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AFRICAN ORCHIDS XVI.

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A SUGGESTED re-classification of the genus *Diaphanthe* Schltr. together with descriptions of new species and new combinations in the genus form the greater part of this contribution. There are also descriptions of new species of other genera of Angraecoid orchids and of one species of *Polystachya*. The sequence, as in previous contributions, is that of Schlechter's "Das System der Orchidaceen" (Notizbl. Bot. Gart. Berlin, 9 (1926) 563-591). The type specimens of all the new species are in the Kew Herbarium.

Polystachya (§ **Cultriformes**) **canaliculata** *Summerhayes* sp. nov.; a *P. fulvilabia* Schltr. foliis angustioribus, inflorescentiis foliis multo brevioribus, floribus albis nec flavis, sepalis obtusis vel apiculatis, labelli ungue brevi, lobo intermedio ruguloso canaliculato; a *P. Mildbraedii* Kraenzl. mento brevior, labello basi magis angustato lobis lateralibus minoribus lobo intermedio ruguloso satis distinguenda.

Herba epiphytica; caules caespitosi, erecti, usque ad 12 cm. alti, leviter ancipites, siccitate sulcati, apice monophylli, basi cataphylla vaginiformi lineari acuta usque ad 7.5 cm. longa instructi. *Folium* erectum, lineari-ligulatum, apice rotundatum, basi cuneatum, 9-25 cm. longum,

5–8 mm. latum, quinquenervosum. *Inflorescentia* erecta, folio multo brevior, 4–7 cm. alta, superne subdense pauciflora; pedunculus gracilis, 3–5 cm. longus, laevis, subteres vel leviter anceps, supra medium vagina singula instructus; bracteae subpatentes, triangulari-ovatae, acuminatae, 1–2 mm. longae. *Flores* patentes, albi, rubro-notati; pedicellus (cum ovario) 7–9 mm. longus. *Sepalum* intermedium lanceolato-oblongum, apice apiculatum, basi leviter dilatatum, 5.5–7 mm. longum, 3.5–4 mm. latum; sepala lateralia oblique triangularia, subacuta, margine superiore (postice) 8.5–9.5 mm. longa, inferiore 5.5–6.5 mm. longa, basi 7.5–8 mm. lata, mentum obtusum 6–7 mm. longum formantia. *Petala* oblique oblongo-subspathulata, apice rotundata, 6–7 mm. longa, 2.25–2.5 mm. lata. *Labellum* curvato-deflexum ex ungue brevi lato ambitu oblongum, infra medium trilobatum, totum 9–10 mm. longum, 6–7 mm. latum (explanatum); lobus intermedius suborbiculari-quadratus, apice recurvato-apiculatus ut videtur retusus, marginibus undulatis, 5–5.5 mm. longus, 5–5.25 mm. latus, rugulosus, farinaceo-pilosus, secus medium canaliculatus; lobi laterales erecti, ab intermedio angulo recto sejuncti, incurvatim triangulares, subacuti, fere 1.5 mm. longi et lati. *Columna* subteres, antice excavata, circiter 2.5 mm. longa; anthera hemisphaerica, dorso cristata, antice leviter producta; rostellum leviter productum; stigma transverse oblongo-ellipticum.

TANGANYIKA TERRITORY: Nguru Mts., Mhonda, 600 m. alt., in deep shade in fork of forest tree, April 1943, *Moreau 353* (TYPE). "One glossy deep grass-green leaf. Flower glistening white with two narrow crimson lines running from anther base to column foot. No scent."

It is not easy to decide which species is the nearest relative of this addition to sect. *Cultriformes*. The narrow leaf and general flower structure indicate its affinity with *P. Mildbraedii* Kraenzl. and *P. gracilentata* Kraenzl., but there is also a strong resemblance to *P. fulvilabia*

Schltr. and other species with short few-flowered simple inflorescences. So far as I am aware this is the first species of sect. *Cultriformes* recorded from the Nguru Mountains.

Rhipidoglossum densiflorum *Summerhayes sp. nov.*; affine *R. obanensi* (Rendle) Summerh., a quo foliis apice valde inaequaliter bilobatis lobo longiore acuto lobo brevior fere nullo, floribus paulo majoribus, sepalis lateralibus quam intermedio longioribus angustioribusque, labello late orbiculari vel flabellato-orbiculari apice leviter exciso basi ante ostium calcaris callo transverso perhumili instructo satis distinguendum.

Herba epiphytica; caulis elongatus, usque ad 40–45 cm. longus, 2–3.5 mm. diametro, teres, superne multifolius, inferne vaginis foliorum delapsorum partim circumdatus, radices numerosas flexuosas ramosas laeves 3–4 mm. diametro emittens. *Folia* adscendentia vel fere patentia, 1–2 cm. distantia; vagina inferne arcta, superne subdilatata, leviter compressa, valde nervosa, apice truncata, 1–2 cm. longa; lamina oblanceolata, oblongo-vel elliptico-lanceolata vel anguste lanceolata, apice valde inaequaliter bilobata, lobulo longiore leviter incurvato acuto 2–10 mm. longo, lobulo brevior brevissimo vel fere nullo, basi angustata, 4–12 cm. longa, 8–23 mm. lata, siccitate multinervosa, tenuiter coriacea. *Inflorescentiae* singulae vel geminae, foliis multo breviores, 1–4 cm. longae, fere ad basin dense multiflorae, basi vaginis paucis ovatis obtusis instructae; rhachis teres; bractae vaginantes, superne dilatatae, truncatae vel subacutae, vix 1 mm. longae, 1–2 mm. distantes. *Flores* patentes, albi vel pallide cremei, eos *Convallariae majalis* revocantes, tepalis \pm conniventibus; pedicellus cum ovario 2–3 mm. longus. *Sepalum* intermedium late ellipticum, apice obtusum vel rotundatum brevissime apiculatum, 2.4–2.8

mm. longum, 1.7–1.9 mm. latum, concavum, trinervium; sepala lateralia oblique late elliptico-lanceolata, apice subacuta, vel obtusa, 3–3.5 mm. longa, 1.3–1.7 mm. lata, 1–3-nervia. *Petala* suborbicularia, apice obscure apiculata, 2.25–2.75 mm. longa, 2–2.6 mm. lata, trinervia, nervis lateralibus ramosis. *Labellum* late orbiculare, flabellato-orbiculare vel fere transverse ellipticum, apice excisum, antice subtruncatum vel rotundatum et brevissime bilobatum, 2.75–3.75 mm. longum, 3.5–4.7 mm. latum, multinervosum, basi ante ostium calcaris callo transverso perhumili leviter emarginato instructum; calcar e basi angustiore dilatatum, ellipsoideum, apice rotundatum, 2–3 mm. longum, circiter 1.75 mm. diametro. *Columna* deflexa, crassa, antice excavata, apice truncata, 1–1.25 mm. longa, androclinio leviter excavato; anthera oblonga, valde convexa, antice truncata; pollinia subsphaeroidea vel ellipsoidea, circiter 0.5 mm. longa, stipitibus duobus subspathulato-ligulatis deorsum angustatis 0.75 mm. longis, viscidiiis duobus elliptico-oblongis antice truncatis postice rotundatis; rostellum trilobum, lobo intermedio porrecto carnosio subspathulato, lobis lateralibus intermedio brevioribus rotundato-triangularibus; fovea stigmatica quadrata. *Capsulae* ellipsoideae, inferne angustatae, leviter curvatae, 1–1.25 cm. longae, 5 mm. diametro.

UGANDA: Bunyoro, Budongo Forest, Sept. 1933, *Eggeling 1431* (Uganda Forest Service No. 1376); Sept. 1935, *Eggeling 2172*; same date, *Hancock 13 A*; Nov. 1943, in fruit, flowered Busingiro Aug. 1944, *Eggeling 5475*; Bugoma Forest, 1050 m. alt., *Darce 759*; Masaka, South Buddu, *Fyffe 187*; Mengo, Kyagwe, Sept. 1921, *Lankester 29*; Mabira Forest, 1200 m. alt., Sept.–Oct. 1920, *Dümmer 4438*.

GABON: Upper Ngounyé River, waterfall on Mboumi River, at Mbigou, Nov. 1925, *Le Testu 5767* (TYPE).

ANGOLA: Moxico Distr., River Lupula, in evergreen vegetation, Jan. 1938, *Milne-Redhead 4239*.

This striking little species well illustrates the difficulties of classification of the group of genera of which it is a

constituent species. I have placed it, for the time being, in *Rhipidoglossum*, since it is clearly closely related to *R. obanense* (Rendle) Summerh. and *R. globuloso-calcaratum* (De Wildem.) Summerh. with which it shares the short dense inflorescences and short swollen spur. The orbicular curiously veined petals are also almost identical with those in other species of *Rhipidoglossum*. On the other hand in the shape of the leaves and the tendency of the whole plant to blacken on drying the species resembles the genus *Sarcorhynchus*. The narrow excision at the apex of the lip may be looked upon as an intermediate between the entire lip-apex of *S. polyanthus* (Kraenzl.) Schltr. and the deeply lobed lip of *S. bilobatus* Summerh., described later in this paper. Another complication is the presence of a low transverse rim-like callus just in front of the spur. Although technically this should place the species in *Diaphananthe* the callus is so unlike the ordinary tooth found in that genus and the plant shows so little resemblance to other species of *Diaphananthe* that it scarcely seems advisable to include it therein.

Further work and discoveries of yet more intermediate species may make it necessary to consider all three genera as forming a single one under the earliest name *Diaphananthe*, but I do not feel that the evidence so far warrants such a change.

Rhipidoglossum microphyllum *Summerhayes* sp. nov.; a *R. longicalcari* Summerh. habitu graciliore, radicibus numerosissimis, foliis multo minoribus, petalis ellipticis, labello apice subacuto, calcari brevioris facile distinguendum.

Rhipidoglossum? sp. Schlechter in Engler. Bot. Jahrb. 53 (1915) 605.

Herba epiphytica; caulis \pm erectus, gracilis, leviter

flexuosus, usque ad 15 cm. longus, 1–1.5 mm. diametro, teres, apice 3–7-foliatus, radices numerosissimas flexuosas simplices \pm recurvatas saepissime compressas usque ad 20 cm. longas 2–3 mm. latas griseas per totam longitudinem dense emittens. *Folia* parva, erecto-patentia vel patentia, usque ad 5 mm. distantia; vagina arcta, valde nervosa, 4–5 mm. longa; lamina oblonga vel oblongo-ligulata, apice paulo inaequaliter bilobata, lobulis rotundatis, 7–18 mm. longa, 2–5 mm. lata, griseo-viridis. *Inflorescentiae* ex axillis foliorum delapsorum exortae, folia superantes, arcuato-decurvatae, 1.5–2.5 cm. longae, sublaxe 4–8-florae; pedunculus 7–10 mm. longus, vaginis 3–4 infimis truncatis superioribus lanceolatis acutis instructus; rhachis fractiflexa, teres; bracteae laxe ochreatae, apice triangulares acutae, 1–1.5 mm. longae. *Flores* patentes, cremei, 1.5–2.5 mm. distantes; pedicellus cum ovario 3–3.5 mm. longus. *Sepalum* intermedium obovato-oblongum, apice subacutum, 3 mm. longum, 1.5 mm. latum, concavum; sepala lateralia oblique et leviter curvatim oblongo-ligulata, apice subacuta, 3.75 mm. longa, circiter 1 mm. lata, superne dorso carinata; omnia sepala trinervia. *Petala* oblique elliptica, apice rotundata, 2.75 mm. longa, 1.5 mm. lata, trinervia, nervis lateralibus \pm ramosis. *Labellum* elliptico-lanceolatum, subacutum, 3 mm. longum, vix 1 mm. latum, multinervosum; calcar valde incurvatum, cylindricum, apice leviter dilatatum, circiter 7 mm. longum et 0.5 mm. diametro. *Columna* brevis, crassa, antice excavata, 1 mm. longa, androclinio levissime excavato; anthera subhemisphaerica, antice vix producta; pollinia globosa, 0.3 mm. diametro, stipitibus duobus linearibus deorsum sensim angustatis 0.5 mm. longis, viscidii duobus ellipticis; rostellum productum, lobo intermedio convexo crasso, lobis lateralibus brevioribus triangularibus; fovea stigmatica quadrata; ovarium papillis nigris sparsis instructum.

TANGANYIKA TERRITORY: Neu Langenburg Distr., Bundali Mts., Ngulu Mt., 1400 m. alt., March 1914, *Stolz 2554* (TYPE.)

A somewhat aberrant member of the genus characterised by the slender stems emitting a mass of aerial roots, the very small leaves, the elliptical petals and the narrow entire lip. It is probably most closely allied to *R. longicalcar* Summerh. in which the lip is also longer than broad. The column and pollinarium characters agree well with those in other species of *Rhipidoglossum*.

Rhipidoglossum rutilum (*Reichenbach filius*) *Schlechter* in *Beih. Bot. Centralbl.* 36, Abt. 2 (1918) 81—*Summerhayes* in *Blumea*, Suppl. 1 (1937) 85.

Mystacidium Kaessnerianum *Kraenzlin* in *Vierteljahrsschr. Nat. Ges. Zürich*, 60 (1915) 395.

The type gathering of *Kraenzlin's* species (*Kässner 741*) was cited by me under *R. rutilum* (Rchb.f.) *Schltr.* in the reference given above, but I had overlooked the original description. This agrees admirably with that of *R. rutilum* and there can be no doubt as to the identity of the two.

Oeonia volucris (*Thouars*) *Sprengel* *Syst. Veg.* 3 (1826) 727.

Epidendrum volucre *Thouars* *Orch. Iles Austr.-Afr.* (1822) t. 81.

Until now this combination has been generally credited to *Durand* and *Schinz*, *Consp. Fl. Afr.* 5 (1895) 51, but the above reference has nearly 70 years' priority. *Sprengel* uses the original spelling *Aeonia*, but as "*Oeonia* *Lindl.*" has been conserved against two earlier names and general usage also favours this spelling, it would appear best to maintain it. Confusion with the Crassulaceous genus *Aeonium* *Webb & Benth.* is also avoided.

DIAPHANANTHE *Schlechter*

An examination of material of practically all the spe-

cies of *Diaphananthe*, including most of the type specimens, has enabled me to reduce some species to synonymy while on the other hand I have added to the number by transferences from other genera and by describing several new species. The details of these changes are given below under the headings of the various species recognised. I am still doubtful as to the exact relationships of a few of the species and also have insufficient material of what may prove to be additional new species. The total number of species on my present reckoning is 24, which is one more than the total in Schlechter's account of the genus (Beih. Bot. Centralbl. 36, Abt. 2 (1918) 95–101).

Schlechter divided the genus into three sections as follows:—

1. Eu-Diaphananthe. Stems very short; pedicels arising singly.
2. Gibbostium. Stems much elongated; pedicels arising singly.
3. Enantianthe. Stem rather short; leaves fleshy; pedicels opposite or whorled.

This arrangement is to a certain extent convenient in classifying the species, but it takes no account of the two quite different types of column structure found in the genus. One group of species containing the lectotype species (*D. pellucida* (Lindl.) Schltr. of Beih. Bot. Centralbl. 36, Abt. 2 (1918) 97) possesses a narrow acute decurved rostellum and a common viscidium to which the pollinia are attached by separate stipites. The other group possesses a column similar to that in the genus *Rhipidoglossum*, the rostellum being distinctly trilobed with a fleshy porrect middle-lobe while each pollinium is furnished with a separate stipe and viscidium.

The species are enumerated below in accordance with what I think are the affinities of the species, but I have

refrained from giving names to the various divisions and subdivisions as I do not feel that our knowledge of the genus and its nearest allies is anything like complete.

A. Column rather short, tapering upwards, androclinium rather small and sloping upwards; rostellum beak-like, deflexed, bilobed on removal of pollinarium, lobes subulate; stipites two attached to a common viscidium.

a) Stems very short with a rosette of leaves or only slightly elongated; flowers alternate.

1. *D. pellucida* (Lindl.) Schltr.
2. *D. bueae* (Schltr.) Schltr.
3. *D. Plehniana* (Schltr.) Schltr.
4. *D. Quintasii* (Rolfe) Schltr.

b) Stems elongated, leafy along a great deal of their length; flowers alternate.

5. *D. bidens* (Sw. ex Pers.) Schltr.
6. *D. subclavata* (Rolfe) Schltr.
7. *D. acuta* (Ridl.) Schltr.
8. *D. papagayi* (Reichb.f.) Schltr.
9. *D. congolensis* (De Wildem.) Summerh.
10. *D. divitiflora* (Kraenzl.) Schltr.

c) Stems long or short; flowers opposite or verticillate.

11. *D. fragrantissima* (Reichb.) Schltr.
12. *D. Welwitschii* (Reichb.f.) Schltr.
13. *D. vandiformis* (Kraenzl.) Schltr.

B. Column short and truncate, androclinium large, occupying the whole of the apex; rostellum porrect, trilobed on removal of pollinaria, middle lobe fleshy, more or less spatulate, laterals shorter, triangular; stipites 2, each attached to a separate viscidium.

a) Stems short or only slightly elongated.

14. *D. kamerunensis* (Schltr.) Schltr.
15. *D. curvata* (Rolfe) Summerh.
16. *D. polydactyla* (Kraenzl.) Summerh.
17. *D. Mildbraedii* (Kraenzl.) Schltr.
18. *D. tenerrima* (Kraenzl.) Summerh.
19. *D. pulchella* Summerh.
20. *D. ugandensis* (Rendle) Summerh.

b) Stems much elongated.

21. *D. Stolzii* Schltr.
22. *D. Schimperiana* (A. Rich.) Summerh.
23. *D. tenuicalcar* Summerh.
24. *D. subsimplex* Summerh.

The column in group B is almost identical with that in the genera *Rhipidoglossum* Schltr. and *Sarcorrhynchus* Schltr., but in many other features the various species may resemble closely species in group A. The charac-

teristic *Diaphananthe* tooth at the opening of the spur is present in all but one of the species of group B and is often identical with the similar structure in species belonging to group A. In *D. curvata* (Rolfe) Summerh. this callus takes the form of a transverse ridge, but on other grounds the species seems correctly referred to *Diaphananthe*.

Diaphananthe bidens (*Swartz ex Persoon*) *Schlechter* *Die Orchideen* (1914) 593.

Limodorum bidens Afzelius ex Swartz in *Kongl. Vetens. Akad. Handl.* 21 (1800) 243, *nomen tantum*—Swartz ex Persoon *Syn. Pl.* 2 (1807) 521, *descript.*

Angraecum ashantense Lindley in *Edwards Bot. Reg.* (1843) *misc.* p. 56.

Angraecum monodon Lindley in *Lindley & Paxton Flower Garden* 2 (1851–52) 102, fig. 187.

Angraecum Bakeri Kraenzlin in *Mitt. Deutsch. Schutzgeb.* 2 (1889) 159.

Mystacidium productum Kraenzlin in *Engler. Bot. Jahrb.* 22 (1895) 30.

Listrostachys mystacidioides Kraenzlin *l.c.* 28 (1900) 170.

Listrostachys longissima Kraenzlin *l.c.* 48 (1912) 400.

Angraecum subfalcifolium De Wildeman in *Bull. Jard. Bot. Brux.* 5 (1916) 192.

Diaphananthe ashantensis Schlechter in *Beih. Bot. Centralbl.* 36, *Abt.* 2 (1918) 98.

Diaphananthe monodon Schlechter *l.c.*

Diaphananthe mystacidioides Schlechter *l.c.* 99.

Diaphananthe producta Schlechter *l.c.*

Diaphananthe subfalcifolia Schlechter *l.c.* 100.

Mystacidium Duemmerianum Kraenzlin in *Vierteljahrsschr. Nat. Ges. Zürich* 74 (1929) 100.

An examination and careful analysis of nearly sixty

gatherings from an area extending from Sierra Leone to Uganda, leads to the conclusion that the above "species" are merely forms of one widely distributed species. This shows considerable variation in leaf size and shape and in the detailed structure of the lip; there is also a less marked variation in flower size.

Unfortunately it has not been possible to examine the types of some of the above names and there seems little likelihood that such examination ever will be possible. These species therefore will have to be interpreted in the light of other gatherings from the same general areas. The descriptions of *Angraecum Bakeri*, *Listrostachys mystacidoides* and *L. longissima* do not include any features, or combination of characters, which cannot be found in other gatherings both from the east and from the west. The spur appears to be longer in relation to the lip than in most other specimens, but even as regards this character Kraenzlin's own descriptions are somewhat contradictory.

From the description the flowers in *Listrostachys subfalcifolia* are larger than in any other gathering, but some collections from the Belgian Congo (e.g. *Corbisier 503*) have flowers almost as large and are otherwise evidently *D. bidens*.

Mystacidium Duemmerianum Kraenzl. is a puzzling case. The type gathering is *Dümmer 4437* of which there are duplicates at Kew and at the British Museum. These specimens are certainly referable to *D. bidens*, the only remarkable feature being the consistently short inflorescences which otherwise are quite normal. Kraenzlin's description, although it fits the Kew and British Museum material in most respects, seems to have been drawn up from a plant bearing considerably smaller flowers with shorter and broader tepals. In view of the poor state of preservation of the duplicates it seems probable that

Kraenzlin was unable to discover a well-preserved flower on the type sheet except in the bud stage when preservation is often better. This would explain the short perianth members since it is a well-known fact that there is considerable growth in length as the flower develops. There is, however, a possibility that *Dümmer 4437* is a mixture of two species and that Kraenzlin's type differs from the material seen.

So far as can be judged from the description, *Diaphanthe subclavata* (Rolfe) Schltr. (*Angraecum subclavatum* Rolfe in Bolet. Soc. Broter. 9 (1892) 140) seems also to be referable to *D. bidens*. Unfortunately no specimen could be discovered in the herbaria at the British Museum or at Coimbra. Admittedly Rolfe described the pollinia originally as having only a single stipe, but he stated that the species is allied to *Listrostachys ashantensis*. However, in the Flora of Tropical Africa (vol. 7, p. 160) he transfers the species to *Listrostachys* which, as understood by him there, possesses two separate stipites in the pollinarium. *D. bidens* has been recorded from Fernando Po and there seems no reason why such a widely spread species should not also occur in São Tomé.

Arrangement of the specimens in a geographical sequence from west to east shows that those occurring to the west of the Cameroons Mountain have on the whole shorter and broader leaves than those to the east and south. There is no absolute distinction, however, moderately long-leaved forms being found in Sierra Leone and short-leaved ones in Gabon. The flowers in the "Congo" group are on the whole slightly larger and the spur relatively shorter than in gatherings from "Upper Guinea," but again there is no hard and fast line of demarcation. With regard to variations in the labellum, which have been used by some authors for differentiating purposes, it is obvious that considerable variations occur.

The lip is usually more or less quadrate with rounded base, the apex truncate and somewhat emarginate with a short central apiculus, and the margins normally irregularly dentate especially in the anticous part. Sometimes the lip is narrowed towards the front, sometimes it is somewhat pandurate, while in other cases there is no obvious emargination. The spur is much narrowed at the base and obtuse at the apex. It varies from being the same length as the lip to a little more than half as long again. On the whole the western or "Upper Guinea" specimens have a relatively longer spur than those from the Congo basin region, but here again there is no sharp distinction.

On the whole the evidence so far available does not appear to be sufficient to justify the recognition of two geographical varieties.

Diaphananthe congolensis (*De Wildeman*) *Summerhayes comb. nov.*

Mystacidium congolense De Wildeman Not. Pl. Utiles Congo 1 (1903) 151—Summerhayes in Blumea Suppl. 1 (1937) 80, in obs.

Rhipidoglossum rutilum Schlechter in Beih. Bot. Centralbl. 36, Abt. 2 (1918) 81, partly.

This species is closely allied to *D. divitiflora* (Kraenzl.) Schltr. and may eventually prove to be conspecific. At present I have not seen sufficient material of either species to make a definite decision.

Diaphananthe fragrantissima (*Reichenbach filius*) *Schlechter* in Beih. Bot. Centralbl. 36, Abt. 2 (1918) 100.

Listrostachys fragrantissima Reichenbach filius in Flora 48 (1865) 190.

Listrostachys Kirkii Rolfe in Dyer Fl. Trop. Afr. 7 (1897) 164.

Listrostachys falcata De Wildeman Not. Pl. Utiles Congo 1 (1903) 147.

Listrostachys fimbriata Rolfe in Bull. Misc. Inform. Kew (1906) 115.

Angraecum Muanse Kraenzlin in Orchis 2 (1908) 99.

Diaphananthe falcata Schlechter in Beih. Bot. Centralbl. 36, Abt. 2 (1918) 100.

Diaphananthe fimbriata Schlechter l.c.

Diaphananthe Kirkii Schlechter l.c. 101.

Diaphananthe Muansae Schlechter l.c.

I fail to see any differences between the above species on comparison of the descriptions and 30 gatherings including type specimens, although there is certainly some variation in flower size and particularly in lip structure. The lip varies in the degree of laceration or fimbriation of the margins and in the length of the apiculus although this is usually at least one quarter of the length of the rest of the lip and sometimes as much as two-thirds. The spur is variously thickened in the distal part, acute or obtuse, and either shorter or longer than the lip. So far I have been unable to correlate the variations in any of the above characters, while in general facies, including habit, inflorescence, shape of tepals, general lip construction and column structure all the specimens exhibit a remarkable uniformity.

Judging from the material available and the notes of collectors the stem is upright at first while still short and the leaves are then recurved downwards and may almost meet below. As the stem elongates the root system is not strong enough to hold it up and it gradually falls over, the leaves produced subsequently then becoming more and more hanging and consequently straighter.

D. Welwitschii (Reichb.f.) Schltr. which is, so far as I am aware, only known from the type gathering, has elongated upright stems with short closely imbricate almost erect leaves which are rounded and unequally bilobed at the apex. The inflorescences and flowers closely

resemble those of *D. fragrantissima*. *D. vandiformis* (Kraenzl.) Schltr., judging from the photograph in Schlechter Die Orchideen, fig. 202, has apparently a habit similar to that in *D. Welwitschii*, but the leaves are much longer and spreading. Until it is possible to see material of this species from the Cameroons it had best be left as a separate species.

As now understood *D. fragrantissima* occurs in Oubangui-Chari, Eastern Belgian Congo, southern Sudan, Uganda, northern Tanganyika Territory, Angola and North-Western Rhodesia. From the data available it appears generally to inhabit gallery forests and dryish woodlands in savanna regions, either epiphytic or on rocks.

Diaphananthe pulchella *Summerhayes sp. nov.*; a *D. Stolzii* Schltr. caule multo brevior, foliis longioribus angustioribusque, inflorescentiis longioribus, floribus minoribus, tepalis obtusissimis vel rotundatis; a *D. ugandensi* (Rendle) Summerh. floribus majoribus, labello subflabellato distinguenda.

Herba epiphytica, pulchella; caulis brevis vel \pm elongatus, \pm dependens, usque ad 13 cm. longus, 3–4 mm. diametro, superne dense 4–9-foliatus, inferne vaginis foliorum delapsorum fere omnino circumdatus, radices flexuosas ramosas, griseas, laeves, 4–6 mm. diametro per totam longitudinem emittens. *Folia* circiter 7.5 mm. distantia, patentia; vagina arcta, leviter compressa, valde nervosa, 5–10 mm. longa; lamina oblongo-ligulata, ligulata vel lineari-ligulata, apice inaequaliter bilobulata, lobulis rotundatis vel obtusissimis longiore 4–11 mm. longo, basi leviter angustata, 4.5–15 cm. longa, 7–11 mm. lata, \pm coriacea. *Inflorescentiae* ex axillis foliorum vel foliorum delapsorum exortae, singulae, simpliciter racemosae, dependentes, 6–15 cm. longae, sublaxe mul-

tiflorae; pedunculus 1–2 cm. longus, vaginis paucis ovatis subacutis instructus; rhachis teres, circiter 1 mm. diametro; bracteae 6–9 (-13) mm. distantes, ochreateae, ovato-triangularis, acutae, 1.5–3 mm. longae. *Flores* patentis, pallide viridi-lutei, cremei-viridescens vel viridescens, translucens; pedicellus cum ovario 3–4 mm. longus. *Sepalum* intermedium erectum, concavum, ellipticum, oblongo-ellipticum vel obovato-ellipticum, apice obtusissimum vel rotundatum, 4.75–7.25 mm. longum, 2.5–3.75 mm. latum; sepala lateralia leviter curvatim oblonga vel elliptico-oblonga, apice rotundata, 5.75–7.5 mm. longa, 2–3.5 mm. lata; omnia sepala trinervia, nervis lateralibus saepius ramosis. *Petala* oblique ovata vel lanceolato-ovata, apice breviter acuminata, marginibus superne irregularibus vel fere denticulatis, 4.25–7.25 mm. longa, 3–4.75 mm. lata, 3–5-nervia, nervis lateralibus ramosis. *Labellum* late flabellato-suborbiculare, apice \pm excisum apiculo saepe interjecto, antice obscurissime tri-vel quadrilobatum, marginibus irregulariter denticulatis vel excisis, totum 6–9.25 mm. longum, 7.25–10 mm. latum, nervis numerosis \pm radiantibus, ante orificium calcaris callo erecto dentiformi instructum; calcar incurvatum, ex ore latiore angustatum, deinde fusiformi-cylindricum, apice angustatum, 8.5–11.5 mm. longum. *Columna* incurvatim porrecta, crassa, subteres, 1.8–2.8 mm. longa, apice truncata, androclinio leviter excavato; anthera subhemisphaerica, antice producta truncata; pollinia subsphaeroidea vel pyriformi-sphaeroidea, 0.65–0.8 mm. diametro, stipitibus linearibus superne leviter dilatatis inferne subulatis 1.05–1.4 mm. longis, viscidiiis duobus distinctis orbicularibus; rostellum convexum, antice productum, trilobum, lobo intermedio leviter spathulato carnosum, lobis lateralibus dimidio brevioribus incurvatim triangularibus acutis; fovea stigmatica elliptico-quadrata.

KENYA COLONY: Mt. Elgon; Kitale, Caves of Elgon Farm, 2010 m. alt., May 1931, *Tweedie 10*; same locality, 2160 m. alt., on Acacia at edge of forest, May 1941, *Tweedie 571*; Suam Saw Mill, 2370 m. alt., edge of forest, high up on *Podocarpus gracilior*, May 1941, *Tweedie 570*; no local., 1800 m. alt., in forest, Feb. 1933 *Napier*, Coryndon Mus. No. 2524; Ngong, 10 miles W. of Nairobi, 1800 m. alt., Nov. 1638, *Cunningham-van Someren 512*.

TANGANYIKA TERRITORY: Masai-land, 50 miles S. of Moshi, Lolbeni Mt., in rich primary forest, April 1943, *Page-Jones in Moreau 569*; W. Usambara Mts., eastern edge, Mazumbai, 1350 m. alt., forest edge, March 1943, *Moreau 611*; E. Usambara Mt., Amani, 900 m. alt. in rain-forest canopy, April 1942, *Moreau 64* (TYPE); Tanga Prov. Handeni, 45 miles S W of Korogwe, 720 m. alt. in semi-evergreen bush, March 1943, *Moreau 610*.

Diaphananthe pulchella *Summerh.* var. **geniculata** *Summerhayes var. nov.*; a typo inflorescentiis saepius longioribus, floribus paulo majoribus, sepalis lateralibus longioribus angustioribusque ligulatis basin versus lateraliter geniculatis vel abrupte curvatis; pollinii stipitibus 1.5–1.6 mm. longis differt.

UGANDA: Toro: Bwamba, Sempaya, Aug. 1937, *Eggeling 2392*; no local., 1500 m. alt., in forests, *Lankester in Snowden 739*. Bunyoro: Bugumolo, in savannah, usually on *Acacia Sieberiana* rarely on *Combretum Binderianum*, Aug. 1935, *Eggeling 2153* (TYPE); Hoima, 1200 m., Aug. 1940, *Purseglove 983*; same local., Dec. 1942 (in fruit), flowered at Busingiro, Aug. 1943 & July-Aug. 1944, *Eggeling 5360*. Busoga: Kitumbazi, Sept. 1921, *Lankester 26*. Also seen (flowers matched) by W. J. Eggeling at Aduku in Lango Prov. and at Metu, West Nile Prov.

The variety may be distinguished from the type of the species especially by the narrow strap-shaped lateral sepals which are suddenly bent in the posticous direction about one-third way from the base and by the longer stipites to the pollinia. Each stipes is narrowly strap-shaped with a broader rounded apex and tapers gradually towards the base where it is narrowest. In the type the basal part of the stipes is somewhat thickened and the tapering from above downwards is not so marked. In both type and variety the pollinia are of the same size. There is some indication from habitat data that the va-

riety is a savanna plant, whereas the type appears to occur mainly in forests or at the forest margins.

D. pulchella is evidently most closely related to *D. ugandensis* (Rendle) Summerh. The latter has smaller flowers with a differently shaped lip. This latter organ is more or less orbicular, the basal margins being rounded but entire whereas in the apical part they are irregularly toothed. At the apex is a broad sublunate truncated sinus with a small central apiculus. In *D. pulchella* the basal part of the lip is distinctly cuneate-flabellate while the front margins are irregularly dentate and more or less obscurely trilobed, the middle lobe being narrowly and sometimes rather deeply incised to form two sub-lobes which give a four-lobed appearance to the whole. The narrow apical sinus or cleft has sometimes a small central apiculus. So far as the lateral sepals and pollinarium are concerned *D. ugandensis* more closely agrees with the Kenya and Tanganyika type form of *D. pulchella* than with the Uganda variety *geniculata* with which it occurs.

Diaphananthe Schimperiana (*A. Richard*) *Summerhayes comb. nov.*

Dendrobium ? *Schimperianum* A. Richard Tent. Fl. Abyss. 2 (1851) 282.

Angraecum Schimperianum Reichenbach filius in Walp. Ann. 3 (1852-3) 573.

This species is omitted by Schlechter from his account of the Angraecoid Orchids. From dissections made of a rather withered flower on a duplicate of the type, taken together with Reichenbach's description, it is evident that the species should be referred to *Diaphananthe*. Here it is clearly related to *D. Stolzii* Schltr. and *D. pulchella* Summerh. From *D. Stolzii* it may be distinguished by the much longer leaves with a more unequal apex in which the shorter lobe is scarcely evident. In

D. Stolzii the leaves are widest towards the apex, the latter being unequally bilobed with both lobes rounded and quite distinct. The long stem and relatively short spikes distinguish the Abyssinian species from *D. pulchella*. It differs from both *D. Stolzii* and *D. pulchella* in the shape of the lip which is broadest near the base, slightly pandurate and quite distinctly, if shortly, lacerate or fimbriate on the anterior angles. The column, although much swollen following fertilisation, is clearly of the *Rhipidoglossum* type, being trilobed with a central fleshy and porrect middle lobe.

Diaphananthe subsimplex *Summerhayes sp. nov.*;
a *D. Stolzii* Schltr. foliis angustioribus, floribus multo minoribus, labello suborbiculari-quadrato apice obscurissime trilobo; a *D. tenuicalcari* Summerh. foliis apice nec angustatis sed lobulis rotundatis, floribus minoribus, calcari multo brevior differt.

Herba epiphytica, glaberrima; caulis elongatus, \pm dependens, pauciramosus, 10–35 cm. longus, 2.5–3 mm. diametro, superne laxe foliatus inferne vaginis foliorum delapsorum fere omnino circumdatus, radices flexuosas simplices usque ad 35 cm. longas et 4 mm. diametro laeves griseas vel brunnescentes per totam longitudinem emittens. *Folia* erecto- ad recurvato-patentia, 1–2 cm. distantia; vagina arcta, valde nervosa, apice truncata, 7–15 mm. longa, leviter compressa; lamina ligulata (si mavis lineari-oblonga), apice inaequaliter bilobulata, lobulis rotundatis longiore usque ad 8 mm. longo, basi \pm abrupte angustata, 2.5–8.5 cm. longa, 5–12 mm. lata, subcarnosa. *Inflorescentiae* axillares, simpliciter racemosae, patentes, 1.5–4 cm. longae, subdense 5–13-florae; bracteae 2–7 mm. distantes, ochreae, triangulares, subacutae, 1–2.5 mm. longae. *Flores* patentes, cremei ad ochracei, \pm viridi-tincti; pedicellus cum ovario 2.5–3

mm. longus. *Sepalum* intermedium oblongo- vel ovato-ellipticum, apice rotundatum vel obtusissimum, 2.7–4 mm. longum, 1.5–2 mm. latum, saepissime trinervium; sepala lateralia oblique oblonga vel oblongo-elliptica, apice obtusa, 3.3–4.5 mm. longa, 1.3–1.6 mm. lata, 1–3-nervia. *Petala* oblique triangulari-ovata, acuta, margine antico inferne dilatato, 2.8–3.5 mm. longa, 1.7–2.7 mm. lata, trinervia, nervis lateralibus saepe ramosis. *Labellum* suborbiculari-quadratum, apice obtusum vel obscurissime bi-vel trilobulatum, basi rotundato-cuneatum, 2.5–3.6 mm. longum, 2.8–3.5 mm. latum, basi ante orificium calcaris callo obtuso dentiformi instructum, disco multinervoso; calcar leviter incurvatum, cylindricum, apice leviter angustatum, 4.4–6.75 mm. longum, circiter 1 mm. diametro. *Columna* deorsum porrecta, crassa, brevis, apice truncata, 1.2–1.5 mm. alta, androclinio leviter excavato; anthera hemisphaerica, antice producta truncata; pollinia fere globosa, circiter 0.5 mm. diametro, stipitibus duobus linearibus superne dilatatis apice rotundatis 0.6 mm. longis, viscidiiis duobus separatis orbicularibus; rostellum productum, lobo intermedio convexo carnosio apice subspathulato rotundato, lobis lateralibus duplo brevioribus triangularibus subacutis; fovea stigmatica quadrata, margine inferiore \pm prominente.

UGANDA: Karamoja, Napak, 2250 m. alt., in ravine forest, occasional, May 1940, *Thomas 3644*.

KENYA COLONY: Mt. Elgon, Suam River Valley, 1950–2100 m. alt., Nov. 1934, *Tweedie 289*; July 1936, *Tweedie 329*; *330*; Aberdare Mts., Kinangop, 2640–2670 m. alt., close to river, April 1938, *Chandler 2400*; Western Aberdare Mts., Kinobop Forest Station, 2580 m. alt., June 1931, *Dale 2863*; Chyulu Hills, Central part, 1650 m. alt., in rain forest, June 1938, *Bally*, Coryndon Mus. No. 7853; Nanyuki, N W of Mt. Kenia, 2040 m. alt., on bole of large tree by river, June 1943, *Moreau 578* (TYPE).

This species resembles strongly *Rhipidoglossum xanthopollinium* (Reichb.f.) Schltr., not only in the general habit and flower size, but also in the structure of the col-

umn which is of the *Rhipidoglossum* type. It possesses, however, a distinct tooth in the mouth of the spur and, moreover, the petals are markedly acute and similar in shape to those in other species of *Diaphananthe*. As I pointed out in my revision of *Rhipidoglossum* (Blumea Suppl. 1, 78-9: 1937) the two genera are very closely allied, but it still appears advantageous to maintain them as separate entities for the time being.

Diaphananthe tenerrima (*Kraenzlin*) *Summerhayes comb. nov.*

Listrostachys tenerrima Kraenzlin in Vierteljahrsschr. Nat. Ges. Zürich 68 (1923) 424.

This species was reduced to *D. Mildbraedii* (Kraenzl.) Schltr. by Schlechter in the Berlin Herbarium but on comparison of the two type gatherings the differences, especially in the floral characters, warrant their separation as distinct species. The sepals and petals in *D. tenerrima* are broader and rounded at the apex while the lip is transversely elliptical and quite rounded in front instead of obovate and apiculate as in *D. Mildbraedii*. In vegetative characters there is admittedly a close resemblance between the two species and both came from the volcanic area near Lake Kivu.

Diaphananthe tenuicalcar *Summerhayes sp. nov.*; affinis *D. Stolzii* Schltr. et *D. Schimperianae* (A. Rich.) Summerh., ab hac foliis plus duplo minoribus, ab illa foliis apice angustioribus lobulis acutis, floribus minoribus sed calcaris longiore tenuissimo, ab utraque statura minore, inflorescentiis multo brevioribus floribus densioribus distinguitur.

Herba verosimiliter epiphytica, glaberrima; caulis elongatus, 7-16 cm. longus, circiter 3 mm. diametro, apice circiter 3-foliatus, inferne vaginis foliorum delapsorum \pm circumdatus, radices numerosas reflexo-arcuatas

laeves griseas 3 mm. diametro per totam longitudinem emittens. *Folia* 6–8 mm. distantia, adscendentia vel \pm patentia; vagina subarcta, 6–8 mm. longa, nervosa; lamina oblique vel curvatim oblongo-lanceolata, basi abrupte angustata, apice breviter et inaequaliter bilobulata, lobulo longiore 4–6 mm. longo acuto, lobulo brevioris usque ad 1 mm. longo subacuto, 4–5 cm. longa, 1–1.3 cm. lata, textura verosimiliter tenuis. *Inflorescentiae* ex axillis foliorum natae, solitariae, erecto-patentes, 1–1.7 cm. longae, 3–4-florae, basi vaginis paucis instructae; bractee 2.5–4 mm. distantes, ochreateae, triangulares, acutae, 1.5–2 mm. longae. *Flores* albi; pedicellus cum ovario 0.8–1.2 cm. longus. *Sepalum intermedium* oblongo-ellipticum, apice rotundatum, 4.5 mm. longum, fere 3 mm. latum, concavum, trinervium; sepala lateralia leviter curvata vel obliqua, ligulato-oblonga, obtusa, 5 mm. longa, 2.5 mm. lata, sub-trinervia. *Petala* oblique et irregulariter ovata, apice acuta, basi margine antico rotundato-dilatata, 4.5–5 mm. longa, 3 mm. lata, trinervia, nervis lateralibus ramosis, saccis crystalliferis numerosis distincte notata. *Labellum* flabellatim obtriangulare, apice anguste retusum apiculo interjecto, 7.5 mm. longum, antice 6.5 mm. latum, multinervium, basi ante ostium calcaris callo humili dentiformi instructum; calcar ex ore lato filiformi-cylindricum, apice sensim angustatum, leviter incurvatum, fere 2.5 cm. longum, circiter 0.75 mm. diametro. *Columna* crassa, subteres, 1.6 mm. longa; anthera sub-hemisphaerica, antice breviter producta truncata; pollinia sphaeroidia, 0.6 mm. diametro, stipitibus linearibus superne subspathulatis inferne subulatis 1.5 mm. longis, viscidiiis duobus distinctis oblongis postice acutis 0.8 mm. longis; rostellum porrectum, lobo intermedio rostrum anatis revocanti, lobis lateralibus multo brevioribus curvatim linearibus apice truncatis; fovea stigmatifera quadrata.

UGANDA: Karamoja, Napak, 2250 m. alt., in ravine forest, occasional orchid with masses of small white flowers, May 1940, *Thomas 3645*.

Another member of the group with elongated stems and *Rhipidoglossum* type of column bearing separate viscidia on each side of a fleshy often more or less clavate obtuse rostellum middle-lobe. The present species is characterised by the short few-flowered inflorescences and the relatively long slender spur.

Diaphananthe ugandensis (*Rendle*) *Summerhayes*
comb. nov.

Mystacidium ugandense Rendle in Journ. Linn. Soc.
London Bot. 37 (1905) 220.

This species is also omitted from Schlechter's monograph of the Angraecoid Orchids, but an examination of the type specimen shows it to be a typical member of *Diaphananthe* with a well-developed tooth in the mouth of the spur. Vegetatively the plant resembles *Rhipidoglossum xanthopollinium* (Reichb.f.) Schltr. but may be readily distinguished by the floral characters. Material collected in Uganda by Mr. W. J. Eggeling and agreeing well in floral structure and other respects with the type, (*Bagshawe 425*), has larger and more laxly flowered inflorescences. The column is of the *Rhipidoglossum* type found in other members of *Diaphananthe* (*D. Stolzii* Schltr., for example), there being two separate vicidias and stipites and a trifid rostellum with a fleshy central lobe. From *D. pulchella* Summerh., which is probably its nearest ally, the species differs in the narrower leaves, slightly smaller flowers and differently shaped lip. This is relatively broader, and lunately truncate at the apex with a distinct central apiculus.

Sarcorhynchus bilobatus *Summerhayes* *sp. nov.*;
a *S. polyantho* (Kraenzl.) Schltr. planta majore, foliis

duplo latioribus, tepalis latioribus, labello profunde bilobato, calcari multo longiore incurvato facile distinguendus.

Planta epiphytica vel rarius terrestris; caulis elongatus, pauciramosus, usque ad 50 cm. longus, verosimiliter plus minusve dependens, circiter 4–6 mm. diametro, fere teres vel sectione ellipticus, radices 3–6 cm. distantes ad 15 cm. longas et 4 mm. diametro laeves griseas per totam longitudinem emittens. *Folia* disticha, 1.5–3 cm. distantia, fere patentia; vagina arcta, dorso leviter carinata, nervosa, 1.5–2.5 cm. longa, apice truncata; lamina elliptico-oblonga vel fere elliptica, apice oblique inaequaliter bilobata, lobulis subconniventibus lobulo brevior vix distincto, basi subrotundata vel rotundata, 5–9.5 cm. longa, 1.5–4.25 cm. lata, siccitate nigrescens. *Inflorescentiae* 1–3-natae, folia aequantes vel paulo superantes, 5–9 cm. longae, fere ad basin subdense multiflorae, basi vaginis paucis ochreatis infimis truncatis superioribus lanceolatis acutis instructae; rhachis teres, leviter fractiflexa; bracteae laxae vaginantes, ochreae, truncatae, 1–2 mm. longae, 3–4 mm. distantes. *Flores* patentes, pellucidi, albidi vel viridescentes; pedicellus (cum ovario) 2–3 mm. longus. *Sepalum* intermedium elliptico-oblongum vel oblongo-obovatum, apice rotundatum, 3.75–4.75 mm. longum, 2–3.25 mm. latum; sepala lateralia oblique vel leviter curvatim ligulato-oblonga, apice rotundata, 4.5–5.5 mm. longa, 1.75–2.5 mm. lata, dorso humiliter carinata; omnia sepala trinervia. *Petala* oblique elliptico-oblonga vel elliptico-ovata, apice breviter acuminata, basi subrotundata, 3.5–4 mm. longa, 2–3 mm. lata, binervia vel trinervia, nervis lateralibus ramosis. *Labellum* ambitu late subpandurato-oblongum, trientibus duobus apicalibus recurvatis, triente apicali profunde trilobatum, in toto 4.75–5.75 mm. longum, 3.5–4.8 mm. latum; lobus intermedius brevissimus, dentiformis; lobi

laterales subconniventes, oblique lanceolato-oblongi, 1.5–1.7 mm. longi, 1.25–2 mm. lati, marginibus leviter incisis; calcar incurvatim dependens, cylindricum, apicem versus leviter angustatum, subacutum, 7–8.25 mm. longum, 1.75–2 mm. diametro. *Columna* horizontalis, semiteres, 1.3–1.75 mm. longa; anthera compressa hemisphaerica, antice breviter producta; pollinia subsphaeroidea, stipitibus subspathulato-ligulatis deorsum angustatis 0.6–0.8 mm. longis, viscidiiis separatis fere orbicularibus antice truncatis; rostellum porrectum, lobo intermedio carnosio lanceolato, lobis lateralibus dimidio brevioribus leviter incurvatis obtusis; stigma quadrato-ellipticum.

UGANDA: Kigezi, Rutenga, Oct. 1940, *Eggeling 4212* (TYPE); Toro; Ruwenzori, Namwamba Valley, 1875 m. alt., in dense forest by river, Jan. 1935, *Taylor 2807 a*; Toro, near mouth of Mpanga River, on rock close to river, Sept. 1906, *Bagshawe 1205*; Ankole, 1 mile from Mbarara on shorter Kabale road, April 1944, *Eggeling 5496*.

An outstanding addition to this small but interesting genus, and occupying an intermediate position as regards geographical distribution, the two other species coming from the Cameroons and Tanganyika Territory respectively. *S. bilobatus* has a longer stem and broader leaves than the other species, but differs most markedly in the lip being deeply incised in the apical third with two large somewhat connivent lateral lobes and a very much smaller triangular middle lobe; the spur is also much longer. As in the other species the leaves blacken somewhat during drying while all three have similarly shaped tepals. In column and pollinarium characters the species agree well.

Mystacidium tanganyikense *Summerhayes* sp. nov.; a *M. venoso* Harvey ex Rolfe foliis apice acutioribus, petalis latioribus, labelli calcaris brevioribus, rostellis lobis lateralibus crassioribus haud barbatis sed tantum papil-

losis, pollinii stipitibus brevioribus latioribusque; a *M. caffro* Bolus foliis majoribus, perianthii segmentis longioribus angustioribusque, labello basi ampliato apice acuminato, calcaris haud apice inflato, pollinii stipitibus latioribus viscidii minoribus satis distinguitur.

Planta parva, epiphytica; caulis brevissimus, vix 1 cm. longus, radices numerosas flexuosas tenues emittens. *Folia* circiter quarto, plus minusve dependentia, ligulata vel lanceolata-ligulata, apice breviter inaequaliter bilobata, lobulis subacutis, 3–6 cm. longa, 8–14 mm. lata. *Inflorescentiae* dependentes, foliis duplo vel fere duplo longiores, dimidio apicali laxiuscule 5–12-florae, 5–10 cm. longae; pedunculus gracilis, vaginis paucis distantibus instructus; rhachis gracilis, interdum levissime fractiflexa; bractae vaginis similes, ovatae, acutae vel acuminatae, 1–2 mm. longae, 3–7 mm. distantes. *Flores* subpatentes, virides, flavido-virides vel cremeri, fragrantis; pedicellus tenuis, cum ovario 6–9 mm. longus. *Sepalum* intermedium recurvatum, lanceolatum, leviter acuminatum, apice ipso obtusum, 5–7.75 mm. longum, 1.5–2 mm. latum; sepala lateralia recurvata, oblique lanceolato-ligulata, apice obtusa, 6–8.5 mm. longa, 1.25–1.75 mm. lata; omnia sepala trinervia. *Petala* deltoideo-lanceolata, dimidio superiore valde angustata, apice sub-acuta, 4.75–7.25 mm. longa, prope basin 1.5–2.5 mm. lata, inferne trinervia; omnia tepala saccis crystalliferis minutis numerosis instructa, dimidio basali tenuiora et pallidiora. *Labellum* basi valde ampliatus ita ut videtur obscure trilobatum, lobis lateralibus rotundatis semiorbicularibus, in calcar sensim angustatum, dimidio apicali (lobus intermedius) valde angustatum, lineari-ligulatum, sectione V-forme, apice anguste obtusum; totum labellum 4.7–6.6 mm. longum, 2.75–3 mm. latum; calcar anguste cylindricum, leviter incurvatum, 17–21 mm. longum. *Columna* brevis, crassa, circiter 1.5 mm. alta, androclinio leviter

excavato. *Anthera* hemisphaerica, antice leviter producta; pollinia subsphaerica, stipitibus duobus ligulatis deorsum angustatis circiter 1.5 mm. longis, viscidiiis duobus lineari-oblongis antice acutis 0.8–0.9 mm. longis. *Rostellum* valde deorsum productum, viscidiiis amotis trifidum; lobus intermedius subspathulato-ligulatus; lobi laterales breviores, lineares, acuti; omnes lobi dense papilloso.

TANGANYIKA TERRITORY: Lake Daluti, 10 miles east of Arusha, in complete shade on underside of forest liane, June 1942, *Moreau 317* (TYPE); Uluguru Mts., west side of Lukwangule Plateau, 2400 m. alt., epiphytic in dry evergreen forest on *Xymalos monospora* Baill., Jan. 1943, *Moreau 474*.

A characteristic member of the genus differing from its allies rather in the combination of characters than in any outstanding feature. It is more closely allied to several South African species than to its Tropical African congeners.

Angraecopsis holochila *Summerhayes sp. nov.*; species distinctissima, ab aliis speciebus labello fere integro, calcari plus 2 cm. longo, pollinii viscidio communi, stipitibus longis divaricatis facile distinguenda.

Herba parva, epiphytica; caulis brevissimus, fere 0.5 cm. longus, paucifolius, radices flexuosas griseas glabras emittens. *Folia* saepius duo, oblongo-ligulata vel oblanceolato-ligulata, apice rotundata, leviter inaequaliter obscureque bilobata, basi angustata, 3.5–5.5 cm. longa, 3–7 mm. lata. *Inflorescentiae* dependentes vel deflexae, foliis aequilongae vel breviores, laxiuscule 3–5-florae; pedunculus gracilis, teres, 1.5–2.5 cm. longus, vaginis duobus vel tribus, acutis, 3–3.5 mm. longis instructus; bracteae ochreateae, ovatae, acutae, 2–3 mm. longae, 5–10 mm. distantes. *Flores* patentes, sordide flavi; pedicellus (cum ovario) gracilis, 5–8 mm. longus. *Sepalum* intermedium ellipticum, apice rotundatum vel leviter retusum, 3.25 mm. longum, 1.75 mm. latum; sepala lateralia par-

ellela, incurvatim oblanceolato-subspathulata, apice rotundata, 4.5 mm. longa, superne 1.5–1.75 mm. lata. *Petala* basi cum sepalis lateralibus breviter connata, oblique ovata, subacuta, margine antico inferne dilatata, 3 mm. longa, vix 2 mm. lata; omnia tepala trinervia. *Labelium* subquadrato-ovatum, obscurissime trilobatum, 3 mm. longum, 1.75 mm. latum; calcar incurvatim dependens, ex ore lato filiformi-cylindricum, apice leviter angustatum, 1.75–2.25 cm. longum, 0.3 mm. diametro. *Columna* incurvata, crassiuscula, 0.7 mm. longa. *Anthera* subhemisphaerica, antice vix producta; pollinia subsphaerica, 0.45 mm. diametro, stipitibus duobus divaricatis corniformibus 0.7 mm. longis, viscidio suborbiculari convexo antico breviter fisso. *Rostellum* breviter productum, latum, obtusum, viscidio amoto bifidum.

UGANDA: Karamoja, Napak, 2250 m. alt., in ravine forest, occasional, May 1940, *Thomas 3646*.

This interesting little species possesses the dwarf habit, small leaves and delicate inflorescence characteristic of many species of *Angraecopsis*. The somewhat spathulate lateral sepals curve forward parallel to one another on each side of the lip and for a short distance at the base are united to the anticous margin of the petals, both of which features are found in several other species of the genus. The lip, however, is outstanding in being practically entire with only the suspicion of a small rounded lateral lobe on each side about half way between the base and apex. The pollinia have a broad common viscidium, from the sides of which the two stipites diverge in a manner recalling the horns on a cow's head. This structure of the pollinarium is quite distinct from that in *A. parviflora* (Thou.) Schltr. on the one hand and from that of *A. breviloba* Summerh. and its allies on the other.

On the whole, however, the species seems best placed in *Angraecopsis* in spite of the distinctive characters mentioned.