XVII. *Enumeration of the Plants collected by Mr. H. H. JOHNSTON on the Kilima-njaro Expedition, 1884, by Prof. D. OLIVER, F.R.S., F.L.S., and the Officers of the Kew Herbarium.*

(Plates LX.-LXIII.)

Read 3rd June, 1886.

WITH the exception of *Anisotes parvifolius*, Oliv. (Acanthaceæ), belonging to a genus known previously only from Arabia and Socotra, the species here first described belong to genera already recorded from Tropical Africa.

The genus *Valeriana* is here recorded for the first time from Tropical Africa, I believe; but the single specimen brought home hardly suffices for description; a species of the genus occurs at the Cape. A single specimen also of an *Anthoxanthum* was gathered at 13,200 ft. on Kilima-njaro, possibly a robust form of *A. odoratum*; this is a second genus here first noted from Tropical Africa.

This enumeration, before it was put in its final form, Mr. Johnston copied for the Appendix to his 'Narrative of the Kilima-njaro Expedition' (London, Kegan Paul & Co., 1886), omitting the descriptions. The plant which in his Appendix is called *Hormolotus Johnstoni*, Oliv., I have since identified with *Antopetitia abyssinica*, Rich., now referred to *Ornithopus*, and the *Senecio Valeriana*, Oliv., I have thought it better to refer to *Gynura*. With the *Astephania africana*, Oliv., of the Appendix, I propose to associate generically a plant which I described in 'Icones Plantarum' (tab. 1451) as a doubtful *Sphacophyllum* from Zambesia (see below p. 339). Dr. Masters, F.R.S., has kindly described for us a new *Tryphostemma*, and Herr O. Bœckler has named three new Cyperaceæ.—D. OLIVER.

CLEMATIS THUNBERGII, Steud., var. HIRTA (foliis 'C. Wightianæ'). 3000-5000 ft.

THALICTRUM RHYNCHOCARPUM, Dill. & Rich. 7000 ft.

RANUNCULUS OREOPHYLLUS, Del. 8000-11000 ft.

RANUNCULUS PINNATUS, Poir. 8500 ft.

ANEMONE THOMSONI, Oliv. in Hook. Ic. Pl. t. 1491. 9000-13,000 ft.

UVARIA LEPTOCLADON, Oliv., sp. nov.; ramulis gracilibus ultimis fusco-tomentellis, foliis breviter petiolatis oblanceolato-ellipticis acuminatis basi rotundatis subtus minute stellato-pubescentibus supra opacis nervo medio excepto glabratis, floribus sæpius geminis ternisve, pedunculo brevissimo, pedicellis 5-8 lin. longis stellato-tomentellis, sepalis late ovatis obtusiusculis inferne coalitis submembranaceis extus tenuiter stellato-tomentellis, petalis calyce subduplo longioribus ovato-ellipticis v. interioribus ovato-oblongis breviter et dense tomentellis, ovariis hirtis pluri- (circ. 8-10-) ovulatis.

Taita, 2000 ft.

Folia $2\frac{1}{2}$ – $3\frac{1}{4}$ poll. longa, 1 – $1\frac{1}{2}$ poll. lata; petiolus 1 lin. longus. Sepala $\frac{1}{4}$ poll. longa petala 4–5 lin. longa.

Hildebrand no 1971, from near Mombassa, may be a form of the same species.

STEPHANIA ABYSSINICA, Rich., var. TOMENTELLA?

So far as I can see, differing only from some of our specimens of *S. abyssinica*, e. g. Dr. Welwitsch's no. 2322 (1322 Distr. Esc. Polytech.), in the thin tomentum of the extremities, petioles, nervation of the leaves underneath, and peduncles; in these particulars agreeing with the South-African *Stephania* named *Homocnema Meyeriana* by Mr. Miers.

Kilima-njaro, 5000 ft.

ARABIS ALPINA, L. 8000–11,000 ft.

CARDAMINE AFRICANA, L. 8000–9000 ft.

CARDAMINE JOHNSTONI, Oliv., sp. nov. Herba adscendens v. subdebilis; caule glabro v. parcissime pilosulo, foliis caulinis membranaceis petiolatis imparipinnatis, foliolis petiolulatis ovatis lateralibus sæpius obliquis utrinque late 1–3-crenato-lobatis, lobis mucronatis, parce pilosulis glabrativæ, racemis terminalibus glabris, floribus majusculis purpurascens, siliquis longiuscule pedunculatis adscendentibus anguste linearibus glabris, valvis enerviis, apice in stylo angustatis.

Kilima-njaro, 8000 ft.

Herba $\frac{3}{4}$ – $1\frac{1}{2}$ –2-pedalis. Folia cum petiolo poll. longa; foliola $\frac{2}{3}$ – $1\frac{1}{4}$ poll. longa, $\frac{1}{3}$ – $\frac{5}{8}$ poll. lata. Flores 3–4 lin. longi; sepala elliptica obtusa marginibus hyalinis; petala oblanceolata v. obovata calyce $2\frac{1}{2}$ –3-plo longiora; filamenta subfiliformia; stigma (temp. florifero) emarginatum. Siliqua $1\frac{3}{4}$ –2 poll. longa, $\frac{1}{16}$ – $\frac{1}{10}$ poll. lata; stylo persistente 1–2 lin. longo.

FARSETIA STENOPTERA, Hochst., forma. Taita.

CLEOME MONOPHYLLA, L. Kilima-njaro, 6000 ft.

COURBONIA DECUMBENS, Brongn., var. PARVIFOLIA. Kilima-njaro, 5000 ft.

CAYLUSEA ABYSSINICA, Fisch. & Mey. Kilima-njaro, 5000 ft.

VIOLA ABYSSINICA, Steud., forma foliis cordato-rotundatis. 8000–10,500 ft.

PITTOSPORUM ABYSSINICUM, Hochst. Kilima-njaro, 5000–6000 ft.

POLYGALA SENENSIS, Klotzsch. Maungu.

SILENE BIAFRÆ, Hook. f., v. *S. Burchellii*, Ott. (imperfect single specimen). Kilima-njaro, 11,000 ft.

CERASTIUM VULGATUM, L., forma. 7000 ft.

CERASTIUM AFRICANUM, Oliv. 9000–10,000 ft.

DRYMARIA CORDATA, Willd. 6000 ft.

HYPERICUM LANCEOLATUM, Lam. 6000–7000 ft.

HYPERICUM KIBOENSE, Oliv., sp. nov. Herba adspectu *H. perforati*, erecta ramosa glabra, caule terete ramulis adscendentibus gracilibus; foliis parvis oblongo-ellipticis obtusis interdum mucronulatis brevissime petiolatis subtus punctatis, cymis terminalibus floribus mediocribus pedicellatis, sepalis lanceolatis acutis acuminatisve sæpius plus minus serrulatis margine nigro-punctatis dein rigidiusculis nervosis, petalis calyce subduplo longioribus obovatis margine nigro-punctatis, stylis 3 basi liberis ovario æquilongis.

Kilima-njaro, 13,000 ft.

Herba 2-3-ped. Folia (ramulorum) 4-5 lin. longa. Flores $\frac{2}{3}$ - $\frac{3}{4}$ poll. diam.

HYPERICUM SCHIMPERI, Hochst. (approaching *H. Quartinianum*, Rich., which may be only a form of it). Kilima-njaro, 5000-6000 ft.

SIDA GREWIOIDES, Guill. & Perr. 4400 ft.

SIDA SCHIMPERIANA, Hochst. (*Dictyocarpus truncatus*, Wight.) Kilima-njaro, 5000 ft.

ABUTILON ASIATICUM, L. ? (vel *A. indicum*, Don). 4300 ft.

PAVONIA SCHIMPERIANA, Hochst. 6000 ft. and upwards.

KOSTELETZKYA ADOENSIS, Hochst., var. **HIRSUTA**. 6000 ft.

HIBISCUS VITIFOLIUS, L. 6000 ft.

HIBISCUS LUDWIGII, Eckl. & Zey. (of Mast. in Fl. Trop. Afr. i. 203). 6000 ft.

HIBISCUS GOSSYPINUS, Thunb. 6000 ft.

HIBISCUS SCHIZOPETALUS, Hook. f. 40-60 miles from coast.

HIBISCUS PLATYCALYX, Mast. Maungu.

WALTHERIA AMERICANA, L. Kilima-njaro, 5000 ft.

MAHERNIA EXAPPENDICULATA, Mast., var. **TOMENTOSA** ? an sp. distincta ? Taveita.

MAHERNIA EXAPPENDICULATA, Mast., var. ? Kilima-njaro, 5000 ft.

GREWIA SALVIFOLIA, Heyne, forma. Taveita.

GREWIA SALVIFOLIA, Heyne, forma foliis obtusioribus. Kilima-njaro, 5000 ft.

TRIUMFETTA an *T. pilosa* ? (Fl. Trop. Afr. i. 257). 6700 ft.

SPARMANNIA ABYSSINICA, Hochst., var. **HIRSUTA**. 7000 ft.

TRIASPIS AURICULATA, Radl. Maungu, and 40-60 miles from coast.

MONSONIA BIFLORA, DC. (*M. angustifolia*, Roxb.). Taveita.

GERANIUM ACULEOLATUM, Oliv. 6000 ft.

GERANIUM ACULEOLATUM, Oliv., forma **parvifolia**. 7000 ft.

GERANIUM SIMENSE, Hochst. 6000 ft.

GERANIUM SIMENSE ? Hochst., forma. 11,000 ft.

GERANIUM (inadequate). 10,000 ft.

GERANIUM OCELLATUM, Camb., var. 6000 ft.

We have the same from the lower plateau, north of Lake Nyassa, collected by Mr. Thomson. The carpels have their transverse ridges very minutely whitish-setulose.

OXALIS CORNICULATA, L., var. 4400 ft.

IMPATIENS WALLERIANA, Hook. f. Kilima-njaro, 5000 ft.

IMPATIENS KILIMANJARI, Oliv. 8500 ft., 7000 ft., and "up to 10,200 ft."

IMPATIENS. 8500 ft. (and no. 25, 8000 ft.?). Two alternate-leaved species, with solitary axillary flowers, I hardly venture to describe in the present state of our material for comparison. They are distinct specifically from each other; both are allied to *I. micrantha*, Hochst., and to *I. capensis*, Thunb. In neither does the spur exceed (or, if so, but slightly) the petals.

IMPATIENS, sp. Single species with 4-5-fid spur-apex. 7000 ft.

TODDALIA, sp. ? aff. *T. aculeata*, Pers. ? (no fruit). Lanjora.

TODDALIA, sp. ? (no fruit). Kilima-njaro, 4000-5000 ft.

HARRISONIA ABYSSINICA, Oliv. Kilima-njaro, 5000 ft.

OCHINA (in fruit), an *O. leptoclada*, Oliv. ? Kilima-njaro, 5000 ft.

TURRÆA FLORIBUNDA, Hochst., var. MACRANTHA.

A South-African species which we had not previously in the tropical flora, but differing remarkably from the type in having the flowers 2 to 3 times larger, the staminal column $3\frac{1}{2}$ in., the style $4\frac{1}{2}$ in. in length. The leaves are not expanded at the time of flowering as in the Natal plant, but the young unfolding ones correspond.

Kilima-njaro, 5000 ft.

TURRÆA NILOTICA, Kotschy & Peyr., var. ROBUSTA.

A form of this species with leaves at length glabrate and with larger flowers, the calyx slightly deeper and more campanulate. Flowers to end of staminal tube $\frac{1}{2}$ inch, to extremity of much exserted style 1 inch. The fruit is depressed-globose, about $\frac{1}{2}$ in. diam.

Maungu, 2000 ft.

RHAMNUS PRINOIDES, L'Hér. Kilima-njaro, 5000 ft.

ZIZYPHUS JUJUBA, Lam., var. OBTUSIFOLIA. Taita.

ZIZYPHUS PUBESCENS, Oliv., sp. nov. Inermis, ramulis hirtellis ultimis flavido-fuscis, foliis ovato-ellipticis obtusis, v. obtusiusculis basi oblique rotundatis serrulatis utrinque pubescentibus, stipulis sæpius deciduis lineari-subulatis hirtis, cymis parvis paucifloris breviter pedunculatis hirtellis, calycis lobis deltoideis acutis extus hirtis, stylo bifido.

Kilima-njaro, 2000-3000 ft.

Folia $1-1\frac{1}{2}$ poll. longa, $\frac{3}{8}-\frac{2}{3}$ poll. lata; petiolus 1-2 lin. longus.

We have fruiting specimens of probably the same species from Zambesia (between Lupata and Tette) collected by Sir John Kirk, differing only in the much larger leaves, $2\frac{1}{2}-3\frac{1}{2}$ in. long, $1-1\frac{3}{8}$ in. broad. The fruit is obovoid, more or less apiculate, glabrate, about 5 lines long.

VITIS ROTUNDIFOLIA, Fres. ? (imperfect). Kilima-njaro, 5000 ft.

VITIS ARGUTA, Hook. f. var. ?

Though with minor differences, I cannot venture to separate this plant from *V. arguta*, previously known only from Western Africa. Kilima-njaro, 5000-6000 ft.

VITIS CYPHOPETALA, Nees, forma. 2000–6000 ft.

VITIS ERYTHRODES, Fres. Kilima-njaro, 6000 ft.

DEINBOLLIA INSIGNIS, Hook. f. ? Kilima-njaro, 5000 ft.

SCHMIDELIA RUBIFOLIA, Hochst. Taita.

CUPANIA ? (Too young.) Kilima-njaro, 2000–3000 ft.

RHUS VILLOSA, L. f., forma *parvifolia*. Kilima-njaro, 2000–3000 ft.

RHUS GLUTINOSA, Hochst.

A form with panicles $\frac{1}{2}$ – $\frac{3}{4}$ ft. long, slightly overtopping the leaves; the inflorescence more loosely pilose-pubescent than usual. Kilima-njaro, 6000 ft.

RHUS GLAUCESCENS, Rich., forma. 40–60 miles from coast and Kilima-njaro, 5000 ft.

AGELÆA LAMARCKII ?, Planch. (in fruit). Plains up to 6000–7000 ft.

ADENOCARPUS MANNII, Hook. 6000–9000 ft.

PAROCHETUS COMMUNIS, Ham. 9000 ft.

TRIFOLIUM SUBROTUNDUM, Steud. & Hochst. 5000 ft.

TRIFOLIUM JOHNSTONI, Oliv., sp. nov. (§ Repentes). Herba perennis repens glabrata, foliis longe petiolatis membranaceis obcordato-cuneatis obtuse denticulatis nerviis utrinque 10–12, stipulis membranaceis apice liberis, pedunculis elongatis folio longioribus, capitulis multifloris globosis, floribus brevissime pedicellatis, calyce membranaceo, dentibus anguste subulatis anticis tubo paullo longioribus, corolla calyce fere duplo longiore, vexillo obovato-oblongo retuso sessile, ovario bi-ovulato.

Kilima-njaro, 10,000 ft.

Petioli 3–5 poll. longi; stipulæ $\frac{3}{4}$ –1 poll. longæ. Foliola $\frac{2}{3}$ –1 poll. longa, $\frac{2}{3}$ – $\frac{3}{4}$ poll. lata. Pedunculi 5–8 poll. longi. Capitula $\frac{3}{4}$ –1 poll. diam.; flores $\frac{1}{2}$ poll. longi.

With the general aspect of *Trifolium repens*, and near to *T. Burchellianum* in floral structure, but the leaflets are not closely nervose.

TRIFOLIUM POLYSTACHYUM, Fres. Kilima-njaro, 5000 ft.

INDIGOFERA, an *I. macrophylla*, Schum. & Thonn. ? (Baker in Fl. Trop. Afr.).

INDIGOFERA ARRECTA, Hochst. Kilima-njaro, 4000–5000 ft.

INDIGOFERA PENTAPHYLLA, L. Kilima-njaro, 2000–3000 ft.

TEPHROSIA VOGELII, Hook. f. 40–60 miles inland.

ORNITHOPUS CORIANDRINUS, Hochst. (*Antopetitia abyssinica*, A. Rich. Fl. Abyss. i. 209, tab. 39). 6000 ft.

Not identifying this at first, I gave it the MS. name of *Hormolotus Johnstoni*, which appears in Mr. Johnston's 'Kilima-njaro Expedition,' pp. 337, 339, without description.

ÆSCHYNOMENE CRISTATA, Vatke ? 40–60 miles inland.

ORMOCARPUM KIRKII, S. Moore. Kilima-njaro, 5000 ft.

DESMODIUM SCALPE, DC. Kilima-njaro, 5000-6000 ft.

DESMODIUM OXYBRACTEATUM, DC. (*D. paleaceum*, Guill. & Perr.). Kilima-njaro, 5000-6000 ft.

ALYSICARPUS RUGOSUS, DC.

LATHYRUS, an *L. sativus*, L. ? But stem angular, not alate ; no fruit. 7000 ft.

CLITORIA TERNATEA, L. (forma minora). Kilima-njaro, 5000 ft.

GLYCINE JAVANICA, L., forma ? 7000 ft.

DOLICHOS LABLAB, L. Kilima-njaro, 5000 ft.

CALPURNIA AUREA, Steud., var. MAJOR. Kilima-njaro, 6000 ft.

CÆSALPINIA, sp. nov. ?

In the absence of fruit better left unnamed. Unarmed, glabrate, or extremities and leaf-rhachis puberulous, varying to 5-6 in. in length ; pinnae 6-8-jugate ; leaflets 14-18-jugate oblong obtuse mucronulate, almost veinless ; stipellæ at base of pinnae subulate spinescent. Flowers in a terminal dense spike overtopped by the leaves ; calyx glabrous with oblong imbricate segments ; petals venose obovate-rotundate, 6-8 lines long ; stamens pilose below.

40-60 miles inland.

PTEROLOBIUM LACERANS, R. Br. (*P. abyssinicum*, Rich.). 6000 ft.

CASSIA DIDYMOBOTRYA, Fres. Kilima-njaro, 5000-6000 ft.

CASSIA GORATENSIS, Fres. 40-60 miles inland.

CASSIA ZAMBESIACA, Oliv. 40-60 miles inland.

CASSIA MIMOSOIDES, L. 6000 ft.

BAUHINIA TOMENTOSA, L., var. PARVIFOLIA-HIRTELLA. Kilima-njaro, 2000-3000 ft.

BAUHINIA TOMENTOSA, L., var. GLABRA. Maungu.

BAUHINIA RETICULATA, DC. (imperfect). Kilima-njaro, 5000 ft.

ACACIA PENNATA, Willd. Kilima-njaro, 6000 ft.

RUBUS DICTYOPHYLLUS, Oliv., sp. nov. Pilosula eglandulosa, caule parce piloso-tomentello aculeato aculeis sparsis recurvis, foliis superioribus 3-1-foliolatis petiolatis aculeolatis, foliolis petiolulatis ovato-ellipticis acutis caudatis v. late rotundatis acute denticulatis, supra rugulosis sparse pilosulis subtus conspicue reticulatis parce pubescentibus, nervo medio aculeato, paniculis terminalibus multifloris, sepalis ovato-lanceolatis glanduloso-mucronatis utrinque tomentosis, petalis rotundatis calycem superantibus, carpellis (floriferis) parce pilosis, stylo glabro.

Kilima-njaro, 4000-10,000 ft.

Folia superiora, petiolo 1-1½ poll. longo, tenuiter pubescente, foliolo centrali 2½ poll. longo, 1½-1¾ poll. lato ; petiolulo ½-¾ poll. longo ; foliolis lateralibus breviter petiolulatis. Flores ½-¾ poll. diam., breviter pedicellati ; bracteæ lineari-lanceolatæ acutæ.

BRAYERA ANTHELMINTICA, DC., var. VILLOSA. A tree of 25-30 ft. in height. The first time we have received this from outside Abyssinia. The stem and underside of sheathing petiole densely clothed with very tawny hairs. 7000-10,000 ft.

ALCHEMILLA ARGYROPHYLLA, Oliv., in Hook. Ic. Pl. t. 1505. Frutex stipulis vaginantibus exceptis sericeo-argenteus, ramis primariis elongatis ramulos breves numerosos axillares emittentibus, foliis breviter petiolatis tripartitis, lobo centrali late oblanceolato breviter trifido lobis lateralibus oblongis acutis, supra sericeis subtus pilis longis argenteis obsitis, stipulis vaginantibus membranaceis glabris castaneis margine pilis longis sparsis ciliatis, cymis 5-7-floris axillaribus pedunculo vaginato abscondito, floribus pedicellatis sericeis flavidis, carpellis 4.

Kilima-njaro, 8000-10,000 ft.

Folia $\frac{1}{2}$ poll. longa, lamina tripartita petiolo 3-4-plo longior. Stipulæ $\frac{1}{3}$ - $\frac{1}{2}$ poll. longæ apice liberæ ovatæ obtusæ v. acutiusculæ. Pedicelli flores subæquantes. Perianthii tubus turbinatus, lobi exteriores lineari-lanceolati, interiores ovato-deltoides.

With somewhat the habit of the Andine *A. polylepis*, Wedd., but with the small congested flowers emerging from the sheaths of nearly every axil on the lateral leafy shoots. The contrast between the silvery foliage and smooth chestnut-brown membranous, usually transversely rugose-plicate, stipules renders this one of the most striking species of the genus.

ALCHEMILLA JOHNSTONI, Oliv., in Hook. Ic. Pl. t. 1504. Fruticulus depressus, ramulis diffusis pilosulis vaginatis, foliis breviter petiolatis coriaceis rotundato-reniformibus plicatis 6- (5-7-) lobatis lobis obtusis bifidis, v. subæqualiter 11-15-lobatis, supra tenuiter pilosis glabratissimè subtus dealbato-glaucis, pilis longiusculis sericeis sparsis obsitis, stipulis apice liberis coriaceis late ellipticis obtusis sæpius bidentatis, cymis paucis (circ. 5-) floris pilosulis pedunculos breves vaginatos axillares folio sæpe longiores terminantibus, calycis tubo turbinato-infundibulari, carpellis solitariis.

Kilima-njaro, 13,000 ft.

Folia $\frac{1}{4}$ - $\frac{1}{3}$ poll. lata; petiolus liber 1-2 lin. longus. Perianthii lobi interiores deltoides, exteriores breviores lanceolati.

With wiry branches 3-6 in. in length, the thickness of a crow-quill, spreading from a woody crown.

TERMINALIA BROWNII, Fres. ? (no fruit). 2000-3000 ft.

COMBRETUM PANICULATUM, Vahl. (forma). 4000-5000 ft.

COMBRETUM, sp. (foliis hirtellis) (no fruit). 40-60 miles inland.

COMBRETUM, sp. (foliis lepidotis) (no fruit). 40-60 miles inland.

DISSOTIS EXIMIA, Hook. f. Kilima-njaro 5000 ft.

DISSOTIS, sp. aff. *D. grandifloræ*, Benth.

EPILOBIUM HIRSUTUM, L. 6000 ft.

WORMSKIOLDIA (*STREPTOPETALUM* *HILDEBRANDTII*, Vatke). Taita.

WORMSKIOLDIA SERRATA, Hochst. Maungu; Taita.

TRYPHOSTEMMA HANNINGTONIANUM, Mast. in Hook. Ic. Pl. t. 1484. Annua cirriferascandens; foliis trisectis; floribus dichlamydeis; fructu subcoriaceo indehiscente.

In Africa tropica Orientali loco dicto "Kwa Chinopa" lat. aust. $2^{\circ} 7'$, ubi legit Rev. J. Hannington!; ad montem Kilima-njaro prope Maungu, alt. 2000 ped., legit H. H. Johnston.

Annua gracilis glabra laxè divaricatim ramosa, ramis filiformibus striolulatis. Folia membranacea eglandulosa suborbicularia 3-secta, segmentis oblongis vel obovato-oblongis acuminatis, basi remote glanduloso-serratis, segmento medio parum productione versus basin angustato. Petioli graciles eglandulosi laminis breviores. Stipulæ lineari-subulatæ deciduæ. Pedunculi folia superantes apice 3-brachiati ramis lateralibus horizontaliter patentibus uno vel geminis fertilibus, centrali in cirrum producto. Bracteæ minutissimæ. Flores diametro 1 cm. patelliformes. Tubus brevissimus. Sepala herbacea oblonga obtusa ad margines albida. Petala albida membranacea sepalis conformia iisque paullo minora. Corona 3-seriata, series extima vel faucialis basi breviter tubulata membranacea, margine filamentosa filis crassiusculis basi retrorsum uncinulatis petala subæquantibus. Corona secunda e tubo versus medium emergens annularis seu cupuliformis membranacea integra; corona tertia seu basilaris e fundo tubi progrediens præcedenti conformis. Stamina 5 perigyna, filamenta e corona basilari emanantes; antheræ lineari-oblongæ. Ovarium ovoideum brevissime stipitatum, stipite tamen ulterius producto. Fructus ovoideus glaber subcoriaceus, stylis 3 liberis superatus. Stigmata capitata. Semina

A curious and interesting plant having exactly the habit and general appearance of a *Passiflora*; but apart from the improbability of a true *Passiflora* being found in tropical Africa, the arrangement of the corona and the insertion of the stamens are those of the East-African genus *Tryphostemma*. There are, however, five petals in the present plant, and the fruit is apparently not dehiscent, though its appearance is such as to suggest that it may be. It is probable, as previously suggested, in the 'Flora of Tropical Africa,' that the two genera, the Eastern *Tryphostemma* and the Western *Basananthe*, will be found to be identical.—M. T. MASTERS.

MOMORDICA CARDIOSPERMOIDES, Klotzsch. 40-60 miles inland.

MOMORDICA CUCULLATA, Hook. f., an var. *M. Morkorra*? Kilima-njaro, 4000-5000 ft.

CEPHALANDRA QUINQUELOBA, Sch., forma? Kilima-njaro, 5000 ft.

ZEHNERIA SCABRA, Sond., var.? Kilima-njaro, 6000 ft.

BEGONIA, sp. (frequent).

BEGONIA JOHNSTONI, Oliv., sp. nov. Herba succulenta, glabra, 1-2-pedalis, foliis (sicca membranaceis) longe petiolatis ovatis basi cordatis valde obliquis breviter acuminatis inæqualiter crenato-dentatis basis annulatim et subtus sparse in nervis pilis setiformibus instructis, stipulis ovatis membranaceis, cymis axillaribus bisexualibus longe pedunculatis, bracteis geminatis brevibus ovatis acutis, pedicellis gracilibus florem subæquantibus, fl. ♂ lobis 4 subæqualibus obovatis pallide roseis, filamentis a basi liberis, antheris ellipticis inappendiculatis; fl. ♀ lobis 4 obovatis v. obovato-ellipticis, stylis 3 inferne coalitis ramis bifidis spiraliter tortis, placentis bifidis, capsula triala, ala una majore oblique producta ovato-oblonga venosa.—Bot. Mag. t. 6899.

Kilima-njaro, 5000-6000 ft.

Folia $3\frac{1}{2}$ – $4\frac{1}{2}$ poll. longa, 2 – $2\frac{3}{4}$ poll. lata; petiolus 2 – 5 poll. longus. Pedunculi 5 – 8 poll. longi. Flores 1 – $1\frac{1}{3}$ poll. Capsulæ ala producta $\frac{1}{2}$ – $\frac{3}{4}$ poll.

The same plant has flowered at Kew, communicated by Mr. Mitten, who raised it from seed brought home by Bishop Hannington.

MOLLUGO NUDICAULIS, Lam. 40–60 miles inland.

SANICULA EUROPÆA, L. 10,000 ft.

TRACHYDIUM ABYSSINICUM, Benth. & Hook. f. 12,000 ft.

PEUCEDANUM, aff. *P. Petitianæ*, Rich. ? 7000 ft.

PEUCEDANUM, sp. (no fruit). Kilima-njaro, 5000 ft.

CAUCALIS INFESTA, Curt. ? (no fruit). 5300–6000 feet.

CAUCALIS MELANANTHA, Benth. & Hook. f. 6000 ft. Also four other Umbelliferæ, not in a state for determination.

DIRICHLETIA, near *D. glaucescens*, Hiern (in fruit only). Kilima-njaro, 2000–3000 ft.

PENTANISIA OURANOGYNE, S. Moore. Kilima-njaro, 2000–3000 ft.

PENTAS MOMBASSANA, Hiern, var. HIRTELLA. Maungu.

PENTAS CARNEA, Benth. Kilima-njaro, 5000–6000 ft.

PENTAS PURPUREA, Oliv. Kilima-njaro, 5000 ft.

PENTAS PURPUREA, Oliv., var. ? LONGIFLORA. Kilima-njaro, 4400 ft.

PENTAS LONGIFLORA, Oliv., sp. nov. Erecta verosimiliter 2–3-pedalis hirtella, foliis lineari-lanceolatis acuminatis basi angustatis breviter petiolatis remote penniveniis, utrinque breviter hirto-tomentellis, cymis multifloris terminalibus v. etiam in axillis superioribus pedunculatis hirtis, floribus congestis, calycis setulosi lobis subulatis tempore florifero subæqualibus v. lobis 1–2 paullo majoribus subulatis tubo longioribus, corollæ hirtellæ elongatæ tubo apicem versus dilatato, limbo 5-partito, lobis ellipticis apice subapiculatis intus glabris, fauce barbato, stylo exserto lobis brevibus crassiusculis ovoideis obtusis.

Kilima-njaro, 5000 ft. (Lower plateau N. of Lake Nyassa, *Mr. Thomson*.)

Folia $2\frac{1}{2}$ – 4 poll. longa, $\frac{1}{3}$ – $\frac{3}{4}$ poll. lata; petiolus 1–2 lin. longus. Calyx (temp. florif.) $\frac{1}{4}$ poll. longus. Corolla $1\frac{1}{2}$ – $1\frac{3}{4}$ poll. longa.

OLDENLANDIA, an *O. Bojeri*, Hiern, var. ? Maungu.

OLDENLANDIA SCHIMPERI, T. And., forma. Taveita and 40–60 miles inland.

OLDENLANDIA OBTUSILOBA, Hiern. Kilima-njaro, 5000 ft.

OLDENLANDIA HEYNEI, Wight & Arn. 4400 ft.

HEDYOTIS JOHNSTONI, Oliv., sp. nov. Suffruticosa diffusa ramosa glabrata v. scaberula, caulibus gracilibus glabris leviter angulatis, foliis ovatis v. ovato-lanceolatis acutis basi rotundatis remotiuscule penniveniis, supra parce scaberulis glabrisve breviter petiolatis, stipulis setaceo-paucilobatis, cymis parvis sæpius 3-fidis terminalibus

v. in axillis superioribus pedunculatis subsessilibusve, floribus 4-5-meris congestis sessilibus v. breviter pedicellatis, calycis subglabri tubo campanulato lobis subulato-lanceolatis 1-costatis tubum excedentibus, corolla extus glabra intus parce pilosula tubo calycem æquante, lobis tubo longioribus oblongis subapiculatis marginibus deinde revolutis, antheris subsessilibus, stigmatе (exserto) bifido lobis linearibus.

Kilima-njaro, 6000 ft.

Folia $\frac{3}{4}$ - $1\frac{1}{2}$ poll. longa, $\frac{1}{8}$ - $\frac{3}{4}$ poll. lata. Inflorescentia $\frac{1}{3}$ - $\frac{3}{4}$ poll. diam., pedunculo 0-1 poll. longo. Flores $\frac{1}{6}$ - $\frac{1}{5}$ poll. longi.

EMPOGONA KIRKII, Hook. f., var. ? GLABRATA; ramulis ultimis hirtis-scabridis, foliis ellipticis acutis retusisve fere omnino glabris, petiolis hirtellis, floribus glabrescentibus. 40-60 miles inland.

This may prove a distinct species; but our type specimen is imperfect and it may be better left as above, notwithstanding the pubescent-tomentose leaves, pedicels, and calyx of Sir J. Kirk's plant.

PAVETTA OLIVERIANA, Hiern. Kilima-njaro, 6000 ft.

PAVETTA (fruit) near *P. gracilis*, Klotzsch, and *P. caffra*, Thbg. 40-60 miles inland.

VANGUERIA EDULIS, Vahl, var. ? Differs from our numerous specimens of this widespread species in the linear-oblong lobes of the calyx, 2-3 times as long as the tube, nearly equalling the corolla-tube; the cymes also are more contracted.

Kilima-njaro, 4000-5000 ft.

VANGUERIA EUONYMOIDES, Schw. Kilima-njaro, 5000 ft.

OXYANTHUS GERRARDI, Sond., var. floribus paullo majoribus, aff. *O. specioso*, DC. Kilima-njaro, 6000 ft.

POLYSPHERIA MULTIFLORA, Hiern. Kilima-njaro, 2000-3000 ft.

PSYCHOTRIA, near *P. (Grumilea) capensis*, Sond. ? Kilima-njaro, 6000 ft.

PSYCHOTRIA HIRTELLA, Oliv., sp. nov. Breviter hirtella, foliis ellipticis obtusis v. breviter apiculatis basi sæpius cuneatim angustatis utrinque hirtellis venis secundariis remotiusculis, petiolatis, stipulis membranaceis hirtis truncatis medio apiculo subulato bipartito breviter productis, paniculis terminalibus v. quasi axillaribus longe pedunculatis divaricatim trichotomiis plus minus pubescentibus, floribus 5-meris pedicellatis, pedicello sæpius flore brevioribus, calyce turbinato truncato leviter 4-5-lobato, corollæ glabræ lobis ovato-ellipticis recurvis tubo brevioribus.

Kilima-njaro, 2000-3000 ft.

Folia 4-5 poll. longa, 2-3 $\frac{1}{4}$ poll. lata; petiolus $\frac{1}{4}$ - $1\frac{1}{4}$ poll. longus. Pedunculus 1-4 poll. longus.

SPERMACOE RUELLIÆ ?, DC. 4400 ft.

GALIAM APARINE, L. 8000 ft.

DIPSACUS PINNATIFIDUS, Steud. 10,000 ft.

SCABIOSA COLUMBARIA, L., var. ? 10,000-12,000 ft.

VALERIANA, sp. nov. ? (Genus new to Trop. Africa.) Only a single flowering specimen, insufficient for description. 10,000 ft.

VERNONIA WAKEFIELDII, Oliv., sp. nov. Frutex (?) glaber, ramulis floriferis inferne leviter incrassatis teretibus, foliis ovalibus oblanceolatisve acutis v. acuminatis basi in petiolum angustatis glabris tenuiter carnosulis v. subcoriaceis, cymis corymbiformibus 5-20-cephalis, capitulis pedunculatis campanulatis multifloris, involucri bracteis brunneis pluriseriatis imbricatis ovato-oblongis obtusis glabris exterioribus minoribus pilis flaccidis albis ciliatis, receptaculo nudo, corollæ segmentis linearibus, ovario dense piloso, pappo pluriseriato fusco setaceo, setis barbellatis exterioribus brevioribus, acheniis . . .

Kilima-njaro, 2000-3000 ft. (Gathered also in Nyika Country by Rev. T. Wakefield.)

Folia $2\frac{1}{2}$ -5 poll. longa, $\frac{3}{4}$ -1 $\frac{1}{2}$ poll. lata. Inflorescentia 2-3 poll. diam. Capitulis floriferis, $\frac{3}{4}$ poll. longis.

VERNONIA (§ STENGELIA) STENOLEPIS, Oliv., sp. nov.; ramis floriferis herbaceis striatis crispule pubescentibus, foliis tenuiter membranaceis ellipticis ovalibusve acute acuminatis basi in petiolum longiusculum attenuatis serrulato-dentatis utrinque pilis sparsis hirtis, capitulis late campanulatis pedunculatis in cymis 3-5-cephalis terminalibus dispositis, involucri squamis exterioribus e basi incrassata coriacea in appendicem elongatam anguste linearem v. spathulatam herbaceam v. purpureo tinctam flores æquantem productis, squamis interioribus brevioribus tenuiter coriaceis oblongis apiculatis pappo æquilongis, corollæ tubo gracili apice dilatato, acheniis striatis breviter piloso-hirsutis, pappi duplicis setis exterioribus brevibus squamiformibus, interioribus barbatis.

Kilima-njaro, 5000 ft.

Folia 4-6 poll. longa, 1-2 poll. lata; petiolus $\frac{1}{2}$ -1 poll. longus. Capitula poll. diam.; pedunculus $\frac{1}{2}$ -1 poll. longus.

VERNONIA MARGINATA, Oliv. & Hiern. "Up to 8000 ft."

VERNONIA, aff. *V. paucifloræ*, Less. ?, an var. ? 6000 ft.

VERNONIA, = V. 2551, Hb. Hildebrandt. 6000 ft.

ADENOSTEMMA VISCOSUM, Forst. Kilima-njaro, 6000 ft.

MIKANIA SCANDENS, Willd. 6000 ft.

DICHOCEPHALA CHRYSANTHEMIFOLIA, DC. 12,000 ft.

FELICIA ABYSSINICA, Sch. Bip. Taita; Maungu.

CONYZA STRICTA, Willd. Kilima-njaro, 5600 ft.

CONYZA ÆGYPTIACA, Ait. Kilima-njaro, 5600 ft.

CONYZA HOCHSTETTERI, Sch., forma. Kilima-njaro, 5600 ft.

PLUCHEA DIOSCORIDIS, DC., var. GLABRA. Kilima-njaro, 5600 ft.

PSIADIA, sp. nov. ? 6000 ft.

ACHYROCLINE HOCHSTETTERI, Sch. Kilima-njaro, 6000 ft.

GNAPHALIUM LUTEO-ALBUM, L. 6000 ft.

HELICHRYSUM NEWII, Oliv. & Hiern. 13,200-14,200 ft.

HELICHRYSUM ELEGANTISSIMUM, DC., var. ? (*H. formosissimum*, Sch. Bip., var. *angustifolia*). 9000-11,000 ft.

HELICHRYSUM FORMOSISSIMUM, Sch. Bip., var. ? With the facies of *H. adenocarpum*, DC., but the ovaries are glabrous. 8000-13,000 ft.

HELICHRYSUM FORMOSISSIMUM, var. *capitulis albis*. 10,000 ft.

HELICHRYSUM KILIMANJARI, Oliv., sp. nov. ; caulibus gracilibus adscendentibus v. erectis subteretibus glanduloso-puberulis, foliis caulinis anguste linearibus acutiusculis amplexicaulibus supra v. utrinque glanduloso-puberulis subtus plus minus laxe villosis v. arachnoideo-tomentosis, capitulis homogamis hemisphæricis multifloris longiuscule pedunculatis in cymis laxis corymbiformibus 7-9-cephalis dispositis, involucri squamis pluriseriatis exterioribus brunneo tinctis ovatis acutiusculis, interioribus flavidis apice oblongo-lanceolatis acutis, receptaculo nudo areolato, corollis tubulosis coriaceis, acheniis minutis subteretibus v. obscure angulatis, pappo caducissimo barbellato.

Kilima-njaro, 8300 ft.

Caules $\frac{1}{2}$ -1-ped. superne ramosi. Folia $\frac{1}{4}$ poll. longa, circ. 1 lin. lata. Capitula $\frac{1}{2}$ poll. diam. ; pedunculi $\frac{1}{2}$ -1 poll., graciles bracteati.

HELICHRYSUM GLOBOSUM, Sch. Bip., forma ? 10,000 ft.

HELICHRYSUM FRUTICOSUM, Vatke, var. 13,000 and 13,200 ft.

HELICHRYSUM ABYSSINICUM, Sch. Bip. 9000-11,000 ft.

HELICHRYSUM ABYSSINICUM, Sch. Bip., forma. 11,000-13,200 ft.

HELICHRYSUM SETOSUM, Harv. (*H. foetidum*, Cass., var. ?). 9000-11,000 ft.

HELICHRYSUM KIRKII, Oliv. & Hiern, forma ?

Kilimanjaro, 6000 ft.

The capitula are rather too young, but probably of this species, which we have from various localities in the Eastern Tropical Highlands.

ASTEPHANIA, Oliv. in Hook. Ic. Pl. t. 1506. (Compositæ § Buphthalmæ.)

Capitula heterogama homochroma radiata, floribus radii ♀ 1-seriatis discique ♂ fertilibus. Involucrum subhemisphæricum basi leviter intrusum, bracteis 2-3-seriatis herbaceis basi coriaceis subæqualibus. Receptaculum convexum paleis angustissimis flores subæquantibus onustum. Corollæ ♀ ligulatæ, lamina ovali-oblonga apice minutissime 3-denticulata v. integra ; ♂ regulares tubo angusto sursum ampliato limbo breviter 5-dentato. Antheræ basi sagittatæ auriculis per paria connatis apice connectivo breviter orato acuto apiculatæ. Styli fl. ♂ rami lineari-oblongi obtusi

apice vix aut leviter subdilatati. Achænia leviter angulata apice truncata calva, basi subturbinato-angustata, glabra, valide 10-costata costis alternis interdum angustioribus.

Herba verosimiliter 2-3-pedalis pilis simplicibus multicellularibus laxè hirtella, caule erecto tereti superne ramoso. *Folia* caulina alterna petiolata late ovata basi cordata obtusa late crenato-lobulata laxè pilosula, 1-1½ poll. longa et lata. *Capitula* sæpe longè pedunculata terminalia solitaria v. in cymis pleiocephalis laxis disposita, ¾ poll. lata; floribus flavis, ligulis radii involucri duplo longioribus. *Achænia* ½-⅔ lin. longa.

A. AFRICANA, Oliv. *l. c.*

Kilima-njaro, 5000 ft.

With the habit of *Anisopappus africanus* or of some specimens of *Epallage dentata*, but wholly destitute of pappus. With this I would associate as a congener the plant figured in 'Icones Plantarum,' pl. 1451, as a doubtful *Sphacophyllum*; it will now stand A. AFRICANA.

MELANTHERA BROWNII, Sch., forma. Kilima-njaro, 6000 ft.

ASPILIA? or WEDELIA, nr. *W. Menotriche* and *mossambicensis*. Kilima-njaro, 5000 ft.

ARTEMISIA AFRA, Jacq., forma. 9900-13,200 ft.

COREOPSIS, sp. nov.? (inadequate). 4300 ft.

BIDENS PILOSA, L. 4000-6000 ft.

TRIPTERIS VAILLANTII?, Decne. 4000 ft.

TRIPTERIS, sp.? (too young). 8500 ft.

GYNURA CERNUA, Benth. 6000 ft.

GYNURA VITELLINA, Benth. Kilima-njaro, 6000 ft.

GYNURA VALERIANA, Oliv. in Hook. Ic. Pl. t. 1507. Perennis erecta (1½-2-pedalis), caule 5-sulcato glabro basi foliosis, foliis pinnatipartitis petiolatis membranaceis supra glabratibus subtus parce pilosulis glabratibus, segmentis lateralibus utrinque 5-6 lanceolatis acutis grosse serrato-incisis dentibus acutis, segmentis inferioribus minoribus ovatis v. ovato-lanceolatis, petiolo basi biauriculato, auriculis stipuliformibus ½-cordatis incisis, foliis superioribus minoribus remotiusculis, capitulis circ. 40-floris discoideis pedicellatis in corymbo terminali polycephalo dispositis, pedicellis gracilibus puberulis, bracteis anguste linearibus, involucri cylindrico 11-15-phyllo, foliolis lineari-oblongis acutatis glabris dorso longitudinaliter 2-3-nervosis, calyculi foliolis brevibus lineari-subulatis, corollis omnibus tubulosis flavis, tubo elongato angusto involucrum subæquante basi leviter dilatato apice gradatim infundibuliformi, styli ramis in appendicibus elongatis angustis papillosis abeuntibus, acheniis circ. 10-costatis glabris.

Kilima-njaro, 5000 ft.

Folia inferiora 5-7 poll. longa, segmentis majoribus 1-1½ poll. longis, ½-⅔ poll. latis. Inflorescentia corymbosa, 3-4 poll. lata. Capitula ½ poll. longa; involucrum ¼-⅓ poll. longum.

CINERARIA ABYSSINICA, Sch. Bip., forma. 7000–10,000 ft.; barren, 13,200 ft.

SENECIO DISCIFOLIUS, Oliv. 5000 ft.

SENECIO DELTOIDEUS?, Less., var. 6000 ft.

SENECIO JOHNSTONI, Oliv., sp. nov. (Plate LX.) Arbuscula 15–20(–30)-ped., caule simplici erecto apice foliis amplis petiolatis indivisis congestis coronato, foliis late ovato-ellipticis obtusissimis basi cordatis dentatis membranaceis supra parce pilosulis glabratissimis subtus præcipue in costa venisque plus minus pilosulis v. sublanatis, petiolo marginato lamina brevior, ramulis floriferis ($\frac{1}{2}$ – $1\frac{1}{2}$ -pedalis) lateralibus bracteatis, bracteis amplis oblanceolato- v. lanceolato-oblongis amplexicaulibus acutatis v. superioribus minoribus acuminatis pilosis glabratissimis, capitulis heterogamis majusculis campanulatis v. hemisphæricis multifloris in paniculis ovoideis v. pyramidalibus lanatis v. inferne glabratissimis dispositis, pedicellis $\frac{1}{4}$ – $\frac{1}{2}$ –2 poll. longis apice deinde recurvis, involucri foliolis 13–20 oblongo-lanceolatis acutatis glabratissimis v. basi leviter lanatis pilosulisve, calyculi foliolis anguste linearibus, floribus radii circ. 10–16, ligula lineari involucri duplo longiore, fl. disci tubo superne cylindrico-dilatato inferne breviter angustiore, styli ramis deinde recurvis truncatis, acheniis glabris longitudinaliter costatis.

Kilima-njaro, 8500–14,000 ft.

Folia 12–15 poll. longa, 8–9 poll. lata; petiolus 3–4 poll. longus. Inflorescentia $\frac{3}{4}$ – $1\frac{1}{2}$ -pedalis; capitula $\frac{3}{4}$ –1 poll. lata; bractæ inferiores 3–6 poll. longæ.

This noble addition to the genus *Senecio* Mr. Johnston found growing by mountain streams, first appearing at 8500 feet. We have two specimens—one in early flower, in which the inflorescence is glabrate and the capitula campanulate, with about 13 involucreal scales; the other lanate, with larger hemispherical capitula, their pedicels at length recurved and with about 20 involucreal bracts. In habit this species approaches *S. gigas*, Vatke, of Abyssinia, but with very much larger capitula and undivided leaves.

NOTONIA ABYSSINICA, A. Rich. 40–60 miles inland.

EURYOPS DACRYDIODES, Oliv. in Hook. Ic. Pl. t. 1508. Frutex ramosus, ramulis strictiusculis erectis dense foliosis, foliis crassiusculis rigidis lineari-subulatis acutiusculis semiteretibus subarcte imbricatis marginibus infra plus minus lanato-villosis, capitulis versus apices ramulorum dispositis breviter pedunculatis, involucri foliolis circ. 13–17 oblongo-lanceolatis obtusis v. acutiusculis glabris, ligulis 16–18 ovali-oblongis involucri 2–3-plo longioribus flavis, receptaculo foveolato, foveolis dentato-marginatis, pappo caducissimo setoso setis barbellatis, acheniis 6-costatis glabris.

Kilima-njaro, 10,000–14,000 ft.

Folia $\frac{1}{6}$ – $\frac{1}{4}$ poll. longa. Capitula $\frac{3}{4}$ poll. diam.; involucrium $\frac{1}{4}$ – $\frac{1}{2}$ poll. diam.

In habit resembling *E. Candollei*, Harv., of the Cape.

GAZANIA DIFFUSA, Oliv., sp. nov. (Plate LXI.) Herba annua (v. interdum perennis?), caulibus diffusis parce setosis foliosis, foliis inferioribus radicalibusque lineari-ovali-

bus v. anguste ovalibus integris v. utrinque 1-3-pinnatim lobatis, caulinis linearibus sessilibus subacutis omnibus subtus albo-tomentosis supra setaceo-hispidis v. scabris, capitulis solitariis terminalibus pedunculatis, involuero setuloso tomentello campanulato-obconico, bractearum apicibus liberis lineari-subulatis erectis medio costatis, acheniis clavato-turbinatis obscure 10-costatis glandulis sessilibus pilisque albidis erectis obsitis, pappo duplici paleis exterioribus 10 ovato-lanceolatis aristato-acuminatis, interioribus brevioribus ovatis fimbriatis subunguiculatis.

Kilima-njaro, 5000 ft.

I think our imperfect specimens of Hildebrandt's no. 2701, belong to the same, as well as a single specimen collected by Speke and Grant, which I left unnamed in Trans. Linn. Soc. xxix. p. 100.

The pappus is dimorphic, as in the above, in *G. Burchelli*, of South Africa.

ERYTHROCEPHALUM MINUS, Oliv. 40-60 miles inland.

CARDUUS LEPTACANTHUS, Fres. Kilima-njaro, 6000 ft.

CARDUUS, an acaulescent species allied to *C. chamaecephalus*, Oliv. & Hiern, but with involucre bracts pinnately fimbriate above. 13,200 ft.

GERBERA PILOSELLOIDES, Cass. Kilima-njaro, 4000-5000 ft.

SONCHUS, a species new to Tropical Africa, with petiolate, elliptical, acute, denticulate leaves and capitula lanate below, in a few-headed congested cyme. A single specimen 6-9 in. high.

LOBELIA DECKENII, Hemsl. (*Tupa Deckenii*, Asch.). 12,000-13,000 ft.

LIGHTFOOTIA ABYSSINICA, Hochst., forma. 6,000 ft.

WAHLENBERGIA, sp. n.? Without fruit. Allied to *W. capillacea*, A. DC., of the Cape. 11,000 ft.

ERICA ARBOREA, L., forma. 10,000 ft.

BLÆRIA SPICATA, Hochst. 8,000-11,000 ft.

ERICINELLA MANNII, Hook. f. 7,000-10,000 ft.

I cannot doubt the identity of this with the Cameroons plant, but I find the flowers trimerous, stamens 6, and ovary trilocular. Mr. Johnston describes it as a "tall tree, twenty to twenty-five feet in height."

PLUMBAGO ZEYLANICA, L. 40-60 miles inland.

LYSIMACHIA, an *L. Ruhmerianæ*, Vatke, var.?, racemis fructiferis elongatis gracilibus. 5300 ft.

EUCLEA FRUTICOSA, Hiern, ? ♂. Kilima-njaro, 6000 ft.

LANDOLPHIA FLORIDA? Inflorescence only. Country at base of Kilima-njaro, 2000 ft.

LANDOLPHIA PETERSIANA, Dyer. Kilima-njaro, 2000 ft.

ADENIUM SPECIOSUM, Fenzl, forma? 40-60 miles inland.

GOMPHOCARPUS BISACCULATUS, Oliv., sp. n. Herba erecta hispidulo-hirta verosimiliter 2-3-pedalis, caule tereti hispidulo, foliis petiolatis oblongis v. interdum lanceolato-oblongis obtusis interdum apiculatis basi rotundatis obtusis utrinque hispidulo-

hirtis v. pagina sup. scabrida venis lateralibus subtus patentibus in vena intramarginali confluentibus, cymis umbelliformibus 4-8(-10)-floris extra-axillaribus longiuscule pedunculatis hispidis, calycis lobis oblongo-lanceolatis acutis hispidis, corollæ lobis ovatis extus hirtis marginibus anguste imbricatis calyce duplo longioribus, lobis coronæ gynostegio brevioribus complicatis medio apiculatim productis lateribus apice utrinque depresso-sacculatis, membrana antheræ terminali late ovata incurva.

Kilima-njaro, 5000 ft.

Folia 3-4 poll. longa, $\frac{3}{4}$ -1 (-1 $\frac{1}{2}$) lata; petiolus $\frac{1}{4}$ poll. longus. Pedunculi 2-3 poll. longi, bracteolis anguste linearibus; pedicelli $\frac{1}{2}$ - $\frac{3}{4}$ poll. longi. Corolla $\frac{3}{4}$ -1 poll. diam., sicco purpureo-reticulata.

Very similar, if not identical, are specimens from Zambesia, *Sir J. Kirk*; Nyika Country, *Rev. T. Wakefield*; and Mombassa, *Hildebrandt*, no. 1943.

GOMPHOCARPUS STENOPHYLLA, Oliv. Lanjora, 2000 ft.

Mr. Johnston's specimens are in much better state than those I had at my disposal in the Speke and Grant collection; but I can hardly doubt they belong to the same species, although in the new specimens the lobes of the corona much overtop the stigma.

GOMPHOCARPUS, aff. *G. lanato* et *G. stenophyllo*. 2300 ft.

SCHIZOGLOSSUM (LAGARINTHUS), sp. Maungu, 2000 ft.

With the facies of *Lagarinthus abyssinicus*, Hochst., and also of *L. interruptus*, E. Mey., the floral structure of which latter is nearly identical, though the appendix of the coronal scales is rather shorter. Perhaps specifically distinct.

ASCLEPIAS MACRANTHA, Hochst. Kilima-njaro, 5000 ft., and Taita, 2000 ft.

MARGARETTA ROSEA, Oliv. Kilima-njaro, 5000 ft.

CYNANCHUM ABYSSINICUM, Decne., var. ? TOMENTOSUM. 7000 ft.

CEROPEGIA, sp. nov., aff. *C. Meyeri*; diff. corollæ ore, &c. Kilima-njaro, 6000 ft.

GYMNEMA PARVIFOLIUM, Oliv., sp. nov. Frutex volubilis glaber, ramis gracilibus teretibus, foliis ellipticis acutis v. obtusis apiculatisque glabris penniveniis petiolatis, cymis glabris v. obsolete pubescentibus breviter pedunculatis paucifloris axillaribus, pedicellis flore æquilongis, calycis lobis ovatis obtusis ciliolatis, corollæ lobis calyce 3-4-plo longioribus ellipticis obtusis, corona 0, stigmatibus breviter columnari-conico producto glabro.

Kilima-njaro, 5000 ft.

Folia $\frac{3}{4}$ - $\frac{5}{8}$ poll. longa, 5-6 lin. lata; petiolus $\frac{1}{2}$ -1 lin. longus. Cymæ axillares v. ad apicem ramulorum 2-4 congestæ, sæpius umbelliformes; pedunculus 1-4 lin. longus. Corolla rotata, 2 lin. diam.

SWERTIA SCHIMPERI, Griseb. 8000-11,000 ft.

SWERTIA PUMILA ?, Hochst. 11,000 ft.

EHRETIA AMÆNA, Klotzsch. ? 40-60 miles inland.

HELIOTROPIMUM, sp. nov. ? (cf. Hildebrandt, 2634), aff. *H. longifloro* et *Steudneri*. 40–60 miles inland.

CYNOGLOSSUM MICRANTHUM, Desf. (*C. lanceolatum*, Fres.). Kilima-njaro, 6000 ft.

CYNOGLOSSUM AMPLIFOLIUM, Hochst. (*C. lancifolium* ?, Hook. f.). 9900 to 11,000 ft.

MYOSOTIS STRICTA, Link. (The plant of Abyssinia and the Cameroons.) Var. *nucibus nigrescentibus*. 13,200 ft.

IPOMŒA BULLATA, Oliv., sp. nov. (Plate LXII.); caule subtereti striato parce hirtello, foliis petiolatis subpinnatim palmatipartitis segmentis 8–10 linearibus oblongisve obtusis acutisve margine undulatis profunde bullatis supra glabratiss subtus præcipue in nervis tomentellis v. interdum glabratiss, cymis paucifloris axillaribus breviter pedunculatis, pedicellis calycem æquantibus, sepalis subæqualibus ellipticis obtusis interdum mucronatis, corollæ purpureæ tubo cylindrico calycem 4–5-plo longiore, limbo explanato.

40–60 miles inland.

Folia 3–5 poll. longa, 5–6 poll. lata, lobis $\frac{1}{4}$ – $\frac{3}{4}$ poll. latis; petiolus $1\frac{1}{2}$ – $3\frac{1}{2}$ poll. longus. Pedunculi petiolo sæpius breviores. Calyx $\frac{2}{3}$ – $\frac{3}{4}$ poll. longus. Corolla 3 poll. longa.

Leaves of the same were collected from the only plant observed by Col. Grant, noticed in the account of his collections in Trans. Linn. Soc. xxix. p. 117.

IPOMŒA PINNATA, Hochst. Kilima-njaro, 5000 ft.

IPOMŒA, sp. ? (too imperfect). 6000 ft.

CUSCUTA (§ *GRAMMICA*) *KILIMANJARI*, Oliv., sp. nov.; caule filiformi, floribus breviter pedicellatis sæpe racemosim umbellato-glomeratis glabris ($\frac{1}{8}$ – $\frac{1}{4}$ poll. diam.), calyce 6-fido tenuiter coriáceo, lobis rotundatis obtusis, corolla campanulata flavida, tubo calyce subæquilongo prope basin lobis opposito transverse sacculato v. foveolato, lobis ovato-rotundatis obtusis, staminibus in sinubus inserta, filamentis anguste linearibus basi breviter dilatatis inappendiculatis, stylis paullo inæquilongis ovario brevioribus, stigmatibus capitatis, capsula verosimiliter basi dehiscentia circumscissa.

Kilima-njaro, 6000 ft.

The “epistamineal scales” of Engelmann are wanting in this species; there is, however, a crescentic transverse sacculus near the base of the corolla-tube, opposite to each lobe.

SOLANUM NIGRUM, L., var. 4400 ft.

SOLANUM, sp., apparently identical with a Natal species (Gerard 1413, Wood 559), and perhaps a form of *S. bifurcum*, Hochst. (Hb. Schimp. Abyss. 201 & 310 of the 1869 distribution).

SOLANUM RENSCHII, Vatke. Taveita.

BUTTONIA NATALENSIS, M^cKen. Kilima-njaro, 5000 ft.

VERONICA ANAGALLIS, L. Kilima-njaro, 6000 ft.

VERONICA MYRSINOIDES, Oliv., in Hook. Ic. Pl. t. 1509. Perennis, caulibus prostratis

elongatis parce aut vix ramosis foliatis bifariam pilosulis, foliis breviter petiolatis oppositis oblanceolatis obovato-oblongisve obtusis utrinque 2-3-crenato-dentatis glabris plus minus coriaceis, floribus in axillis foliorum superiorum pedicellatis, pedicellis glanduloso-pubescentibus calyce subæquilongis v. brevioribus, calyce 5-partito, lobo postico minuto cæteris oblanceolato-oblongis glanduloso-ciliatis, corolla pallide cærulea profunde 5-fida, lobis subæquilongis, postico cæteris obovatis integris paullo latiore late obovato, capsula obcordata lobis obtusis.

Kilima-njaro, 11,000 ft.

Folia $\frac{1}{4}$ - $\frac{1}{3}$ poll. longa; petiolus 1 lin. v. brevior. Flores 3-4 lin. diam. Ovarium ellipsoideo-globosum apice parce glandulosum, glandulis stipitatis; stylus gracilis ovario 2-plo longior.

Allied to *Veronica glandulosa*, Hochst.

RHAMPHICARPA (sp. nov.?).

Strigose herb, the lower leaves wanting, with elongate raceme of *Buchnera* or *Striga* and shortly pedicellate, "mauve-white" flowers; the limb 1 in. in diameter; calyxlobes more or less recurved.

A single piece, barely sufficient for description. 4400 ft.

RHAMPHICARPA, sp. ? (no fruit). 40-60 miles inland.

BARTSIA DECURVA, Hochst., var. ? 12,000 ft.

OROBANCHE, sp. Kilima-njaro, 6000 ft.

STREPTOCARPUS, sp., aff. *S. caulescenti*, Vatke. 6000 ft.

STREPTOCARPUS MONTANUS, Oliv., sp. nov. Herba epiphytica acaulescens, foliis paucis (2-4) ovali-oblongis acutiusculis basi in petiolum angustatis serratis in utraque facie (supra appresse subtus præcipue in nervis) pilosulis, scapis gracilibus 1-3 pilosulis, cyma sæpius 3-10-flora, pedunculis gracilibus glanduloso-pilosulis, corolla inflato-tubulari v. tubulari-infundibuliforme, labiis vix patentibus, ovario glanduloso-pilosulo.

Kilima-njaro, 7000-9000 ft.

Folia 3-6 poll. longa, 1-1 $\frac{1}{2}$ poll. lata. Scapus 5-8 poll. Flores purpurascens, $\frac{1}{2}$ poll. longi; pedicelli inæquilongi, longiores, 3-6 lin. longi. Calyx 5-partitus, lobis oblongo-lanceolatis obtusiusculis hirtis. Corolla calyce 6-plo longior, basi leviter obliqua, bilabiata, labiis subporrectis, superiore paullo brevior, lobis obtusis. Capsula $\frac{3}{4}$ -1 poll. longa.

With the general aspect of *S. parviflorus*, E. Mey., but corolla very different.

HEBENSTREITIA DENTATA, L. 9000-12,000 ft.

SELAGO THOMSONI, Rolfe. 11,000 ft.

SELAGO JOHNSTONI, Rolfe, n. sp. Annua, ramis erectis teretibus cinereo-pubescentibus, foliis linearibus obtusis integris scabridulo-pubescentibus margine subrevolutis, capitulis terminalibus in glomerulis sæpissime congestis, floribus sessilibus, bracteis oblongis obtusis crassiusculis concavis ciliatis, calyce irregulariter 5-fido pubescente

lobis subulato-linearibus, corollæ tubo brevi lobis rotundato-oblongis tubo subæqualibus, staminibus styloque breviter exsertis, fructu ovoideo subcompresso in cocciis 2 partibilis.

Kilima-njaro, 11,000 ped. alt. "Corolla pinkish."

Herba $\frac{1}{2}$ ped. alt. Folia 2-4 lin. longa, $\frac{1}{2}$ lin. lata, sæpissime fasciculata. Glomerula $\frac{1}{3}$ - $\frac{1}{2}$ in. longa lataque. Bracteæ 1 lin. longæ. Calyx 1 lin. longus. Corolla $1\frac{1}{4}$ lin. longa. Fructus vix 1 lin. longus.

Closely allied to *S. Thomsoni*, Rolfe, from the same region, but somewhat stouter and dwarfer in habit, and readily distinguished by its more rigid fascicled and scabrid leaves, congested panicles, and slight floral differences. Both belong to a small group of which *S. hyssopifolia*, E. Mey., may be regarded as the type.—R. A. ROLFE.

SESAMUM INDICUM, L. Kilima-njaro, 5000 ft.

THUNBERGIA AFFINIS, var. PULVINATA, S. M. Maungu.

THUNBERGIA FUSCATA?, T. And. 6000 ft.

The flower is described as deep yellow; that of *T. fuscata* as pink.

THUNBERGIA. Fragments merely, but apparently a remarkable species of this genus with glabrous, rotundate-cordiform, petiolate leaves, and the multifid calyx with lanceolate acuminate segments growing out to $\frac{3}{4}$ in. in length.

BLEPHARIS BERNHAEVIFOLIA, Juss. Maungu.

BLEPHARIS, an var. *B. Hildebrandtii*, S. Moore.? Maungu; Kilima-njaro, 2000-3000 ft.

PHAYLOPSIS LONGIFOLIA?, Sims (T. And.). *Ætheilema imbricatum* (R. Br.). 5000 ft.

PHAYLOPSIS LONGIFOLIA. 6000 ft. (=Schimper, Abyss. Herb. 1523).

MIMULOPSIS, sp.?, v. *Strobilanthes*? 7000 ft.

BARLERIA, sp.? 5300 ft.

BARLERIA, near *B. repens*, Nees. 40-60 miles inland.

STROBILANTHES, sp. n.? 6000-7000 ft.

CROSSANDRA NILOTICA, Oliv., var. ACUMINATA, Moore. (Species ut videtur distincta.)
Lanjora; Kilima-njaro, 2000-3000 ft.

ASYSTASIA SCHIMPERI, T. And., var. MINOR. Kilima-njaro, 4000-5000 ft.

JUSTICIA (ADHATODA) SCHIMPERIANA, T. And. Maungu.

JUSTICIA (ROSTELLARIA) PALUSTRIS, T. And.? Maungu.

JUSTICIA PLICATA, Nees, var.? Kilima-njaro, 6000 ft.

JUSTICIA MATAMENSIS, Schweinf. Kilima-njaro, 5000-6000 ft.

JUSTICIA MATAMENSIS, Schweinf., foliis angustioribus. 40-60 miles inland.

JUSTICIA, aff. *J. neglecta*, T. And. Kilima-njaro, 6000 ft.

JUSTICIA DEBILIS, Vahl. Maungu.

JUSTICIA, sp. Near *J. insularis* and *neglecta*; with species gathered from 4400 to 6500 ft.

JUSTICIA, sp. (inadequate). 7000 ft.

ISOGLOSSA LAXA, Oliv., sp. nov. Fruticosa, ramis gracilibus glabris (cystolithiis numerosis longitudinaliter dispositis quasi strigillosis), foliis petiolatis membranaceis

ellipticis plus minus acuminatis basi in petiolum angustatis glabratiss, paniculis terminalibus laxis pilosis pedunculis divergentibus, bracteis linearibus, floribus brevissime pedicellatis, calycis lobis anguste linearibus parce pilosis, corolla carnea pilosula bilabiata, tubo calyce duplo longiore, labio superiore bifido, inferiore trifido.

Kilima-njaro, 7000 ft.

Folia 2-3 poll. longa, 1-1½ poll. lata; petiolus ½-2 poll. longus; folia superiora interdum subsessilia. Flores ½-¾ poll. longi.

Nearly allied to, if not identical with, a plant occurring on the Cameroons Mountain at 7000 ft. alt.

BRACHYSTEPHANUS, sp. ? 7000 ft.

ANISOTES PARVIFOLIUS, Oliv., sp. nov. Ramis teretibus glabris cortice albido, foliis subcoriaceis oblanceolatis obovatisve acutiusculis v. obtusis basi in petiolum cuneatim angustatis glabris, floribus 2-4-nis fasciculatis subsessilibus ramulos brevissimos laterales terminantibus, calyce 5-partito lobis lanceolatis acutis appresse sericeis, corolla puberula v. glabrata, longissime bilabiata, labio postico bidentato, antico breviter 3-fido lobo centrali paullo latiore oblongo obtuso, antherarum loculis leviter obliquis basi mucronulatis.

Kilima-njaro Expedition, 40-60 miles inland.

Folia ¾-1 poll. longa, 3½-5 poll. lata. Flores 2-2½ poll. longi; calyx 3-4 lin. longus; bracteae sepalis conformes.

RHINACANTHUS COMMUNIS, Nees. 40-60 miles inland.

HYPOESTES ANTENNIFERA, S. Moore. Maungu; Kilima-njaro, 2000-3000 ft. and 6000 ft.

LANTANA VIBURNOIDES, Vahl. 4400 ft.

LANTANA PETITIANA, Rich. ?, an *L. salvifolia* forma? Kilima-njaro, 6000 ft.

LANTANA SALVIFOLIA, Jacq., var. ? Kilima-njaro, 5000 ft.

VITEX CHRYSOCLADA, Boj. Kilima-njaro, 6000 ft.

VITEX, aff. *V. mombassae*, Vatke, et *lanigerae*, Sch. Kilima-njaro, 5000 ft.

CLERODENDRON JOHNSTONI, Oliv., sp. nov.; ramulis tomentellis, foliis longiuscule petiolatis ovato-ellipticis apiculatis obtusisve basi rotundatis v. late cuneatis supra pilis brevibus sparsis hirtis glabratissve subtus tomentosis, cymis multifloris terminalibus breviter pedunculatis corymbosim ramosis tomentosis, bracteis anguste linearibus, floribus breviter pedicellatis, calyce turbinato-campanulato 5-fido tomentoso lobis ovato-deltoides acutis, corollae tubo glabro calyce duplo longiore limbi lobis subaequilongis obovato- v. late ellipticis obtusis extus hirtis, filamentis exsertis.

Kilima-njaro, 5000 ft.

Folia 2½-5 poll. longa, 1¾-3 poll. lata; petiolus ¾-1½ poll. longus. Inflorescentia 2-4 poll. lata. Flores ½ poll. longi. Calyx ¼ poll. longus.

CLERODENDRON (CYCLONEMA), sp. nov. ? Taita.

Differs from other named species in the Kew Herbarium with ternate, narrow, serrate-dentate leaves in the long slender tube of the corolla.

CLERODENDRON (CYCLONEMA) MYRICOIDES, Hochst., var. ? Foliis verticillatis (3-4 poll.) grosse serratis subtus tomentosis, calyce hirsuto.

"Very common, reaches 7000 ft."

OCIMUM CANUM, Sims, var. Kilima-njaro, 2000-3000 ft.

OCIMUM GRAVEOLENS, A. Br. ? Kilima-njaro, 6000 ft.

OCYMU, sp. 6000 ft.

ORTHOSIPHON ?, aff. *O. glabrato*, Benth. ? (inadequate). 40-60 miles inland.

PLECTRANTHUS PARVUS, Oliv., sp. nov. Herba annua $\frac{1}{2}$ - $\frac{3}{4}$ -pedalis, caule erecto simplici v. inferne ramoso flaccide pilosulo, foliis longe petiolatis ovatis acutiusculis crenato-serratis petiolisque parce pilosis, racemis terminalibus laxe pilosis 1-2-uncialibus, bracteis parvis ovatis lanceolatisve pedicello brevioribus, verticillastris sexfloris, pedunculo brevissimo, pedicellis 1-1 $\frac{1}{2}$ lin. longis, calycis lobis deltoideis lobo postico paullo latiore cum apiculo cæteris brevior, lobis anticis acuminatis, corollæ labio postico explanato, angulato-rotundato, antico cymbiformi postico vix longiore stamina inclusa vaginante, nucibus obovoideo-globosis lævibus.

Kilima-njaro, 5000 ft.

Folia 1-1 $\frac{3}{4}$ poll. longa, $\frac{2}{3}$ -1 poll. lata; petiolus $\frac{1}{2}$ -1 poll. longus. Flores 4 lin. longi.

PLECTRANTHUS, aff. *P. glanduloso*, Hook. f. 6000 ft.

COLEUS UMBROSUS, Vatke. Taita.

PLATYSTOMA AFRICANUM, Beauv. Kilima-njaro, 5000-6000 ft.

MOSCHOSMA: *M. MULTIFLORIS* v. *M. RIPARIE*, var. ? Kilima-njaro, 6000 ft.

ÆOLANTHUS ZANZIBARICUS, S. Moore. 40-60 miles inland.

HYPTIS PECTINATA, Poit. Kilima-njaro, 4000-5000 ft.

SALVIA NILOTICA, Vahl., var. ? Kilima-njaro, 6000 ft.

MICROMERIA PUNCTATA, Benth. 4000 ft. A form found in the Cameroons, 7000-10,000 ft.

MICROMERIA, an *M. punctatæ* forma floribus cleistogamis ? 6000 ft.

MICROMERIA ABYSSINICA, Benth., forma (flowers mauve). 4000-6000 ft.

TINNEA ÆTHIOPICA, Kotschy & Peyr., var. Kilima-njaro, 5000 ft.

TINNEA, sp., may be distinct. Kilima-njaro, 5000 ft.

With narrow oblanceolate-spathulate scabrid leaves, fascicled at the nodes, with two or three pedicellate flowers from each. A copiously flowering shrub, of which additional specimens are needed. *T. erianthera*, Vatke, I do not know; the anthers of our plant are barbate.

AJUGA REMOTA, Benth. Kilima-njaro, 5000 ft.

LEONOTIS. *L. RUGOSÆ*, Benth., var. ? Kilima-njaro, 4000-5000 ft.

LEUCAS GLABRATA, Benth. Maungu and Kilima-njaro, 2000-3000 ft.

LEUCAS. *L. GLABRATÆ*, var. ? 40-60 miles inland.

LEUCAS NEUFLIZEANA, Courb. Maungu, 2000 ft.

LEUCAS, sp. nov.? Taita; Maungu.

LABIATA (§ OCYMOIDEÆ), sp. 8000 ft.

PLANTAGO PALMATA, Hook. f. 7000 ft.

DIGERA ARVENSIS, Fres. 40-60 miles inland and Maungu.

PSILOTRICHUM AFRICANUM, Oliv., sp. nov. Frutex pubescens glabratisve, ramulis divaricatis gracilibus subteretibus, foliis oppositis ovato-lanceolatis ovatisve acutis basi late cuneatis rotundatisve minute pubescentibus glabratisve, spicis sæpius 5-15-floris brevibus axillaribus terminalibusque breviter pedunculatis v. subsessilibus, bracteis persistentibus ovato-lanceolatis acutis hirtis patentibus recurvisve, bracteolis late ovatis apiculatis scariosis perianthio dimidio brevioribus, perianthii segmentis ovato-lanceolatis concavis acutis coriaceis extus minute pubescentibus, filamentis angustis basi in annulum brevissimum coalitis, stigmate capitellato.

Kilima-njaro, 5000 ft. (Zambesi, *Sir J. Kirk*; Ribè, *Rev. T. Wakefield*).

Folia (in spp. Kilim.) $\frac{3}{4}$ - $1\frac{1}{4}$ poll. $\times$ $\frac{1}{2}$ - $\frac{3}{4}$ poll., (in spp. Zamb. et Ribè) $1\frac{1}{4}$ -3 $\times$ $\frac{2}{3}$ - $1\frac{1}{2}$ poll.; petiolus 1-3 lin. longus. Spicæ $\frac{1}{2}$ - $\frac{3}{4}$ poll. longæ; flores $\frac{1}{8}$ - $\frac{1}{6}$ poll. longi.

PHYTOLACCA ABYSSINICA, Hoff. Kilima-njaro, 6000 ft.

CHENOPODIUM MURALE, L. Kilima-njaro, 5000 ft.

OXYGONUM (*Ceratogonum atriplicifolium*, Meiss.). Kilima-njaro, 6000 ft.

POLYGONUM BARBATUM, L. Kilima-njaro, 5000 ft.

POLYGONUM SENEGALENSE, Meiss. Kilima-njaro, 6000 ft.

POLYGONUM SERRULATUM, Lag. Kilima-njaro, 5000 ft.

RUMEX STEUDELII, Hochst. Kilima-njaro, 6000 ft. Same? (in fl.). Kilima-njaro, 13,000 ft.

RUMEX ALISMIFOLIUS, Fres. Kilima-njaro, 6000 ft.

PROTEA ABYSSINICA, Willd. 9000-13,000 ft. A leafy specimen of the same was collected some fourteen years ago by Mr. New.

ARTHROSOLEN LATIFOLIUS, Oliv., sp. nov. Frutex, ramulis gracilibus teretibus ultimis sericeo-pubescentibus mox sæpe glabratis, foliis alternis oblanceolato-oblongis obtusis basi angustatis tenuiter sericeis subglabrisve breviter petiolatis, floribus capitatis, capitulis terminalibus v. ramulos breves laterales foliosos terminantibus, involucratibus, bracteis ovalibus sericeo-pubescentibus floribus paullo brevioribus deciduis, floribus 5-meris, tubo perianthii longe et dense villosa.

Kilima-njaro, 5000 ft. (Ribè to Galle Country, *Rev. T. Wakefield*).

Folia 1- $1\frac{3}{4}$ poll. longa, 3-5 lin. lata.

LORANTHUS CURVIFLORUS, Benth. 40-60 miles inland.

LORANTHUS, sp. (§ TAPINANTHUS, sed corolla basi haud dilatata). 4500 ft.

THESIUM, an *T. radicans*, Hochst.? 10,000-13,000 ft.

EUPHORBIA (§ TITHYMALUS), sp. 10,000 ft. Aspect of *E. depauperata*, Hochst., but too young.

EUPHORBIA, sp. (not in a state to describe). 7000 ft.

BRIDELIA MELANTHESOIDES, Klotzsch, forma. Kilima-njaro, 5000 ft.

PHYLLANTHUS MADERASPATENSIS, L. Kilima-njaro, 2000-3000 ft.

PHYLLANTHUS NIRURI, L., forma? Kilima-njaro, 5000 ft.

ANTIDESMA. A. VENOSUM, Tul., var.? 40-60 miles inland.

GELONIUM ZANZIBARENSE, Muell. Arg. 40-60 miles inland.

JATROPHA, sp. nov.? Leaves ovate elliptical serrulate, stipules partite in setaceous segments. 40-60 miles inland.

Not identified and probably new, but the material hardly sufficient for description.

CROTON PULCHELLUS, Baill.? 40-60 miles inland.

CROTON MACROSTACHYS, Hochst. Kilima-njaro, 5000-6000 ft.

ACALYPHA ORNATA, Rich., var. (*A. Livingstoniana*, Muell. Arg.?). Kilima-njaro, 6000 ft.

ACALYPHA, cf. *A. adenotricham*, Rich. Kilima-njaro, 6000 ft.

ACALYPHA PANICULATA, Miq. Maungu.

ACALYPHA, an aff. *A. fruticosæ*, Fres.? 5000 ft.

TRAGIA, an *T. mitis*, var.? (fruit). Kilima-njaro, 4000-5000 ft.

SPONIA BRACTEOLATA, Hochst.? Lanjora.

MORUS INDICA, Willd.? 40-60 miles inland.

PILEA JOHNSTONI, Oliv., sp. nov. Herba urticiformis, caulibus erectis glabris, foliis longe petiolatis ovatis obtusiuscule acuminatis basi sæpius late rotundatis grosse serratis supra parce subtus præcipue in nervis pilosulis, stipulis membranaceis intrapetio- laribus late ovatis rotundatisve, cymis axillaribus petiolo brevioribus pedunculatis androgynis, floribus sæpius capitatim congestis, fl. ♂ perianthii lobis 4 basi coalitis ovato-oblongis dorso sub apicem apiculato, fl. ♀ lobo majore achænium subæquante. Kilima-njaro, 5000 ft.

Herba verosimiliter $1\frac{1}{2}$ -3 ped. Folia 2-3 poll. longa, $1\frac{1}{2}$ -2 poll. lata; petiolus $1-2\frac{1}{2}$ poll. longus. Cymæ cum pedunculo $1-1\frac{1}{2}$ poll.

MYRICA, an *M. salicifoliæ* var., foliis oblongo-ellipticis obtusis? Kilima-njaro, 4000-5000 ft.

POLYSTACHYA KILIMANJARII, Reichb. fil. 40-60 miles inland.

VANILLA, sp.? (frequent). 40-60 miles inland.

ANGRÆCUM EBURNEUM?, Thou. Kilima-njaro, 6000 ft.

EULOPHIA, sp. Maungu.

LISSOCHILUS, sp. 40-60 miles inland.

DISPERIS JOHNSTONI, Reichb. fil., sp. nov. Kilima-njaro, 5000-6000 ft.

DISPERIS KERSTENI, Reichb. fil. Kilima-njaro, 7500 ft.

HABENARIA, aff. *H. macranthæ*, Hochst. Kilima-njaro, 6000 ft.

HABENARIA STYLITES, Reichb. fil. & S. Moore. Kilima-njaro, 2000-3000 ft.

HABENARIA PLEISTADENIA, Reichb. fil. Kilima-njaro, 8000–10,000 ft.

HABENARIA RARICOLORATA, Reichb. fil., sp. nov. Kilima-njaro, 7000 ft.

SATYRIUM CHLOROCORYS, Reichb. fil., sp. nov. Kilima-njaro, 7000 ft.

DISA DECKENII, Reichb. fil. Kilima-njaro, 6000–8000 ft.

ACIDANTHERA LAXIFLORA, Baker, sp. nov.; cormo parvo globoso tunicis brunneis membranaceo-fibrosis, foliis basalibus productis 3 linearibus firmulis glabris, floribus 2–6 in spicam laxissimam erectam dispositis, spathæ valvis magnis lanceolatis viridibus, perianthio tubo longissimo cylindrico, limbi albi segmentis obovatis obtusis tubo quadruplo brevioribus, antheris limbo duplo brevioribus connectivo ultra loculos breviter producto.

Maungu, 2000 ft.

Cormus 6 lin. diam. Folia producta semipedalia vel pedalia, medio 3–4 lin. lata. Spathæ $1\frac{1}{2}$ – $2\frac{3}{4}$ poll. longæ. Perianthii tubus 3–4-pollicaris, limbus 9–10 lin. longus, segmentis 4– $4\frac{1}{2}$ lin. latis. Antheræ semipollicares.

GLADIOLUS (§ *EUGLADIOLUS*) *PAUCIFLORUS*, Baker, n. sp.; foliis basalibus productis 3 elongatis linearibus firmulis glabris, caule 2–3-ped. simplici foliis 2 reductis supra medium prædito, spica laxissima erecta pauciflora, spathæ valvis lanceolatis magnis viridulis, perianthio albido suberecto, tubo anguste infundibulari spathis inferioribus paulo longiore, limbi segmentis oblongis subobtusis, genitalibus limbo conspicue brevioribus. Ad *G. angustum*, L., magis accedit.

Kilima-njaro, 2000–5000 ft.

Folia basalia producta pedalia, 3–4 lin. lata. Caulis 2–3-pedalis. Spica semipedalis. Spathæ 1– $1\frac{1}{2}$ poll. Perianthium 3 poll., segmentis tubo paulo brevioribus, medio 6 lin. latis.

GLADIOLUS (§ *EUGLADIOLUS*) *SULPHUREUS*, Baker, n. sp.; fibris radicalibus cylindricis, cormo globoso membranaceo-tunicato, foliis productis 5–6 ensiformibus brevibus coriaceis glabris erectis, caule valido simplici erecto, floribus suberectis 10–12 in spicam laxam dispositis, spathæ valvis magnis lanceolatis chartaceis brunneis, perianthii tubo anguste infundibulari spathis inferioribus æquilongo, limbo sulphureo suberecto tubo æquilongo, segmentis obovatis obtusis, supremo arcuato lateralibus latiore, infimo reliquis multo minore, genitalibus perianthio paulo brevioribus.

Ab *G. Quartiniano* recedit foliis brevibus, perianthio suberecto segmento supremo solum leviter arcuato.

Kilima-njaro, 5000 ft.

Cormus 8–9 lin. diam. Folia producta 4–5 poll. longa, medio 6 lin. lata. Caulis 8–9-pollicaris. Racemus 8–9-pollicaris. Spathæ 1– $1\frac{1}{2}$ poll. longæ. Perianthium 3 poll. longum, segmento supremo 8–9 lin. lato, lateralibus 6 lin. latis, infimo 8–9 lin. longo.

GLADIOLUS WATSONIODES, Baker. 8500–11,000 ft.

GLADIOLUS WATSONIOIDES, Baker, var. MINOR. Up to 13,000 ft.

GLADIOLUS QUARTINIANUS, A. Rich. 7000 ft.

ARISTEA ALATA, Baker. 7000 ft.

DIERAMA PENDULA, Baker. 8300-10,000 ft.

HÆMANTHUS ABYSSINICUS, Herb., = *H. tenuiflorus*, Herb. 40-60 miles inland.

DIOSCOREA, aff. *D. crinitæ*, Hook. f. 6000 ft.

ASPARAGUS FALCATUS, L. Kilima-njaro, 5000 ft.

ASPARAGUS, verosimiliter sp. nov., flowers 0.

An aff. *A. plumoso*? Kilima-njaro, 2000-3000 ft.

ASPARAGUS, aff. *A. plumoso*, Baker. (No flowers.) 8000 ft.

GLORIOSA VIRESCENS, Lindl. Kilima-njaro, 2000-3000 ft.

SCILLA (§ LEDEBOURIA) JOHNSTONI, Baker, sp. nov.; bulbo magno globoso tunicis pluribus membranaceis, foliis binis synanthiis subsessilibus ovatis vel obovatis obtuse cuspidatis tenuibus glabris, scapis 4 foliis eminentibus, floribus perpluribus in racemum cylindricum dispositis, pedicellis flori æquilongis, bracteis minutis lanceolatis, perianthio oblongo medio constricto splendide rubro-purpureo, segmentis lanceolatis uninervatis basi oblongis flore expanso supra basin patulis, staminibus perianthio æquilongis, stylo breviter exserto stigmate capitato.

Ad *S. lilacinam* (*nubicam*), Baker, in Journ. Linn. Soc. xiii. 250, et *S. Hildebrandtii*, Baker, inedit. (Hildebrandt, 2644) accedit.

40-60 miles inland.

Bulbus $1\frac{1}{2}$ poll. diam. Folia 3-4 poll. longa, $2-2\frac{1}{2}$ poll. lata. Scapus 6-8-pollicaris. Racemi semipedales, expansi 15-18 lin. diam. Perianthium $3-3\frac{1}{2}$ lin. longum.

WALLERIA NUTANS, Kirk. Taveita.

BULBINE ASPHODELOIDES, Roem. & Sch. 40-60 miles inland.

ORNITHOGALUM (§ OSMYNE) MELLERI, Baker. 40-60 miles inland.

KNIPHOFIA THOMSONI, Baker. 8000-11,000 ft.

ALOE, perhaps near *A. commutata*, Tod. Material inadequate. 3000-6000 ft.

ALOE (§ EUALOE) JOHNSTONI, Baker, n. sp. (Plate LXIII.) Acaulis, rhizomate tuberoso globoso, foliis productis 8-12 erectis linearibus rigidulis ad marginem minute aculeatis sursum concoloribus deorsum conspicue albo maculatis basi in laminam chartaceam albidam deltoideam dilatatis, scapo simplici tereti erecto foliis subæquilongo bracteis paucis vacuis ovatis cuspidatis scariosis prædito, racemo denso brevi subcorymboso multifloro, pedicellis elongatis strictis ascendentibus, bracteis magnis scariosis oblongo-navicularibus cuspidatis, perianthio parvo cylindrico obscure rubello, tubo brevissimo, segmentis lanceolatis, exterioribus dorso laxè trinervatis, genitalibus perianthio æquilongis, fructu oblongo capsulari perianthio æquilongo.

Ad *A. Cooperi*, Baker, in Journ. Linn. Soc. xviii. 155; Bot. Mag. t. 6377, magis accedit.

Kilima-njaro, 2000-5000 ft.

Folia pedalia vel semipedalia, medio $1\frac{1}{2}$ lin. lata, basibus dilatatis scariosis 8-9 lin. latis. Racemus 2-3-pollicaris. Pedicelli inferiores 9-10 lin. longi. Perianthium 7-8 lin. longum.

DRACÆNA, sp. nov. Near *D. Smithii*, Baker. Material inadequate for description. 6000-9000 ft.

ANTHERICUM (§ PHALANGIUM) VENULOSUM, Baker, sp. nov.; fibris radicalibus cylindricis, collo radicis setis paucis deciduis cincto, foliis omnibus radicalibus lineari-lanceolatis rigidulis conspicue venulosis facie glabris margine incrassatis conspicue ciliatis, caule ancipiti simplici foliis brevioribus racemo laxo elongato simplici erecto, pedicellis medio articulatis flore brevioribus solitariis vel geminis, bracteis membranaceis pallidis lanceolatis vel ovatis, perianthii albidis segmentis oblanceolato-oblongis medio crebre 3-5-nervatis, staminibus perianthio æquilongis, filamentis glabris antheris lanceolatis æquilongis, fructu globoso, capsulæ valvis lineis transversalibus rugosis, seminibus turgidis nigris in loculo pluribus superpositis.

Kilima-njaro, 2000-5000 ft.

Folia radicalia producta sæpe 6 semipedalia vel pedalia plana vel crispato-undulata, medio 5-6 lin. lata. Racemus 3-6-pollicaris. Bracteæ inferiores 3 lin. longæ; superiores sensim minores. Pedicelli 2 lin. longi. Perianthium 4 lin. longum.

ANTHERICUM (§ PHALANGIUM) RUBELLUM, Baker, sp. nov.; fibris radicalibus duris, collo radicis dense setoso, foliis omnibus radicalibus linearibus firmulis glabris crebre nervatis, caule ancipiti, racemis erectis laxis simplicibus vel basi furcatis, pedicellis solitariis vel geminis medio articulatis, bracteis parvis ovatis castaneis scariosis, perianthii rubelli segmentis lanceolatis patulis dorso 5-7 nervatis, antheris magnis linearibus filamentis brevibus glabris, fructu globoso capsulæ valvis lineis transversalibus glabris rugosis, seminibus turgidis nigris in loculo pluribus superpositis.

Ad *A. zanguebaricum*, Baker, in Journ. Linn. Soc. xv. 302, magis accedit.

Kilima-njaro, 5000 ft.

Folia producta 6-8 semipedalia medio 3 lin. lata ad basin et apicem sensim attenuata. Caulis subpedalis. Racemus primarius 2-3 poll. Pedicelli 3 lin. longi. Perianthium 4 lin. longum. Antheræ 2 lin. longæ.

DASYSTACHYS GRANTII, Benth. Kilima-njaro, 5000 ft.

DASYSTACHYS ? (inadequate). Kilima-njaro, 5000 ft.

COMMELINA, near *C. latifolia*, Hochst. Kilima-njaro, 5000 ft.

ANEILEMA SINICUM, Lindl. Kilima-njaro, 5000 ft.

ANEILEMA ÆQUINOCTIALE, Kunth. Maungu, 5000-6000 ft.

ANEILEMA, cf. *A. lanceolatum*. Kilima-njaro, 2000-3000 ft.

ANEILEMA PEDUNCULOSUM ?, C. B. Clarke. Up to 9000 ft.

PHOENIX, sp. Nearly to 6000 ft.

Spadices only "Mkindo" palm.

LUZULA FORSTERI, DC., forma ? 8000-9000 ft.

CYPERUS DICHROSTACHYS, Hochst. Kilima-njaro, 6000 ft.

- CYPERUS ROTUNDUS, L., forma (*C. adoensis*?). Kilima-njaro, 4000–5000 ft.
- CYPERUS PANICEUS, Boeckl. ? Kilima-njaro, 5000 ft.
- CYPERUS LEPTOCLADUS, Kunth. (Apparently *C. ingratus* of the Cameroons and Fernando Po lists.) 6000 ft.
- KYLLINGA CYLINDRICA, Nees ? 6000 ft.
- FIMBRISTYLIS, an *F. hispidula* (*glabrata*)? Kil. Exped. No detail.
- FIMBRISTYLIS (*Abildgaardia pilosa*, Nees). 40–60 miles inland.
- FIMBRISTYLIS (§ ONCOSTYLIS), apparently *Isolepis schænooides*, Kunth, of Sir J. Hooker, in Report on Cameroons plants (Journ. Linn. Soc. vii. 225): *Schænus* ? *erraticus* (l. c. vi. 22); *Scirpus* (§ *Oncostylis*) *atrosanguineus*, Boeckl., in Engler, Bot. Jahrb. vii. 276.
- CAREX, an *C. Wahlenbergiana*, Boott ? With specimens from 6000–10,000 ft.
- CAREX JOHNSTONI, Boeckl., in Engler, Bot. Jahrb. vii. 278. 6000–10,000 ft.
- CAREX TRIQUETRIFOLIA, Boeckl., l. c. p. 279. 12,000 ft.
- ISACHNE MAURITIANA ?, Kunth. 7000 ft.
- PANICUM EXCURRENS, Trin. (*P. plicatum*, var. ?). 7000 ft.
- PANICUM (TRICHOLÆNA), an *P. longisetæ*, Hochst., var. ? 4400 ft.
- PANICUM (TRICHOLÆNA ?). Fragment. 6000 ft.
- OPLISMENUS COMPOSITUS ?, Beauv. Fragment. 5300 ft.
- ANDROPOGON (CYMBOPOGON) CYMBARIUS, L., forma. 6000 ft.
- ANDROPOGON (CYMBOPOGON) HIRTUM, L., var. 6000 ft.
- ANTHISTIRIA, an *A. abyssinica*, Hochst. ? 8300; 10,000–11,000.
- ELIONURUS ARGENTEUS, Nees. Kilima-njaro, 5000 ft.
- ARISTIDA ADOENSIS, Hochst. Kilima-njaro, 5000 ft.
- SPOROBOLUS INDICUS, R. Br. (*S. elongatus*, R. Br.). Kilima-njaro, 5000 ft.
- ANTHOXANTHUM ODORATUM, L., var. ? or a new species closely allied. 13,200 ft. The genus is new to Tropical Africa. There is but a single specimen, remarkably robust, with somewhat hirsute leaves $\frac{1}{4}$ – $\frac{1}{3}$ in. broad, rapidly tapering to subacute apex, with strongly striate sheaths, and narrow, compact, purplish inflorescence.
- KOEHLERIA CRISTATA, Pers., var. (*Airochloa convoluta*, Hochst.). A single leafless culm of nearly 2 feet. 7000 ft.
- ERAGROSTIS SCHIMPERI, Benth. *Harpachne* (Hochst.). Kilima-njaro, 6000 ft.
- ERAGROSTIS, sp. Two leafless culms. 6000 ft.
- FESTUCA MACROPHYLLA, Hochst., var. ? 12,000–14,000 ft.
- FESTUCA, aff. *F. Schimperianæ*, Rich., an imperfect leafless specimen. 13,000 ft.
- HYMENOPHYLLUM POLYANTHOS, Sm. Trunks of trees. 18,000 ft.
- CYSTOPTERIS FRAGILIS, Bernh. Crannies of rock at 13,000 ft.
- ADIANTUM CAUDATUM, L. 4300 ft.
- ADIANTUM ÆTHIOPICUM, L. 4000–6000 ft.
- ADIANTUM CAPILLUS-VENERIS, L. 5000–6000 ft.
- CHEILANTHES MULTIFIDA, Sw. 4000–7000 ft.
- PELLÆA GERANIÆFOLIA, Fée. 4000–7000 ft.
- PELLÆA HASTATA, Fée. 4000–7000 ft.

LONGCHITIS PUBESCENS, Willd. 6000–8000 ft.

PTERIS FLABELLATA, Thunb. 4000–8000 ft.

PTERIS AQUILINA, L. Up to 10,000.

PTERIS QUADRIAURITA, Retz. 4000–7000 ft.

ASPLENIUM MONANTHEMUM, L. 10,000 ft.

ASPLENIUM FURCATUM, Thunb. 4000–8000 ft.

ASPLENIUM LUNULATUM, Sw. 4000–8000 ft.

ASPLENIUM CICUTARIUM, Sw. 7800 ft.

ASPLENIUM SANDERSONI, Hook. 8000 ft.

ASPLENIUM (§ DAREA) LOXOSCAPOIDES, Baker, n. sp.; frondibus oblongo-lanceolatis subcoriaceis bipinnatifidis facie glabris dorso obscure purpureis, rhachide brunneo facie profunde canaliculato dorso rotundato obscure furfuraceo, pinnis multijugis lanceolatis sessilibus ad costam anguste alatham pinnatifidis, pinnulis lanceolatis uninerviis adnatis parallelis segregatis ascendentibus simplicibus vel paucis inferioribus apice furcatis, soris solitariis centralibus oblongis, involuero glabro firmulo margine integro.

Stipites et caudex desunt. Lamina 15–18 poll. longa, 5–6 poll. lata. Pinnæ inferiores 4–5 poll. longæ, 5–6 lin. latæ.

Ad *A. pteridoidem*, Novæ Caledoniæ, et *A. rotæfolium* Africanum magis accedit.

Kilima-njaro, 8000 ft.

ASPLENIUM (§ DAREA) SERTULARIOIDES, Baker, n. sp.; frondibus oblongo-lanceolatis bipinnatifidis subcoriaceis utrinque viridibus facie glabris dorso parce paleaceis, stipitibus brevibus cum rhachidibus nigro-brunneis paleis adpressis lanceolatis vestitis, pinnis multijugis lanceolatis sessilibus ad costam anguste alatham pinnatifidis basi inæqualibus antice productis postice cuneato-truncatis, multis inferioribus reductis, pinnulis erecto-patentibus contiguis adnatis, superioribus lanceolatis simplicibus integris, inferioribus multis apice emarginatis vel furcatis, infimo antico cuneato majore pinnatifido, soris solitariis parvis oblongis, involuero firmulo glabro margine integro.

Lamina 8–15-pollicaris, medio 2–3 poll. diam., stipite 2–3-pollicari. Pinnæ centrales 1½–2 poll. longæ, deorsum 3 lin. latæ.

Forma adest involuero subnullo.

Ad *A. Belangeri*, Kunze, magis accedit.

Kilima-njaro, in locis aquosis. 9000 ad 13,000 pedes, frequens.

ASPLENIUM THUNBERGII, Kunze. 5000 ft.

ASPIDIUM ACULEATUM, Sw. 4000–8000 ft.

ASPIDIUM. Bed of stream at 13,700 ft.

NEPHRODIUM MOLLE, Desv. 4000–10,000 ft.

NEPHRODIUM CICUTARIUM, var. GEMMIFERUM (Fée). 4000–8000 ft.

POLYPODIUM PHYMATODES, L. 5000 ft.

ACROSTICHUM HYBRIDUM, Bory. 8000 ft.

ACROSTICHUM AUBERTII, Desv. 8000 ft.

MOHRIA VESTITA, Baker, n. sp. Dense cæspitosa, stipibus brevibus rhachidibusque paleis linearibus membranaceis patulis pallide brunneis vel albidis dense vestitis, frondibus oblongis bipinnatis facie viridibus obscure glanduloso-paleaceis dorso dense paleaceis, pinnis oblongis sessilibus, infimis reductis latioribus, pinnulis oblongis adnatis obtusis contiguis conspicue inciso-crenatis, sporangiis pinnularum totam marginem occupantibus.

Stipites 9–12 lin. longi. Lamina 3–4-pollicaris, medio 15–18 lin. diam. Pinnæ centrales 8–9 lin. longæ, 3–4 lin. latæ.

Ab *M. caffrora* Capensi et Mascaranensi præsertim indumento recedit.

Kilima-njaro, ad rupium fissuras. 6000 ft.

LYCOPodium CLAVATUM, L. 7500–8500 ft.

SELAGINELLA RUPESTRIS, Spring. 40–60 miles inland.

SELAGINELLA MOLLI-CEPS, Spring. 5000 ft.

MARCHANTIA (no fruit).

GRIMMIA, sp. 12,000 ft.

DICRANUM, sp. 10,000 ft.

THUIDIUM, sp. 10,000 ft.

PHYSCIA FLAVICANS (Sw.).

PHYSCIA SPECIOSA (Wulf.).

PARMELIA PERLATA (L.).

PARMELIA, sp. 14,300 ft.

USNEA, sp.

DESCRIPTION OF THE PLATES.

PLATE LX.

Figs. 1–9. *Senecio Johnstoni*, Oliver, n. sp. 1, a reduced sketch of the trees, drawn from nature by Mr. Johnston; 2, the leaf, natural size; 3, cluster of the inflorescence, also natural size; 4, involucre bract; 5, ray-floret; 6, disk-floret; 7, seta of pappus; 8, stamens; 9, cleft style. Figs. 4 to 9 enlarged.

PLATE LXI.

Figs. 1–9. *Gazania diffusa*, Oliver, n. sp. 1, the plant, nat. size; 2, involucre laid open; 3, ray-floret; 4, disk-floret; 5, stamen; 6, style; 7, fruit; 8, scale of pappus; 9, hairs of ovary. Figs. 2–9 considerably enlarged.

PLATE LXII.

Figs. 1–2. *Ipomæa bullata*, Oliver, n. sp. 1, portion of plant in flower, nat. size; 2, stamen, seen laterally.

PLATE LXIII.

Figs. 1–8. *Aloe* (§ *Eualoe*) *Johnstoni*, Baker, n. sp. 1, the plant, nat. size; 2, portion of leaf showing spines; 3, flower, side view; 4, stamen; 5, pistil; 6, stigma; 7, fruit, nat. size; 8, the fruit, enlarged.