection number cited in the protologue. Two Welwitsch numbers are known for this name, as cited by Baker (1898) and Rendle (1899). The original materials comprise *Welwitsch 3772* (November 1856, in flower) and *Welwitsch 3773* (March 1857, in fruit); the two collections are mounted on the same sheet in BM and on separate sheets in LISU. The protologue mentions both flowers and fruits and both collections have obviously been used by Baker. Kativu (1994) designated the flowering collection i.e. *Welwitsch 3772* (BM) as the lectotype, even though seeds are more important than flowers to discriminate subspecies in the *C. lancifolium* complex (Poulsen & Nordal, 2005). However, the lectotype is not in conflict with the protologue and there is no good reason to supersede Kativu’s lectotypification (ICN, art. 9.19). *Welwitsch 3772* in K (barcode K000256941) is a flowering plant with a few detached capsules; the capsules most likely come from *Welwitsch 3773* and should be excluded.

Chlorophytum limosum (Baker) Nordal in Nordic J. Bot. 13(1): 63. 1993 ≡ *Anthericum*

limosum Baker in Trans. Linn. Soc. London, Bot. 1(5): 257. 1878 – **New lectotype designated here:** Angola. Barra do Bengo, rarissime in inundatis exsiccatis limosis inter Quicune et Cacuaco, Aug 1858, *Welwitsch 3803* (BM barcode BM000911719!; isolectotype: LISU barcode LISU222141, left-hand specimen only!).

Remaining syntypes: Angola, Quicune, Feb 1859, *Welwitsch 3804* (BM barcode BM000911720!; LISU barcode LISU222141, right-hand specimen only!); Welw. Iter Ang., *Welwitsch 3803-3804* (K barcode K000256965!).

There is no collection number cited in the protologue. Two Welwitsch numbers are known for this name, as cited by Baker (1898) and Rendle (1899). Kativu & Nordal (1993) designated *Welwitsch 3798* (BM) as the lectotype, but this is a mistake, because this specimen is a syntype of *Anthericum andongense* Baker; Kativu & Nordal's lectotypification must be superseded (Art. 9.19). The original materials include *Welwitsch 3803* and *Welwitsch 3804*, respectively a flowering and a vegetative specimen, mounted on the same sheet, at BM and at LISU. The lectotype should be a flowering specimen since the protologue includes a description of flowers. The locality mentioned on the label of *Welwitsch 3803* at BM is the same as in the protologue.

Chlorophytum longifolium Schweinf. ex Baker in J. Linn. Soc., Bot. 15: 327. 1876 var.

longifolium – Lectotype designated by Meerts & Bjora (2012): Sudan/Ethiopian border, Gallabat, Matamma, Aug 1865, *Schweinfurth 8* (P barcode P01848100!).

= *Dasystachys falcata* Baker in Trans. Linn. Soc. London, Bot. 1(5): 256. 1878 ≡

Chlorophytum welwitschii Poelln. in Portugaliae Acta Biol., Sér. B, i. 220. 1945 –

Lectotype inadvertently designated by Kativu (1994), corrected from “holotype”:

Angola. Huilla, sparse in rupestribus elatis (5500) de Morro de Lopolo, Jan 1860,

Welwitsch 3793 (BM barcode BM00911760!; isolectotypes: LISU barcodes

LISU222164! & LISU222166!); possible isolectotype: Welw. Iter Ang., *Welwitsch*

3793 (K barcode K000256930!).

Remaining syntypes of *Dasystachys falcata*: Angola. Bumbo, in sylvis ex “Unteate” compositis inter Bumbo et Bruco, Oct 1859, *Welwitsch 3792* (BM without barcode!; LISU barcode LISU222165!).

There is no collection number cited in the protologue. Only *Welwitsch 3793* is cited by Baker (1898), but Rendle (1899) cites two collections i.e. *Welwitsch 3792* (Bumbo, fruiting specimens, October 1859) and flowering specimens collected at Morro de Lopollo in Jan 1860 (no number mentioned). The protologue includes a description of both flowers and fruits and cites two localities.

Chlorophytum molle (Baker) Meerts, **comb. nov.** ≡ *Anthericum molle* Baker in Trans. Linn.

Soc. London, Bot. 1(5): 259. 1878 – **Lectotype designated here:** Angola. Pungo

Andongo, in apricis petrosis totius territorii praesidii Pungo Andongo, Nov 1856,

Welwitsch 3780 (BM barcode BM000911729!; isolectotype: LISU barcode

LISU222151!); possible isolectotypes: Welw. Iter Ang., *Welwitsch 3780* (P barcode

P02056094!), Welw. Iter Ang., Pungo Andongo, near the Fort, *Welwitsch 3780* (K

barcode K000256966!, LD barcode LD1833922!).

There is no collection number cited in the protologue. Only one Welwitsch number is known for this name, as cited by Baker (1898) and Rendle (1899). Type materials have been found in BM, K, LD, LISU and P and have an original combination of traits, with rosulate, falcate, long pseudopetiolate leaves, and copious hyaline pubescence. This taxon is endemic to Angola.

Chlorophytum orchideum (Baker) Meerts, **comb. nov.** ≡ *Anthericum orchideum* Welw. ex

Baker in Trans. Linn. Soc. London, Bot. 1(5): 258. 1878 – **Lectotype designated here:**

Angola. Huilla, in graminosis humidiusculis ad basin Serra de Monimo, Jan 1860,

Welwitsch 3806 (LISU barcode LISU222142!; isolectotype: BM barcode BM

000911724!); possible isolectotypes: Welw. Iter Ang., *Welwitsch 3806* (K barcode

K000256968!, P barcode P02056078!).

There is no collection number cited in the protologue. Only one Welwitsch number is known for this name, as cited by Baker (1898) and Rendle (1899). The specimens in LISU are

more robust and better match the protologue than those in BM and are therefore chosen as the lectotype. The materials have an original combination of traits, including leaves with a long sheath tightly clasping the peduncle to form a pseudostem, leaf margin orange-tinged and microdenticulate. This taxon is endemic to Angola.

Chlorophytum pilosicarinatum (Poelln.) Meerts in Pl. Ecol. Evol. 145(3): 399. 2012 ≡ *Anthericum pilosicarinatum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 89. 1943 – Lectotype designated by Meerts & Bjora (2012): Angola. Benguella: country of the Ganguellas and Ambuellas, *Gossweiler 4018* (K barcode K000256969!).

Remaining syntypes: Angola, *Gossweiler 2039* (BM, without barcode!); Vila da Ponte, Rio Cubango, 28 Oct 1905, *Gossweiler 2663* (LISC barcode LISC063118!).

The protologue cites three syntypes, i.e. Bie: Ufer des Cubango, Vila da Ponte, in der Humidiherbosa-Formation, Nov 1905, *Gossweiler 2039* (COI); same locality, in der Petrideserta-Formation, Jan 1906, *Gossweiler 2663* (COI); same locality, in der Herbosa-Formation, Jan 1906, *Gossweiler 4018* (COI). None of these specimens has been found in COI. Meerts & Bjora (2012) chose *Gossweiler 4018* (K) as the lectotype. Since then, other materials have come to our attention. *Gossweiler 2039* has been found in BM; it consists of two flowering plants, showing the characteristic pattern of pubescence of the species. A specimen labeled *Gossweiler 4018* has also been found in LISC (barcode LISC063119!), but it deviates from the protologue in lacking the characteristic cilia and in having black-spotted bracts; this specimen should be excluded from the original materials. Finally, a specimen labeled *Gossweiler 2663* has been found in LISC; it is a very depauperate specimen.

Chlorophytum scabrum Baker in Fl. Trop. Afr. [Oliver & al.] 7(3): 497. 1898 – Holotype: Angola. Welw. Iter Ang., *Welwitsch 3805* (K barcode K000256970!); isotype: Angola. Pungo Andongo, in sylvestribus solo argilloso, Mar 1857, *Welwitsch 3805* (BM barcode BM000911738!, LISU barcode LISU222152!).

= *Chlorophytum hispidulum* Rendle in Cat. Afr. Pl. 2: 53. 1899 – Holotype: Angola. Pungo Andongo, in sylvestribus solo argilloso inter Candumba et Mangue, Mar 1857, *Welwitsch 3805* (BM barcode BM000911738!; isotypes: LISU barcode LISU222152!, K barcode K000256970!).

Baker (1898) described *Chlorophytum scabrum* some 20 years after the division of Welwitsch's collections. Since he worked at Kew Royal Botanic Gardens, it is reasonable to assume that his description is based on the material deposited in K, which has, therefore, to be considered as the holotype. This assumption is consistent with the vague locality indication ("Angola") in the protologue, corresponding to the specimen deposited in K, lacking a precise locality. This contrasts with the detailed indications that Baker included in the protologues of the species that he described in 1878 based upon the complete Welwitsch collections.

The duplicate deposited in BM was used by Rendle (1899) to describe *Chlorophytum hispidulum* Rendle, published a few months after Baker's name. Rendle, working at the Natural History Museum (London), based his new species on materials kept at BM. Therefore, BM000911738 has to be considered as the holotype. This taxon is endemic to Angola.

Chlorophytum sphacelatum (Baker) Kativu var. ***arenarium*** (Baker) Meerts, **comb. & stat. nov.** ≡ *Anthericum arenarium* Baker in Trans. Linn. Soc. London, Bot. 1(5): 259. 1878 – **Lectotype here designated:** Angola. Rarior in dumetis arenosis inter Candumba et Lombe, Mar 1857, *Welwitsch 3802* (BM barcode BM000911726!; isolectotype: LISU barcode LISU 222143!); possible isolectotypes: Welw. Iter Ang., Pungo Andongo,

between Candumba and Lombe, *Welwitsch 3802* (K barcode K000256958!), Pungo Andongo, *Welwitsch 3802* (G barcode G00428627!).

There is no collection number cited in the protologue. One Welwitsch number is cited by Baker (1898) and Rendle (1899). The materials in LISU (barcode LISU222143) are much more variable in leaf width than those in BM and K. Two specimens deviate from the protologue, having very narrow leaves, ca. 3 mm wide (flattened) with ca. 11 nerves (protologue: 6–20 mm wide and 30–40 nerves). However, for all the other traits they are similar to the other specimens on the same sheet and to the materials in BM and K and they obviously belong to the same taxon. Since the materials in BM agrees better with the protologue, it is chosen as the lectotype. Figueiredo & Smith (2008) consider this taxon as a synonym of *C. sphacelatum* var. *sphacelatum*. However, the long stiff cilia (1–2 mm long) on leaf margins at the junction between lamina and sheath, in addition to the slender habit, justify recognition at varietal rank. This taxon is endemic to Angola.

Chlorophytum sphacelatum (Baker) Kativu in Nordic J. Bot. 13(1): 64. 1993 var.
sphacelatum ≡ *Anthericum sphacelatum* Baker in J. Linn. Soc., Bot. 15: 303. 1876 –
Holotype: Angola. 70 miles from Ambriz, *Monteiro s.n.* (K barcode K000256908!).

Chlorophytum sphagnicola Meerts in Pl. Ecol. Evol. 145(3): 402. 2012 ≡ *Anthericum andongense* Baker in Trans. Linn. Soc. London, Bot. 1(5): 257. 1878 – **Lectotype designated here:** Angola. Pungo Andongo, in arenosis humidis sylvestribus inter Luxillo et Cazella, Jan 1857, *Welwitsch 3798* (BM barcode BM000911762!; isolectotype: LISU barcode LISU222134!); possible isolectotype: Welw. Iter Angolense, Pungo Andongo, *Welwitsch 3798* (P barcode P02056161!).

= *Anthericum dissitiflorum* Baker in Trans. Linn. Soc. London, Bot. 1(5): 257. 1878 –
Lectotype designated here: Angola. Pungo Andongo, in pascuis humidis prope Condo, Mar 1857, *Welwitsch 3781* (BM barcode 911717!; isolectotype: LISU barcode 222135!); possible isolectotype: Welw. Iter Ang., Pungo Andongo, *Welwitsch 3781* (K barcode K000256961!), **syn. nov.**

= *Anthericum andongense* var. *glabrum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 59. 1943 –
Holotype: Angola. Am rechten Longa-Ufer, bei dem Lazingua, unterhalb Minnesera, auf Sandboden, im lichtem Wald, ca. 1250 m, Jan 1900, *Baum 683* (B†) – **Lectotype designated here:** Angola. Am Longa, unterh. Minnesera, 1200 m, 31 Jan 1900, *Baum 683* (K barcode K000256959!; isolectotypes: BM without barcode, left-hand specimen!, BR barcode BR00000856402!), **syn. nov.**

= *Anthericum andongense* var. *parviflorum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 59. 1943 –
Holotype: Angola. Bié, auf sandiger, alluvialer Anschwemmung des Cubango-Ufers, Vila da Ponte, in der Duriherbosa-Formation, Nov 1905, *Gossweiler 2285* (COI†) –
Lectotype designated here: Angola. Benguella; country of the Ganguellas and Ambuellas, *Gossweiler 2285* (K barcode K000256913!), **syn. nov.**

Remaining syntypes of *Anthericum andongense*: Angola. Pungo Andongo, Marshes near Candumba on the river Cuanza, Jan 1857, *Welwitsch 3797* (LISU barcode LISU222133!), Welw. Iter Ang., Pungo Andongo, *Welwitsch 3797-3798* (K barcode K00256957!, BM without barcode!).

For *Anthericum andongense*, there is no collection number cited in the protologue, but both *Welwitsch 3797* and *Welwitsch 3798* are cited by Baker (1898) and Rendle (1899). The locality cited in the protologue corresponds to *Welwitsch 3798*. The materials of the two collection numbers are very similar and were collected in January 1857. A second sheet in BM (without barcode), with two specimens, labelled *Welwitsch 3797-3798* may be an

admixture of both collections and should not be considered as an isolectotype. Meerts & Bjora (2012) cite a holotype in error.

Concerning *Anthericum dissitiflorum*, there is no collection number cited in the protologue. Only one Welwitsch number is cited by Baker (1898) and Rendle (1899). The materials in BM, K and LISU are very similar; BM00911717 has somewhat more complete label information.

For *Anthericum andongense* var. *glabrum*, Poellnitz (1943) did not specify the herbarium in which the type specimen was deposited but it is most likely B, where the original Baum collection was kept (Figueiredo & al., 2009). The holotype has not been found, but at least three isotypes still exist, which match the protologue. The specimen K000256959 is here chosen as the lectotype. The African Plant Database considers this name as a synonym of *C. fasciculatum*. However, the latter has rough filaments while these are smooth in *Baum 683*.

For *Anthericum andongense* var. *parviflorum*, the holotype was not found in COI. Materials labelled *Gossweiler 2285* have been found in LISC and K. The materials in LISC (barcode LISC063156) are an admixture of two taxa, none of which closely matches the protologue. The left-hand specimen has a branched inflorescence, aristate bracts, and hairy leaves; it is most likely *Chlorophytum galpinii* (Baker) Kativu var. *galpinii*. The right-hand specimen has a long creeping rhizome and cataphylls with dark bands; it is *Chlorophytum ustulatum* (Baker) Meerts. The specimen in K matches the protologue and is here chosen as the lectotype.

The type materials of all the names here synonymized with *Chlorophytum sphagnicola* share the characteristic traits of this species, i.e. filiform leaves, distal tubers, slender habit, loose few-flowered inflorescence, smooth stamen filaments, and transversally ridged fruit.

Chlorophytum stolzii (K.Krause) Kativu in *Nordic J. Bot.* 13(1): 64. 1993 – Holotype:

Tanzania. Rungwe Dist., Kyimbila, Mulinda, 12 Oct 1910, *Stolz 339* (B barcode B 10 0168559!; isotype: K barcode K000257031!).

= *Acrospira asphodeloides* Welw. ex Baker in *Trans. Linn. Soc. London, Bot.* 1(5): 255 & Plate XXXIV Fig 4-7. 1878 – Lectotype designated by Marais & Reilly (1978): Angola. In rupestribus dumetosis ad ripas flum. Cuanza prope Condo versus Quisonde, Martio 1857, *Welwitsch 3777* (BM barcode BM00911749!; isolectotype: LISU barcode LISU222131!) ≡ *Anthericum welwitschii* Marais & Reilly in *Kew Bulletin* 32: 657. 1978.

Remaining syntypes: Angola. In rupestribus edit. de Pedra Songue, 21 Apr 1857, *Welwitsch 3778* (BM barcodes BM000911748! & BM00911750!); *Welwitsch 3777/3778* (LISU barcodes LISU222128!, LISU222129! & LISU222130!); Welw. Iter Ang., *Welwitsch 3777-3778-3779* (K barcode K000256921!).

There is no specimen number cited in the protologue. Baker (1898) and Rendle (1899) cite three Welwitsch numbers. A lectotype was designated by Marais & Reilly (1978) (“*Welwitsch 3777* (BM)”), without a justification. However, another sheet in BM (*Welwitsch 3778*, barcode BM000911748) bears a handwritten note “Specimen figured for Baker” and the corresponding material is indeed a very good match of Plate XXXIV, Fig 4-7 in the protologue. Even so, *Welwitsch 3777* is not in conflict with the protologue and there is thus no reason to supersede Marais & Reilly’s lectotypification, following art. 9.19 of ICN. There has been much confusion in the numbering of specimens of *Acrospira asphodeloides*, several sheets in LISU and K bearing ambiguous collection numbers (i.e. *Welwitsch 3777/3778*, *Welwitsch 3777-3778-3779*). Such specimens should not be considered as isolectotypes, but as remaining syntypes, together with *Welwitsch 3778*.

Welwitsch 3779, cited by Baker (1898) and Rendle (1899), in BM (without barcode) and LISU (barcode LISU222132!) (both vegetative) does not belong here; it should not be considered for typification.

Chlorophytum subpetiolatum (Baker) Kativu in Nordic J. Bot. 13(1): 64. 1993 var.

subpetiolatum – **Lectotype, designated here:** Mozambique. Morrumbala Mt., lower Zambezi River, 18 Jan 1863, *Kirk s.n.* (K barcode K000256915, lower specimenonly!).
= *Acrospira curtisiae* I.M.Johnst. in Contr. Gray Herb. 73: 32. 1924 – Holotype: Angola. East of Coanza River, 23 Sept 1923, *A.G.Curtis 333* (GH 00046508!), **syn. nov.**
= *Anthericum mendoncai* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 85. 1943 – Holotype: Angola. Lunda, Dala, in der Nähe des Chiumbe-Ufers, Sept 1927, *Carrisso & Mendonça 572* (COI†) – **Lectotype designated here:** Angola. Dala, prox. margens Rio Chiumbe, 25 Nov 1927, *Carrisso & Mendonça 572* (LISC barcode LISC063115!; isolectotype: LISC barcode LISC063116!), **syn. nov.**

Concerning *Acrospira curtisiae*, the material represents a hysteranthous form of the highly polymorphic *Chlorophytum subpetiolatum*, with the swollen roots typical of this species.

For *Anthericum mendoncai*, the holotype has not been found in COI. Duplicates matching the protologue have been found in LISC (two sheets: barcodes LISC063115 & LISC063116). This material is a special form of *Chlorophytum subpetiolatum* with roots less swollen than usual.

For *Chlorophytum subpetiolatum*, the type materials are an admixture of two taxa. The upper specimen is *Chlorophytum vestitum* Baker and must be excluded. The lower two plants match the protologue and are here designated as the lectotype.

Chlorophytum ustulatum (Baker) Meerts, **comb. nov.** ≡ *Anthericum ustulatum* Welw. ex Baker in Trans. Linn. Soc. London, Bot. 1(5): 258. 1878 – **Lectotype designated here:** Angola. Huilla, in pascuis tempore pluvii inundatis nunc siccatis, Apr 1860, *Welwitsch 3801* (BM barcode BM000911716!; isolectotype: LISU barcode LISU222138!).

= *Anthericum nodulosum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 87. 1943 – Holotype: Angola. Bié, Cuanavate, in Duriherbosa-Formation, Aug 1906, *Gossweiler 2215* (COI†) – **Lectotype designated here:** Angola. Vale do Cubango, Vila da Ponte, Duriherbosa, 5 Nov 1905, *Gossweiler 2215* (LISC barcode LISC063117!); possible isolectotype: Angola. Benguella; country of the Ganguellas and Ambuellas, *Gossweiler 2215* (K barcode K000256967!), **syn. nov.**

= *Anthericum ustulatum* Baker var. *ciliatum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 77. 1943 – Holotype: Angola. Hochland von Benguela, zwischen Ganda und Caconda, Xangorolo, Sept 1932, *Hundt 95* (B barcode B 10 0165906 quoad specimens I-II!), **syn. nov.**

Remaining syntypes of *Anthericum ustulatum*: Angola. Pungo Andongo, in spongiosis sylvaticis apricis de Mutollo, Mar 1857, *Welwitsch 3800* (BM barcode BM000911715!, LISU barcode LISU222139!), Welw. Iter Ang., *Welwitsch 3800-3801* (K barcode K000256971!).

For *Anthericum ustulatum*, there is no specimen cited in the protologue, but the two localities mentioned correspond to *Welwitsch 3800* (Pungo Andongo) and *Welwitsch 3801* (Huilla), respectively, both of which are cited by Baker (1898) and Rendle (1899). Both gatherings are affixed on the same sheet in BM and LISU. *Welwitsch 3801* is more copious and is therefore chosen as the lectotype. This species is very distinctive, with long creeping stolons and cataphylls with brown bands. *Anthericum nodulosum* and *Anthericum ustulatum* var. *ciliatum* show the same traits.

The holotype of *Anthericum nodulosum* has not been found in COI. Duplicates exist in LISC and K, which match the protologue. The material in LISC is more copious and is therefore selected as the lectotype.

Concerning *Anthericum ustulatum* var. *ciliatum*, *Hundt 95* (B) is an admixture, as already noted by von Poellnitz (handwritten notes in schedis). Two specimens, labelled “I” and “II”, represent *Anthericum ustulatum* var. *ciliatum* while the other three specimens, labelled “III”, “IV”, “V” are the type of *Anthericum tostum* Poelln. (= *Trachyandra saltii* (Baker) Oberm.).

This taxon is endemic to Angola.

Unplaced names

For the following ten names, neither the type specimen, nor other material has been found. These names thus remain unplaced. The reference of the holotypes are copied from the protologues. For some of them a tentative identification is proposed based upon the protologue.

Anthericum andongense var. *papillosum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 58. 1943 – Holotype: Angola. Huila: Gambue-Ebene, Dec 1882, *Newton s.n.* (B†).
Not mentioned in Figueiredo & Smith (2008).

Anthericum exellii Poelln. in Bol. Soc. Brot., Ser. 2, 17: 63. 1943 – Holotype: Angola. Rio Cassai, Estrada do Dundo, May 1937, *Exell & Mendonça 1941* (COI†).
Based on the protologue, it may have been *Chlorophytum galpinii*.

Anthericum junciforme Poelln. in Bol. Soc. Brot., Ser. 2, 17: 68. 1943 – Holotype: Angola. Huila, *Antunes 34* (B†).

Anthericum liliagastrum Engl. & Gilg in Kunene-Sambesi-Exped. 188. 1903 – Holotype: Angola. Linkes Kubango-Ufer, oberhalb Kuimarva, auf Sand mit weissem Kalkmergel, Nov 1899, *Baum 461* (B†).
Based on the protologue, it may have been *Chlorophytum cameronii* var. *pteroaulon*.

Anthericum liliagastrum var. *capitatum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 71. 1943 – Holotype: Angola. Chifumbazi, auf trocknen Stellen, Feb 1906, *Tiesler 70* (B†).
Not mentioned in Figueiredo & Smith (2008). Based on the protologue, it may have been *Chlorophytum sphacelatum*.

Anthericum liliagastrum var. *glabrum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 70. 1943 – Holotype: Angola. Huila, Ruacana, auf feuchten Stellen, Jun 1937, *Exell & Mendonça 2739* (COI†).
Not mentioned in Figueiredo & Smith (2008). Based on the protologue it may have been *Chlorophytum cameronii* var. *pteroaulon*.

Anthericum liliagastrum var. *pilosum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 70. 1943 – Holotype: Angola. Malange, Dec 1879, *Mechow 382 p.p.* (B†).
Not mentioned in Figueiredo & Smith (2008). Based on the protologue, it is almost certainly *Chlorophytum sphacelatum*.

Anthericum liliagastrum var. *robustum* Poelln. in Bol. Soc. Brot., Ser. 2, 17: 70. 1943 – Holotype: Angola. Malange, Dec 1879, *Mechow* 382 p.p. (B†).
Not mentioned in Figueiredo & Smith (2008). Based on the protologue, it is almost certainly *Chlorophytum stolzii*.

Anthericum xylorrhizum Engl. & Gilg in Kunene-Sambesi-Exped. 187. 1903 – Holotype: Angola. Unweit des Kuito, am waldrand auf sand, ca. 1150 m, bl. Dec 1899, *Baum* 530 (B†).

Chlorophytum peralbum Poelln. in Portugaliae Acta Biol., Sér. B, Sist. i. 217. 1945 – Holotype: Angola. Lunda, Dala, Coimbra-Cassai, R. Cuchi, Apr 1937, *Exell & Mendonça* 1166 (COI†).

ACKNOWLEDGEMENTS

I am most grateful to the curators of the following herbaria, for providing access to their collections and/or sending materials on loan: B, BM, BR, COI, K, LISC, LISU, P. Special thanks are due to Maria Cristina Duarte and Maria Paula De Matos Branco (LISC), Ana Isabel Correia and Xana Lucas (LISU), Fatima Sales and Joaquim Santos (COI) for making my stay in Portuguese herbaria unforgettable. I am grateful to the Université Libre de Bruxelles and the Fonds National de la Recherche Scientifique (Belgique) for funding the sabbatical leave during which this work was completed. The referees are gratefully acknowledged for their useful comments on the manuscript. Estrela Figueiredo is acknowledged for her help in finding information on Angolan herbaria.

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