Catalogue

OF THE

Hanbury Herbarium.

Provincial Medical Journal:

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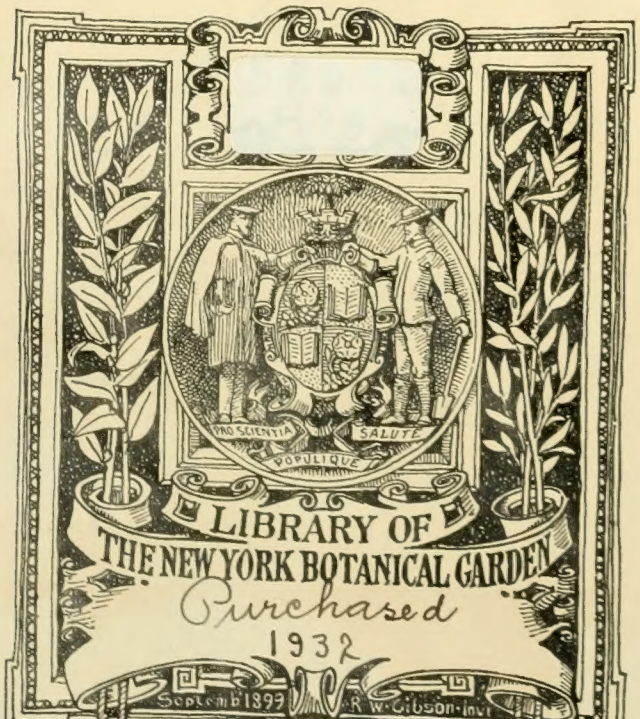

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CATALOGUE

OF THE

HANBURY HERBARIUM.

CATALOGUE

OF THE

HANBURY HERBARIUM,

IN THE

Museum of the Pharmaceutical Society of Great Britain.

COMPILED BY

E. M. HOLMES, F.L.S.,

Curator of the Museum.

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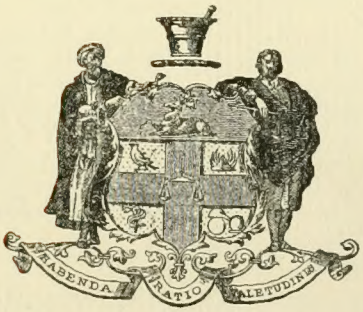

London:
THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.
BLOOMSBURY SQUARE.

1892.

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PREFACE.

In the *Pharmaceutical Journal and Transactions* for July 8th, 1876, p. 31, the following note will be found, which explains the circumstances under which the Daniel Hanbury Pharmaceutical Herbarium and Collection of Materia Medica came into the possession of the Pharmaceutical Society of Great Britain:

The Materia Medica Collection of the late Daniel Hanbury.

"The President also read the following letter from Mr. Thomas Hanbury, relating to the botanical collection of the late Daniel Hanbury, F.R.S., and suggested that the offer should be gratefully accepted on the conditions named.

"Ashburton House,
"Croydon, 29 June, 1876.

"To the President of the Pharmaceutical Society of Great Britain.

"Sir,—My late dear brother Daniel Hanbury, when near his end, gave me verbal instructions that he wished 'his herbarium to be divided between Kew, the Pharmaceutical Society, the British Museum, and Professor Flückiger.'

"In taking steps to carry out this wish, I have heard many regrets expressed by the scientific friends of my late brother, that there should be any division of his Pharmaceutical collection, which being unique and *sui generis*, would, it is considered, greatly lose in interest by being divided and scattered. I share this opinion, and believe that had my late brother calmly considered the matter in time of health, he would have come to the same conclusion.

"With the approval of my co-executor and my other relatives, I have decided to offer the entire Pharmaceutical collection to your society, on the simple condition that it should be kept apart, and labelled in a suitable manner to show it was formed by my late brother, and that access to the specimens and herbarium be allowed only under most careful regulations to prevent injury or loss.

"I am, yours faithfully,
Thomas Hanbury."

Mr. Sandford moved, and Mr. Hills seconded the following, which was carried unamiously:

"That the offer of the collection of the late Daniel Hanbury to the Pharmaceutical Society be accepted, with the best thanks of this Council to his executors, and that the letter from Mr. Thomas Hanbury be referred to the Library, Museum, and Laboratory Committee, for the purpose of making the necessary arrangements for keeping the specimens according to the wishes of the late Daniel Hanbury's representatives."

MAR 1 1932

In accordance with the wishes then expressed by Mr. Thomas Hanbury, the collection of plants, as well as that of materia medica, is kept apart in a room now known as the Hanbury Room. Consequently it appeared to the Council to be desirable that a separate catalogue of the collections should be published.

The specimens collected by Daniel Hanbury himself are, as a rule, excellently preserved and complete in detail, but in the case of some received from abroad, it has evidently been impossible to obtain a complete set of specimens. A few, for this reason, or because they belonged to species at that date undescribed, were labelled with the generic name only. In such a case, if the plant has been subsequently described, the specific name has been added by the Curator of the Museum. In every case in which explanatory matter has been added, it has been enclosed in brackets thus [ ], so that the Catalogue exclusive of these portions represents the Herbarium as left by Daniel Hanbury. The copious notes and extracts from letters of foreign correspondents have been given in full, except where an abstract has been found sufficient to express all the contents of the letter referring to the particular specimen.

It is hoped that by giving dates, localities, and references to published works, etc., the Catalogue may be found useful in economising the time and aiding the investigations of persons desirous of consulting the herbarium, and that it will enable working pharmacists and botanists to ascertain easily whether any plant or part of a plant suitable for purposes of comparison can be seen in the Herbarium.

The classification adopted is that of Bentham and Hooker's "Genera Plantarum." The plants are arranged alphabetically under each natural order. Where the natural orders in the work above-mentioned have been made to include groups of plants as tribes or suborders formerly treated as distinct natural orders, those tribes or suborders are given, and the plants are arranged alphabetically under them. The separate sheets of specimens are indicated by italic letters, and the specimens on each sheet by ordinary numerals enclosed in parentheses.

The Hanbury Herbarium contains several autograph letters and labels bearing the handwriting of celebrated botanists. These are referred to in the Index under their respective names. A list of the works quoted in this Catalogue is given, together with an annotated list of the Herbaria referred to in the text. Further details regarding these Herbaria may be found in "La Phytographie," by A. De Candolle (Masson, Paris, 1880), and in "Musee Botanique," de M. B. Delessert, Par A. Lasègue (Paris, Fortin, Masson and Cie, 1845).

THE

HANBURY HERBARIUM.

☞ *The letters of the alphabet under each species are used to indicate a herbarium sheet, and the numerals in parenthesis refer to the specimens from different localities.*

DICOTYLEDONES.

I. POLYPETALÆ. *I. THALAMIFLORÆ.*

RANUNCULACEÆ.

1. **Aconitum Napellus, L.**
   a. A portion of the plant in flower.
   Hohneck, Vosges, 13 Aug., 1855. Pîc de Sancy, Auvergne, Sept., 1858.
   b. Plant in flower, with root attached.

2. **Aconitum Lycoctonum, L.**
   a. Plant in flower, with root attached.
   Hohneck, Vosges, 13 Aug., 1855.

3. **Actæa spicata, L.**
   a. Leafy stem with flowers and detached fruit. Cultivated at Clapham Common, 1867.
   b. Two leafy stems with fruit, and detached fruit.
   (1) Hohneck, Vosges, 13 Aug., 1855. (2) Auvergne, Sept., 1855.

4. **Anemone Hepatica, L.**
   a. Plant in flower, two specimens.
   (1) Salzburg, 10 Sept., 1862. With root attached. (2) Mont. Ventoux, near Avignon, 7 May, 1866.

5. Anemone Pulsatilla, L.

a. Plant in flower, three specimens.

(1) Chalky hills, Hexton, near Hitchin, Herts., April, 1854; R. Bentley. (2) Hitchin, 1857; B. Hanbury. (3) with root attached, near Cambridge, 1859; T. W. Beddome.

b. Plants with flower, fruit, and root.

Tonnerre, France, 27 April, 1866.

6. Clematis Caripensis, H.B.K. "Crespia."

a. Twig in fruit.

The following extract is attached to this specimen:—

"Among the dried specimens I send a portion of a vine, or large creeper, called by the Indians 'Crespia,' or blistering leaf, much used among them and among many of the native doctors. I have often recommended it myself to the poor as a cheap blister. In using it, a few fresh leaves should be bruised in a mortar with a little water or vinegar, and applied to the skin for about ten minutes, or until a slight redness is produced on the part. The leaves are then carefully removed and a little fresh lard gently rubbed on, when the blister shortly after rises. If the leaves are left on too long, a troublesome sore ensues. For children, a small rag wetted with the liquid answers the purpose.

"There are two varieties, the smaller one which I send, and the larger from Nicaragua, which produces a pod like cotton. From the flowers a feeble counter-irritant is produced. Flowers in June and July."

(Letter from Dr. Dorat. Sonsonate 12, Aug., 63.)

7. Clematis Flammula, L.

a. Twig in flower with detached fruits.

(1) Grasse, 6 July, 1857. (2) Nismes, 19 Oct., 1859.

8. Clematis graveolens, Hook. "Zarmiri."

a. Leafy twig.

9. Coptis Teeta, Wall. "Mishmi."

a. Plant with leaves and root.

Ex Herb. late E. I. Company, E. Bengal (in Herb. Griffith), Distributed by the Royal Gardens, Kew, 1861-2.

b. Ditto.

Ex Herb. Hort. Calcutta, Griffith; from Dr. T. Thomson, 18 Mar., 1864.

10. Delphinium Consolida, L.

a. Plant in flower and fruit.

Bingen-on-the-Rhine, 20 Aug., 1855.

11. Helleborus fœtidus, L.
a. Leaves and inflorescence.
Vienne (Isère), 27 April, 1854.

12. Helleborus lividus, Ait.
a. Leafy stem.
b. Inflorescence.
Near Bocagnano, Corsica, June, 1868.
Common about Bastia and Suri.

13. Helleborus niger, L.
a. Leaf and root.
Cultivated at Clapham Common, 1873.

14. Helleborus viridis, L.
a. Leaf and inflorescence.
Leigh Woods, Bristol; W. W. Saunders, May, 1855.

15. Nigella arvensis, L.
a. Plant in flower and fruit.
Bingen-on-the-Rhine, 20 Aug., 1855.

16. Nigella Damascena, L.
a. Plant in flower and fruit.
(1) Toulon, May, 1854. (2) Grasse, 1857. (3) Draguignan, 10 July, 1857.

17. Nigella sativa, L.
a. Plant in flower.
From seeds received from A. E. Webb, 21 Aug., 1871.

18. Xanthorrhiza apiifolia, L'Her.
a. Flowering twig.
b. Ditto, with leaves.
Bot. Gard., Cambridge, Mass; from Prof. Asa Gray, 1868.

MENISPERMACEÆ.

19. Abuta rufescens, Aublet.
a. Leaves.
This specimen is one of J. Correa de Méllo's Pl. Bras., and is his "Menispermaceæ, No. 6, Folhas de Abutua grande ou Pareira Brava Grande." It was compared with Aublet's specimen in British Museum, 17 June, 1873, by D. H., who adds in pencil, "same as 3860 *Abuta*, Rio de Janeiro, Coll. Glaziou, in Herb. Kew. Doubtfully referred to *Abuta rufescens*, Aubl. in Herb. Burchell at Kew, but seems to me the same species. 14 June, 1873."

20. Chondodendron* tomentosum, R. & P.

a. Leaves.

From Pl. Bras. J. Correa de Méllo. The leaves are respectively labelled in his writing: "(1) Menispermaceæ, No. 3, Cissampelos ? (Folhas da planta qui produira Pareira brava)"; (2) "Folha da Abutua de St. Sebastiao"; (3) "Abutua de St. Sebastiao." By D. H. the sheets are labelled: "*Botryopsis platyphylla*, Miers."

b. Ditto.

This is Menispermaceæ, No. 5. "Folhas da Abutua pequena ou Pareira brava pequena" of J. Correa de Méllo, and is also labelled by D. H.: "*Botryopsis platyphylla*, Miers."

c. Ditto, Leafy stem with detached portion of stem and young fruit.

This is "Nó. 5, Abuta miuda, Butinha vel Pareira brava miuda," from Theodor Peckolt, Cantagallo, Brazil, 1867, and is labelled by D. H.: "(*Botryopsis platyphylla*, Miers)," and superscribed "*Chondodendron tomentosum*, R. & P."

d. Twig, with leaves and detached inflorescence.

From Theodor Peckolt, Cantagallo, Brazil, 1867, and is labelled in D. H's writing: "*Botryopsis platyphylla*, Miers (Eichler in Martius' Fl. Bras., fasc. 38, tab. 48)," and is superscribed: "*Chondodendron tomentosum*, R. & P."

e. Ditto, a second specimen.

f. Flowering twig, with smaller leaves.

This is labelled: "No. 5 Butinha vel Pareira Brava miuda; with dried stems, from Theodor Peckolt, 1867;" it is also labelled with the two botanical names.

g. Ditto, a second specimen, with portion of stem and detached fruit.

Labelled as above, and also as "Abuta miuda."

h. A third specimen, with stem and panicle of young fruit.

i. Ditto, a fourth specimen, with large leaves. *h* and *i* are labelled in the same way as *g*.

j. A flowering and a fruiting twig.

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* [The first r in the name Chondrodendron is here omitted in deference to the opinion expressed by the late Daniel Hanbury. 'Science Papers,' p. 387.

This is No. 7 "Butua legitima vel Pareira Brava legitima," Theodor Peckolt, 1867, and is labelled by D. H.: "*Cocculus Chondodendron*, Dec.; *Chondodendron tomentosum*, R. & P.; *Cissampelos Abutua*, Velloso, Flor. Flum. x. t. 140, and *Botryopsis platyphylla* Miers. With large specimen of stem and fruits, both dried and in alcohol."

k. Seedling plant, and a very large leaf.

The seedling plant was raised at Clapham from seeds received from Mr. Glaziou, 1874; the leaf was sent by T. Peckolt, 1867. Attached to this sheet is the proof of the drawing of the fruit published in Pharm. Journ., 2 Aug., 1873.

[Specimen *b* differs from the other specimen of *C. tomentosum* in the more acuminate leaves, although younger leaves on a separate shoot are obtuse. The superscription of *Chondodendron tomentosum* over *Botryopsis platyphylla* in these specimens appears to have followed a recognition of the fact pointed out to D. H. by E. M. H., that the Kew specimens at that time labelled *Botryopsis platyphylla* were identical with those at the British Museum labelled *Chondodendron tomentosum*, R. & P., and were different from the British Museum specimens of *Botryopsis platyphylla*, Miers.]

21. Cissampelos glaberrima, St. Hil.

a. Flowering twig, male.

Campinas; J, Correa de Méllo, 12 Jan., 1865.

b. Ditto

"No. 1. Menispermaceæ," Campinas; J. Correa de Méllo 17 Jan., 1869.

22. Cissampelos grandifolia, Tr. & Pl.

a. Flowering twigs,

Moumee Station, Panama Railroad; S. Hayes, 30 Sept., 1862.

23. Cissampelos Pareira, L.

a. Flowering twigs.

Common about Panama; S. Hayes, 1861.

b. Ditto.

Trinidad, W. Indies; H. Prestoe, 1866.

c. Ditto

"No. 2. Menispermaceæ," Campinas; J. Correa de Méllo, 19 Dec., 1868.

The upper specimen is labelled "Alté volúbil; fructus maduras de cor verde muito desmaiada, minores que en do C. glaberrima, mas, fructifera, 17 Jan., 1869."

Hanbury appears to have been in doubt about this specimen, since a letter from Professor Oliver is attached to it in which it is stated :—

"Probably M. Miers would regard it as distinct, but according to our Kew authorities and Dr. Eichler, who monographed the *Menispermaceæ* for '*Flora Brasiliensis*,' it is *C. Pareira*.

d. Flowering twigs, male and female.

Desterro, S. Brazil; Fritz Müller. Received 10 Aug., 1867 with specimens of stem from the same plant, Jamaica; N. Wilson, 1867.

24. Jateorrhiza palmata, Miers. (Oliver, 'Flora of Tropical Africa,' vol. i., p. 42.)

a. Leaf and flowering spray of male plant, and detached flowers.

Botanical Gardens, Mauritius; J. Horne, 1868.

b. Detached leaf of female plant; J. Horne, Botanical Gardens, Mauritius, 1868.

Bojer in his 'Hortus Mauritianus' (Maurice, 1837) says of this plant on p. 7 :—

". . . a été introduite dans l'île par le capitaine W. F. W. Owen et maintenant cultivée à Bois Chéri et en d'autre endroits." D.H.

c. Leaf bases, one with free and the other with over-lapping basal lobes.

Botanical Gardens, Trinidad, 1873.

A letter from Mr. H. Prestoe, of the Trinidad Botanical Gardens, states as follows:

"I am now able to inform you that stem and leaves having developed on our big plant of *Cocculus palmatus*, I find *both* the leaf forms you have sent me, in sketch 7th June, occur on the same plant and on the same stem. I enclose central bits of leaves showing the two forms."

BERBERIDEÆ.

25. Berberis aristata, D. C.

a. Twig with detached fruits and leaves.

Khajjiar, 500 feet, near Churba; Baden H. Powell, Lahore, from Dr. J. L. Stewart, Aug., 1870.

26. Berberis Lycium, Royle.

a. Flowering branch with leaves.

From good sized bushes in the garden of Mr. B. H. Powell, Lahore, April, 1871; from Dr. J. L. Stewart.

b. Flowering branches.

Dalhousie, about 5,500 feet. Mr. B. H. Powell, per Dr. J. L. Stewart.

"This is the common species collected for Rasout. Flowers from April 15th to the end of May, according to situation and altitude. Fruits in August."

27. Berberis vulgaris, L.

a. Twig with fruit.

Königswinter on the Rhine, 22 Aug., 1855.

28. Berberis vulgaris, L. var.?

a. Twigs with flowers and young fruit.

Near Salrundi, below the Stack Pass to the Chenab valley, 11,000 to 12,000 feet. Aug., 1870. B. H. Powell; from Dr. J. L. Stewart.

SARRACENIACEÆ.

29. Sarracenia purpurea, L.

A plant with root and detached flowers.

From Butler and McCulloch, Covent Garden Market, Oct., 1862; the flowers from Mr. Moberly.

PAPAVERACEÆ.

30. Chelidonium majus, L.

a. Branch with flower and fruit and detached seeds.

Gravesend, July, 1854.

31. Hypecoum procumbens, L.

a. Plant with flower and fruit.

(1) Cette, 23 May, 1854. (2) Jerusalem; E. Atkinson, 1860.

32. Papaver Argemone, L.

a. Plant with flower and fruit.

(1) Whitby, Aug., 1854; W. F. S. (2) Reading, 16 June, 1860; D. H.

33. Papaver dubium, L.

a. Plant in flower.

Vaucluse, 5 May, 1854.

34. Papaver hybridum, L.

a. Plant in flower and fruit.

(1) Gravesend, July, 1854. (2) Eastbourne, July, 1855.

35. **Papaver Rhœas, L.**
a. Plant in flower.
Erith, Kent, July, 1859.

36. **Papaver somniferum, L.**
a. Branch with flower and fruit.
Cultivated by Mr. Usher, Bodicott, near Banbury, 4 Sept., 1872. "The white-flowered poppy is preferred to the purple." [See P. J. (3) VII., p. 1018].
b. Ditto, Cultivated at Clapham Common, 1873.

CAPPARIDEÆ.

37. **Capparis aphylla, L. "Karil."**
a. Fruiting twig, without leaves.
Stewart, 'Punjab Plants,' p. 15.

38. **Capparis spinosa, L.**
a. Flowering twigs.
Palazzo Orengo, near Mentone, 14 July, 1867.

CISTINEÆ.

39. **Cistus salviæfolius, L.**
a. Twigs in flower and fruit.
Toulon, 14 May, 1854.

VIOLARIEÆ.

40. **Anchietea salutaris, St. Hil.**
a. Branch with fruits detached, showing ripe seeds.
Campinas, J. C. de Méllo, received Dec., 1871.

41. **Viola cinerea, Boiss. "Makhan bhuta."**
a. Entire plant.
Stewart, 'Punjab Plants,' p. 19.

42. **Viola pedata, L.**
a. Flowering plant, with root attached.
Schuylkill Falls, 6 Oct., 1860 (second flowering).

CANELLACEÆ.

43. **Canella alba, Murray.**
a. Twig with young fruit; with detached fruit and bark.
(1) Southern shore of the island of Jamaica; Mr. G. Roberts, 16 Sept., 1857: (2) Flowering twig; Botanic Gardens, Jamaica; received Oct., 1857, *per* N. Wilson, Bath, Jamaica.
b. Leafy twig.

(1) Bahamas, together with the bark (see the Hanbury Materia Medica Collection); from Governor Rawson, received 3 Dec., 1868, per N. Wilson, 1857.

(2) Flowering twig, Jamaica.

44. Cinnamodendron corticosum, Miers. (J. Miers on Canellaceæ, 'Annals and Magazine of Natural History,' May, 1858, p. 351.)

a. Leafy twig.

Cultivated in England, 1865.

b. Leaves, with detached bark and fruit.

Received from N. Wilson, Bath. Jamacia, 3 Nov., 1856.

A note is appended in Hanbury's writing to this specimen, quoting a statement by Mr. N. Wilson, that "when growing on the plain it is a strong and bushy shrub, not more that 10 or 12 feet high, and having much the appearance of the Laurustinus (*Viburum Tinus*, L.) of Europe. When growing on the mountains it attains a much larger size, being 50 or 60 feet in height."

The Catalogue of the Jamaica Contributions to the Paris Exhibition describes it as "Wild Cinnamon, *Canella alba*," a common tree on mountains and rocky hills, and in lower woods, growing to 40 or 50 feet (p. 36).

BIXINEÆ.

45. Bixa Orellana, L.

a. Twig with young fruit.

Hacienda del Powero, Cordova, Mexico: Hugo Finck.

POLYGALEÆ.

46. Krameria tomentosa, St. Hil. (Krameria Ixina, L., var. β granatensis Triana.)

a. Flowering branches.

b. Ditto, with detached portion of root.

Jiron, near Pamplona, New Granada. John Weir, 1 Feb., 1864. "The root is collected and shipped to Europe where it is known as Savanilla Rhatany."

The following notes in D. Hanbury's handwriting are attached to these specimens:—

"Agrees well with '*Krameria Ixina*, L., Mexico,' Herb. Pavon; also with the same plant marked 'Curassao, Mr. Von Rohr, 1783.' It seems to be the same species as 'Krameria,' collected by Gardner (no number), marked as 'Common,' on dry hilly pastures in the Sartao, of the Province of Ceara, Sept., 1838; the same also as '*Krameria*, No. 925,' of Gardner's Brazilian Plants, British Museum, 12 May, 1854. Professor Oliver and I compared this plant with the species of Krameria in the Hookerian Herbarium, and found it to agree with *Krameria*, No. 925, marked in Gardner's writing thus:—'A shrub about 3 feet high with long spreading branches, on a low hill covered with bushes, in the interior of the island of Itamarica, Dec., 1837.'

"There is no specimen in the Linnean Herbarium. A full description of *Krameria Ixina* is contained in 'Lœfling, Iter Hispanicum' (Stockholm, 1758, p. 195). The leaves of the plant are stated to be 'alterna, lanceolata, superiora linearia acuta, subsessilia,' terms which are not inapplicable to the British Museum specimen (Pavon and Rohr's), admitting the bracts to be the linear, acute, subsessile upper leaves. Gardner's '*Krameria*, No. 4094, from upland sandy *campos*, Serra Geral, Province of Goyaz, May, 1860,' and 'No. 2781, District of the Rio Prato, Province of Pernambuco, Sept., 1839,' is a species coming very near to *K. Ixina* (assuming No. 925 to be that plant), but the entire plant is rather more shaggy, and the fruit has the *spines more numerous, not barbed*, with only a few scattered hairs between them (instead of a dense tomentum)". [See paper by Hanbury in Proc. Roy. Hort. Soc., Nov. and Dec. 1864, p. 181; Pharm. Journ. (2), vi., p. 460; 'Science Papers,' p. 323.]

The following description, quoted from a letter from J. Triana, is also appended:—

"Krameria Ixina var. β granatensis *suffrutex ramosus, foliis ovatis in petiolum attenuatis, spathulatisve, acutis, spinescentibus, crassis, obscurè 3-nerviis, sicut tota planta pube brevissima incanis, supremis in bracteas lineares pungentes abeuntibus, floribus pedicellatis in racemos terminales digestis, fructu globoso magnitudine pisi, aculeis retrorsum scabris muricato, 1-spermo.*"

A specimen of *K. Ixina* from the Antilles, consisting of a portion of a twig with a flower and fruit, accompanies these notes.

47. Mundtia Brasiliensis, St. Hil.

a. Twigs in flower and detached fruits.

No. 1. *Campestris*; J. Correa de Mello, Campinas, Brazil, 1865.

b. Leafy twig.

No. 1. *Silvestris.* From the same locality and collector.

[The leaves in specimen *b.* are much larger than in *a.*]

CARYOPHYLLEÆ.

48. Drymaria cordata, Willd.

a. Plant in flower.

"Found on the highest part of the Volcano of Izalco, out of the range of the vapour"; Dr. Charles Dorat, Sonsonate, State of San Salvador, Central America, 1861. On the same sheet is a specimen of a moss, *Funaria calvescens, Schw.*

TAMARISCINEÆ.

49. Tamarix dioica, Roxb. "Lahi or Jhau." (Hind.)

a. With fruit.

Stewart, 'Punjab Plants,' p. 91.

50. Tamarix orientalis, L. "Khagal or Tarash."

a. Leafy twig.

Stewart, 'Punjab Plants,' p. 92.

HYPERICINEÆ.

51. Vismia dealbata, H.B.K. "Lacre-zeira."

a. Flowering branchlet.

b. Twig with young fruit.

Santarem, Para; H. W. Bates, Aug. 18, 1853.

The following note is attached to the specimen *a.*:—

"No. 8, Lacrezeira, with specimens of gum and roots. The specimen of gum I collected from one wounded tree. The tree was slender; height, 20 feet; diameter of stem, 4 inches. It runs slowly like wax, but soon solidifies. It is an indelible pigment, colour of gamboge. I supposed the tree was a species of *Vismia*. The roots, I now find, are much esteemed as a remedy here; decoctions drank in tea have performed great cures in old chronic gonorrhœa. The botanical specimens were taken, some from the tree, which yielded the gum, and others from those from which I took the roots; not observing any specific difference, I have put them together."

Specimen *b* is labelled, "Yields a red gum, applied externally in ringworm, &c. Received March, 1853."

GUTTIFERÆ.

[52. Garcinia Hanburyi, Hook. f.] Garcinia Morella, Desrouss. var. pedicellata.

a. Leaves.

Singapore, D'Almeida. With 6 drawings attached, including a sketch of the tree, leaves, flowers, and dissections of the flower and fruit.

[These drawings formed the basis of the illustrations published in the Trans. Linn. Soc., 1864, vol. xxiv. tab. 50a, p. 487. The plant was subsequently raised to the rank of a species by Sir J. D. Hooker, under the name of *G Hanburyi*, Hook. *f.* See Journ. Lin. Soc., vol. xiv., p. 485, 1875. Bentl. and Trim. Med. Pl., tab. 33. Hanbury 'Science Papers,' p. 326-333.]

DIPTEROCARPEÆ.

53. Dryobalanops Camphora, Colebr.

A leafy twig bearing flower buds and detached leaves and flowers.

Sumatra, Dr. W. H. K. De Vriese, Leyden, 8 Aug., 1857.

MALVACEÆ.

54. Gossypium herbaceum, L.

a. Twigs with flower and fruit and detached seeds.
Cultivated, Larnaka, Cyprus, 24 Sept., 1860. D. H.

55. Pachira aquatica, Aubl.? (pl. 291, 292?)

a. Twig in flower.
No. 13. "Payne amarella." "Gelber Wollbaum." Theodor Peckolt, Cantagallo, Brazil, 1867.

56. P. sessilis, Benth.

a. Twig, with fruit and detached flower and leaves.
In woods and on slopes of hills near Panama, 25 Jan., 1862. "A tree 20 to 50 feet high; the natives call it "Barrigon blanco," and use the down of the pods for stuffing pillows;" S. Hayes.

STERCULIACEÆ.

57. Basiloxylon Rex, Schumann. [in Fl. Bras. xcvi., p. xlj. Obs.]

a. Flowering twigs.
No. 18. "Pao rei vel Farrinha secca" (gutes Bretterholz); Theodor Peckolt, Cantagallo, Brazil, 1867. [Schumann remarks that this is not a *Sterculia*—Peckolt identifies it as *Sterculia Rex*, Mart. (Pharm. Journ. (2), xiv., p. 87) —but that the plant probably belongs to a new genus, for which he proposes the name *Basiloxylon*.]

58. Byttneria lanceolata, D.C.

a. Twigs with flowers and detached root. "Sarsaparilla Negra," Sonsonaté, State of San Salvador; Dr. Charles Dorat, Oct., 1860.

b. Ditto, with portion of prickly stem and root "Sarsaparilla Colorada" (red); flowers white.

59. Cheirostemon platanoides, H.B.K.

a. Twig with flowers and detached flowers laid open, Bot. Gardens, Palermo, 17 May, 1872.

60. Guazuma tomentosa, H.B.K.

a. Twig with flowers.
"Caulote"; bark much used to clarify sugar-cane juice Dr. Dorat, Sonsonaté, 1863.

61. Herrania albiflora, Gaud.

a. Leaf with detached flowers.
b. Portion of leaf continued from *a.*

Lion Hill Station, Panama; Sutton Hayes, Jan. 1863. A shrub 10–18 feet high, without branches. The flowers appear on the stem often close to the ground. The fruits are hispid externally. A pencil sketch of the fruit accompanies the specimen. For fruit preserved in alcohol, see the Hanbury Materia Medica Collection.

62. Sterculia scaphigera, Wall.

a. Leaves (1) and (2) fruit with wing attached.
(1.) Leaves of seedling plants raised at Bangkok by Sir R. H. Schomburgk.
(2.) Malacca; Griffiths. The fruit is the "Bungtalai" of the Siamese and the "Boa-tam-paijang" of Guibourt's Hist. des Drogues.

A letter from Dr. A. O. Black, dated Kew, May 19th, 1862, is attached to this specimen, in which the following remarks occur:—

"On looking at the genus *Scaphium* in Herb. Hook. I find three sheets with follicles, and with the follicles on one sheet a piece of a Euphorbiaceous plant in flower and leaf, which I have had cut off, so I send you one of the follicles, and I think from looking at it you will readily admit that it is extremely like your Chinese 'Ta-hai-tsze." If you have leaves on the specimens in the Exhibition, could you manage to get some for Herb. Hook. as we have none, neither have we of flowers? Wallich's specimens are from Martaban, and Griffith's, one of which is enclosed, from Malacca. Hooker and Bentham retain the plant in Sterculia (*S. scaphigera*), and Brown in 'Plantæ Javanicæ' ranks it as a genus under the name of *Scaphium Wallichii.*" [See Pharm Journ. (3), viii. p. 784.]

TILIACEÆ.

63. Grewia betulæfolia. Juss. "Inzar."

a. Leafy twig with detached fruit and leaves.
Stewart, 'Punjab Plants,' p. 27.

64. Grewia oppositifolia, Buch. "Pastoua,"

a. Leafy twig.
b. Ditto.

Stewart, 'Punjab Plants,' p. 27.
Specimen *b.* is labelled "Daman.

II.—DISCIFLORÆ.

LINEÆ.

65. Linum catharticum, L.

a. Plant in flower. Two specimens.
(1) Near Whitby, Aug., 1854. (2) Lindfield, Sussex, 21 July, 1874.

66. Linum usitatissimum, L.

a. Plant in flower with detached seeds.
Raised at Clapham, from the straw-coloured seed imported from Bombay, 18 Oct., 1874. The plant appears in nowise different from the ordinary form.

MALPIGHIACEÆ.

67. Tetrapterys species?

a. Flowering branchlet.
"No. 6, Im Kaffee sehr haufig," Theodor Peckolt, Cantagallo, Brazil, 1867.

ZYGOPHYLLEÆ.

68. Balanites Ægyptiaca, Delil.

a. Branch and twig, with flower and fruit.
Wady el Kelt, between Jerusalem and the supposed site of Jericho, 20 Nov., 1860; Dr. J. D. Hooker and D. Hanbury. A tree 15 feet high.

69. Fagonia Cretica, L. "Ispalgrai, Spalaglizai" (Pushtu),

a. Branchlet, with flowers and fruit.
Stewart, 'Punjaub Plants,' p. 37.

70. Guaiacum arboreum, H.B.K.

a. Leafy branch, with fruit.
At the Popa, near Carthagena, 7 April, 1862.
From 'Plants of Central America,' collected by Sutton Hayes, No. 619. A small spreading tree, 20 feet high, with ripe fruit called "Guayaca" by the natives; S. Hayes.

71. Guaiacum officinale, L.

a. With flowers and fruit.
Port au Prince, Hayti. Mons. Eugène Nau; received 29 July, 1873, D. H. "Recoltes dans la plaine du Cul de Sac, par Eug. Nau."

72. Guaiacum officinale, L. var. nanum. "Le Gayac nain."

a. Twig with flowers and detached fruit.

Port au Prince, Hayti; Mons. Eugène Nau, D. H.; received 29 July, 1873. "Troisième espèce (Guaiacum verum) cueillies dans la plaine du Cul de Sac, par Eug. Nau."

b. (1) Twig with leaves and flowers.

Labelled "Martinique, Plée, ex Herb. Mus. Paris."

b. (2) Leaves and flowers of *G. sanctum*, L.

St. Dominique; Nectoux.

b. (3) Ditto, a fruit of *G. sanctum*, L.

St. Dominique; Desportes.

The specimens of *G. sanctum* are marked in Hanbury's handwriting, "From E. Bureau, 31 May, 1873."

73. Guaiacum sanctum, L.

a. Leaves and fruit.

Port au Prince, Hayti; Mons. Eugène Nau; received 29 July, 1873, D. H. "Deuxième espèce, le gaiac bâtard, cueillies dans la plaine du Cul de Sac. Eug. Nau."

74. Nitraria tridentata, Desf.

a. Twig with fruit and Leaves.

Northern end of Dead Sea, 21 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

[This plant is said by Murby to be the true Lotus Plant of the Ancients. It possesses a somewhat intoxicating action. To the Arabs the shrub is known as Damouch. Rosenthal, "Pl. Diaph.," p. 798. See Zizyphus Lotus.]

75. Tribulus (alatus, Del.?) "Chukra" (Pi).

a. With leaves and flowers.

Stewart, 'Punjaub Plants,' p. 37.

76. Tribulus terrestris, L.

a. Plant with leaves, fruits, and flowers.

Smyrna; Dr. J. D. Hooker and D. Hanbury, 20 Sept., 1860.

77. Zygophyllum Fabago, L.

a. Plant with flowers and young fruit.

Damascus; B. T. Lowne, 1863-4.

[This species possesses vermifuge and antipyretic properties, and its flower buds are used instead of capers. Rosenthal, Pl. Diaph., p. 886.]

78. Zygophyllum simplex, L.

a. Plant with flowers.

Aden, 1857; F. Hanbury.

[The leaves are employed by the Arabs as a remedy for spots on th cornea. The taste of the plant is so disagreeable, that no animal will touch it. Rosenthal, l. c. p. 886. *Z. coccineum*, L., is apparently used in the same way. See Pharm. Journ. (3), xix., p. 744.]

GERANIACEÆ.

Tribe II. Pelargonieæ.

79. Pelargonium Radula, Ait.

a. (1) Branchlet with fruit. Ex hort. W. W. Saunders, Aug., 1857.
(2) Ditto, ex hort. nost., Sept., 1857.

b. Branchlet with flowers (2 sheets). (**"Var. roseum."**)
From Cannes, where it is cultivated for the sake of its essential oil, 9 July, 1857.

80. Pelargonium graveolens, Ait.

a. Branchlet with flowerbuds.
Royal Gardens Kew, 11 Sept., 1857.

Tribe VI. Oxalideæ.

81. Oxalis Acetosella, L.

a. (1) Plant with flowers and rhizome.
Reigate, 14 May, 1857.
(2) Ditto.
Great Saling, Essex, 21 April, 1868.

82. Oxalis megalorhiza, Jacq. (Refugium Botanicum, pl. I).

a. With flowers and detached root and flowers.
The root has been imported into London under the name of "Chelleco."

RUTACEÆ.

Tribe II. Ruteæ.

83. Peganum Harmala, L.

a. Plant with fruit.
Dr. J. Hooker and D. Hanbury. Plain of Leontes, Syria 10 Oct., 1860.

b. Ditto.
Stewart, 'Punjaub Plants,' p. 38.

84. Ruta angustifolia, Pers.

a. Branch with flowers and young fruit.
Mortola, near Mentone, 23 May, 1868.

b. Branch with flowers.
Congenies, near Nismes, May, 1856.

85. Ruta bracteosa, D. C.

a. Branch with flowers and fruit.
Mortola, near Mentone, 23 May, 1868.
b. (1) Fruit.
Jeb'a, Syria, 27 Oct. 1860, D. J. Hooker and D. H.
b. (2) Flowers.
Hyères, W. F. Saunders, 15 Mar., 1866.

TRIBE III. DIOSMEÆ.

86. Empleurum serrulatum, Ait.

a. Twig with flowers and fruit.
From a sample imported and offered for sale as Buchu.

TRIBE V. XANTHOXYLEÆ.

87. Xanthoxylum alatum, Roxb.

a. Branchlet, with fruit.
Cultivated in the garden, Clapham Common, Nov., 1873.
b. Ditto. Cultivated against a south wall in the garden, Clapham Common. 10 Feb., 1869.
c. From Hang-Chow, China.

Received from Thos. Hanbury as the tree yielding the spice called Haw-tseaou, Oct., 1856. To specimen (*c*) two letters are attached, one from Dr. Hooker, and another from Alphonse De Candolle. The former letter has a note attached in Daniel Hanbury's writing, to the following effect:—

"Subsequent comparison with a large suite of specimens from the Kew Herbarium, as well as specimens from the Herbarium of the Linnean Society, fully confirmed Dr. Hooker's opinion that the Hang-Chow plant is *Xanthoxylum alatum*, Roxb."

In the other letter De Candolle states that he has compared Hanbury's *X. alatum* with *Xanthoxylum acanthopodium*, D.C., and that the latter is very different, having imparipinnate leaves with 9 leaflets, not ternate, the rachis more narrowly winged, the leaflets longer, more gradually attenuated above, and generally long thin spines ("aculeoles") on the middle side. The secondary ones are more closely approximated, more numerous, more prominent, and the leaflets are pubescent on the secondary veins. The length of the leaf is 7—8 inches. The spines of the rachis are more veined.

88. Xanthoxylum Bungei, Planchon.

a. Leafy stem.
Garden, Clapham Common, 7 Aug., 1866. Raised from seed received from Pekin.
b. Twigs in fruit.

(1) Jardin des Plantes, Montpellier, July, 1864. (2) Ditto, Sept., 1867. From Prof. Dr. J. E. Planchon.

c. Twig in fruit.

Pekin, W. G. Stronach, 1862.

This specimen is accompanied by a letter from M. Stronach in which he says the plant is called at Pekin, Hwa-chicao. A note in pencil by D. H., states—Mr. Bennett would call this "*X. piperitum.*" [The fruit of *X. piperitum* in the Hanbury Materia Medica collection differs from this specimen in being reticulated and without raised tubercles.

89. Xanthoxylum piperitum, D.C.

Clapham, cultivated in the garden, 1 Oct., 1864.

This specimen has only the flowers, but is accompanied by a pen and ink sketch of the young fruit.

[*Note.*—The fruit of *X. alatum* is covered with small, raised, scattered tubercles, which are apparently oil glands. These are more abundant and crowded in *X. Bungei.* The fruit of *X. piperitum* in the Hanbury Collection of Materia Medica differs from both these in having a reticulated surface, in which the oil glands appear to be sunken. Mr. Stronach's specimen has crowded tubercles like the other specimens of *X. Bungei.* It is not apparent, therefore, why Hwa-tseaou is stated in 'Science Papers,' p. 228, to be applied to the fruits of "the two species of *Xanthoxylum*," viz. : *X. piperitum*, D.C., and *X. alatum*, Roxb., since from the Herbarium specimens above enumerated it would seem that fruits of *X. alatum* are used in Hang-Chow under the name of Hwa-tseaon, and those of *X. Bungei* under the same name in Pekin.]

TRIBE. VII. AURANTIEÆ.

90. Citrus Bergamia, Risso. (Bergamot Orange.)

a. Twig with flowers and rind of fruit.

Gardens at Giampilieri, near Messina, 13 May, 1872.

b. Twig with flowers.

Cultivated, Reggio, Calabria, 15 May, 1872.

A pencil drawing of two fruits accompany this specimen, (1) of a fruit from Palazzo Orengo, April 1872, and (2) a larger one from the Garden of the Instituto Agrario Castelnuovo, near Palermo, 21 May, 1872.

91. Citrus Bigaradia, Duham. (Bigaradier, Seville Orange).

a. Twig without flowers.

From the garden of M. Chiris, Grasse, 6 July, 1857.

Var. Aurantium (Orange de Portugal).

a. Twig without flowers.

From the garden of M. Chiris, Grasse.

92. Citrus medica, Risso. ("Cedro" of the Italians).

a. Twig without flowers.

From Giampilieri, near Messina, 13 May, 1872. "The flowers are unisexual."

93. Citrus species.

a. Twig without flowers.

From the garden of M. Chiris, Grasse, 6 July, 1857.

b. Twig with flowers.

Mentone, May, 1866; cultivated.

c. Ditto, with spines on the twigs.

"This is the orange tree that is raised from pips, and is used for grafting the bitter orange upon. The stocks shoot out below and are cut off, the leaves then being distilled for essential oil."

SIMARUBEÆ.

94. Ailanthus Malabarica, D.C.

a. Leaves only.

From A. F. Sealy, Cochin, 1873. "With a large quantity of the bark."

95. Brucea antidysenterica, Mill.

a. Branchlet in fruit, with detached flowering spikes.

Route de Mai, Gouagoua à Dobrasina (Abyssinie); Quartin-Dillon et Petit, Sept., 1840. Ex Herb. Cosson.

[This plant is known in Abyssinia under the name of "Wutschinus." The inner bark is used for dysentery and intermittent fever. Rosenthal, Plant. Diaph., p. 873.]

96. Quassia amara., L. "Guavito amargo."

a. Branchlet, with flowers, young fruits, and detached flowers and fruits. A small tree.

In damp woods, Frijoli Station, Panama Railway, 6 Feb., 1862. No. 491; Sutton Hayes.

97. Cneorum tricoccum, L.

a. Fruiting branchlet.

Hill near Cette, 23 May, 1854.

BURSERACEÆ.

98. Balsamodendron Playfairii, Hook, f. ('Flora of Tropical Africa,' vol. I. p. 326, 1868.

a. Twigs with leaves and fruit.

Somali Country, Captain Playfair; received Dec., 1862.

[This tree yields Hotai gum, described by Vaughan and Hanbury in Pharm. Journ., vol. xii., p. 227.]

Boswellias yielding Olibanum.

In the cover containing the genus Boswellia there is the following memorandum by D. Hanbury, which may serve as an introductory note to the species present in this Herbarium. See also Pharmacographia, p. 120.

"BOSWELLIA CARTERII, BIRDW. includes three forms, viz. :—

(1) *Boswellia* No. 5, Oliver, Fl. Tropical Africa, vol. i., p. 325.

(2) *Boswellia* No. 6, Oliver, Birdw, tab. 29. With leaves crenate or crisped, shortly pubescent, rugose beneath.

(3) *Boswellia* collected by Carter in Hadramaut; Birdw, tab. 30.

No. 3 is in cultivation at Bombay, and either No. 1 or No. 2 or both at Aden.

"BOSWELLIA BHAU-DAJIANA, BIRDW, Linn. Trans. xxvii., tab. 31

Sent to Bombay as "Mohr Add." It is not known if they present a distinct appearance under cultivation from that presented by the original dried specimens.

"BOSWELLIA NO. 4, OLIVER.

Also sent to Bombay as "Mohr Add." There is a great contrast in colour between the upper and under sides of of the leaf.

"BOSWELLIA FREREANA, BIRDW, tab. 32. "YEGAAR."

"The specimen of *Boswellia* cultivated in the Victoria Gardens, Bombay, are evidently not in a congenial climate, and exhibit a weak, drawn up appearance, wanting in those distinctive features which should enable one to connect them with the parent plant from the Somali Country. The drier climate of Aden is doubtless better suited to these plants." D. H., 26 Sept., 1871."

99. Boswellia Bhau-Dajiana, Birdw. "Mohr Add."

a. Twig without flowers or fruit.

From Dr. Birdwood, Bombay, June, 1868.

To this specimen is appended a note in Dr. Birdwood's handwriting: "My 'Mohr Add,' of which flowers are sent in glycerine." See Birdwood, Trans. Linn. Soc., vol. xxviii., p. 31.

[The name "Mohr Add" is also applied to *B. neglecta.* S. Le M. Moore, Pharmacographia, 2nd ed., p. 135.]

b. Ditto.

Victoria Gardens, Bombay, Feb. 1870; E. Samuel.

A small tree about 6 feet high; flowered in April, 1868.

c. Ditto.

From the gardens at "The Tanks," Aden, 21 Jan., 1872; Dr. Thos. Thomson.

This sheet has leaves from different trees; the tallest tree 9–10 feet high, with a trunk as thick as a man's wrist; the smallest 2 or 3 feet high.

d. Ditto, several detached leaves.

Bombay Gardens. Dr. Birdwood states that ("he thinks" D.H.) he gathered these three leaves from one and the same tree at the same date, 1868. [The right hand leaf corresponds with Boswellia, No. 4, Oliver.]

100. Boswellia Carterii, Birdw. "Mohr Madow."

Var. A.

a, b, c. Leafy twig.

d. Leaves without stem.

Somali Country; Captn. Playfair; received in England Dec. 1862. Boswellia No. 5; see Oliver, Fl. Trop. Africa, vol. i. (1868) p. 324; Birdwood, Trans. Linn. Soc. vol. xxvii., t. 29.

[The leaves on *a*, *c*, and *d* specimens have curious small urceolate galls on the under surface.]

e. Leafy twig with stem and flowers.

f, g. Leafy twigs.

From one of the trees in the gardens at the Tanks at Aden; J. Collins; received in England 1874.

Var. B.

Boswellia No. 6, Oliver, ('Fl. Trop. Africa, I. (1868) p 324.")

a. Leafy twig.

Somali Country; Captn. Playfair. This is the first variety described in Birdwood's memoir (l.c.p. 144) as having leaves "crenate-undulate and pubescent on both sides." [The veins are more numerous and closer together and the veinlets more prominent than in the typical specimens of *B. Carterii.*]

Var. C. "Maghrayt d' Sheehaz."

a. (1) Leafy twig; (2) leaf only (*B. thurifera*, Carter ?)

(1) From Dr. Birdwood, Bombay, June, 1868.

(2) Victoria Gardens, Bombay, April, 1870; E. Samuel. Dr. Carter's *Boswellia.* About 2½ feet high, much branched, with smooth greyish bark. To this sheet Carter's illustration, of *B. thurifera* ? Carter, *non* Colebrook, from the Journ. Bombay Branch of the Asiat. Soc. ii., t. 23, is attached.

101. Boswellia Frereana, Birdw. "Yegaar."

a. (1) Leafy twig; (2) Flowering twig, with detached flowers and young fruit.

(1) Aden, Dr. Birdwood; received by him from Captn. Playfair.

(2) From a tree planted by Captn. Playfair in the public gardens at Aden, and gathered there by Dr. Birdwood, Sept., 1868. It is the *Boswellia* No. 3, Oliver, Fl. Trop. Africa, I., (1868) p. 324.

To this sheet (*a*) the following note from Professor Fluckiger is attached:—

"My specimen of true *Boswellia papyrifera*, collected by Schimper in the Fatsokl Country, Upper Nile, does not resemble the 'Mohr Madow,' but rather the 'Mohr Add.' I think that the 'Yegaar tree' is exactly what I called in my Lehrbuch, *Boswellia sacra*, 5 Aug. 1867."

b. (1) Twig without flowers or fruit; received in England Dec., 1862. (2) Detached fruits from Captain S. B. Miles, May, 1871. Somali Land, Captain Playfair; received in England, Dec., 1862. On this sheet D. H. has written as follows:—

"Extract of a letter, dated Aden, 16 Nov., 1862, from Capt. Playfair to Sir W. J. Hooker: 'The "Luban Maitee," the plant producing which is called "Yegaar." It grows nearest the coast, and always out of the smooth limestone rock. I have never noticed any roots, properly so-called, the stem growing out of an intumescence at the base, which adheres to the rock as a boy's sucker to a stone. The leaves, when crushed, emit a powerful aroma of the gum, and in this respect it differs from the other species.'"

[The leaves are glabrous and glaucous.]

c. (1) Leafy twig and (2) detached leaves.

(1) Victoria Gardens, Bombay, Jan., 1870; E. Samuel. Two or three plants between 3 and 6 feet high, much branched, bark as Dr. Carter's, leaves corrugated.

(2) From the gardens at The Tanks, Aden; 21 Jan., 1872; Dr. Thos. Thomson.

102. Boswellia No. 4. Oliver, (Fl. Trop. Africa, vol. i., 1868, p. 324).

a. Leafy branchlet.

Bunder Murayah, Somali Country; Captain Playfair; received Dec., 1862.

This sheet bears the following:—

"Extract of letter, dated Aden, 16 Nov., 1862, from Capt. Playfair to Sir W. J. Hooker: 'The "Mohr Add," which produces the gum called "Luban Bedowi" or "Sheheri," also grows out of the rock, but sometimes

also out of the soil or detritus of the limestone rock. It is never found on the range of hills close to the sea, but on those further inland, and on the highest parts of those hills.' "

b. Leafy branchlet.

Somali Country; Captain Playfair; given by him to Dr. Birdwood, Jan., 1862.

This plant, as well as Boswellia No. 5, yields "Luban Bedowi' and 'Luban Sheheri,' and was received at Kew as "Mohr Add," a name applied by Birdwood also to B. Bhau-Dajiana. See 'Pharmacographia' 1st ed., p. 120. [The leaflets are glabrous above, with very short down below; whereas in *B. Frereana* they are entirely glabrous and glaucous.]

103. [Bursera Delpechiana, Poiss]; Elaphrium sp. "Linaloe tree of the Mexicans."

a. Leaflets only. (1) From Mr. J. Collins.

(2) Ditto, collected by Mr. Grandeson, (Oajaca ?)

Communicated by Hugo Finck, Cordoba, Mexico, Nov. 1870.—Some fruits are also attached to this sheet, but no record of their source is given.

A note on the drug by J. Collins is attached to the sheet, see Pharm. Journ., (2) x., p. 590.

[The Linaloe of Mexico has been more recently stated to be obtained from *Bursera Delpechiana*, Poisson, Bull. de l' Assoc. Franc pour l' Avancement des Sciences, tom. xxii., p. 305, pl. x. Blois 1884. See Pharm. Journ., (3) xviii., p. 132.]

104. [Bursera tenuifolia, Engl.]; Elaphrium species. "Aceitillo" or "Sassafras."

a and *b.* With flowers and fruit.

From Hugo Finck, Cordoba, Mexico; received April, 1865.

"Yields by incision a transparent oleo-resin, whence its name 'Aceitillo,' having a very strong odour of Sassafras. The oleo-resin is used to purify the blood, also in gargles for sore throat, and in syphilis."

Attached to this sheet is a pen and ink drawing of the flower, with the following remarks:—"Petals concave, stamens 8 (four long and four short), sometimes sub-equal; some flowers male." [The fruits taste rather like a mixture of carraways and bergamot than like sassafras, and appear more likely to yield carvene than safrol. The plant has

been compared with specimens in the Kew Herbarium and has been identified there as *Bursera tenuifolia*, Engl.]

105. Canarium commune, L. "Arbol de la Brea."

a. Branchlet, without flowers or fruit.

Buitenzorg, Java, 1866; S. Binnendyk.

This specimen is accompanied by a tracing taken from a drawing of *Canarium commune*, by Camelli, in the British Museum; also by a letter from A. W. Bennett, F.L.S., bearing date 7 Mar., 1874, stating:—

"I have very little doubt of the enclosed being a *Canarium*, and in all probability *C. commune*, which is said either by Miquel or Blume to extend to the Philippines. The form of the fruit and the mode of attachment of the leaflets exactly correspond."

See 'Pharmacographia,' 1st ed., p. 131, and the Hanbury Materia Medica Collection.

106. Icica heterophylla, D. C.

a. With fruit. No. 21, "Breo branco."

A very abundant tree at Santarem, Para, yielding plentifully a white fragrant resin which is used medicinally; H. W. Bates, Nov., 1853. Resin received afterwards.

b. Without flowers or fruit.

"The tree was a tolerably large one; diameter of stem about 15 inches. The resin forms under the bark quite spontaneously, *i.e.*, without wounds, and seems to exude through the bark. The aroma when fresh was very powerful. I use the resin as a substitute for camphor in my insect boxes."—H. W. Bates.

A series of fine specimens of bark, with resin, all from the same tree, are in the Hanbury Materia Medica collection. Specimen *b.* is labelled in a note in D. H.'s writing, "*Icica Aracouchini*, Aublet, Hist. des Plantes de la Guiane Française, Tom. I., 344, Pl., 133."

107. Icica species. "Balsamo."

a. Leafy twig.

The wood is dark red, heavy and close-grained, having a balsamic odour; Hugo Finck, Cordoba, Mexico, 1866.

MELIACEÆ.

108. Melia Azedarach, L. "Drek or Bakain."

a. (1.) Leaves only. (2.) Twig with flowers.

(1) India; (2) Golfe de Jouan, near Cannes; cultivated 1866.

CELASTRINEÆ.

109. Celastrus spinosus, Don.

a. Twig with fruit.
[Apparently an E. Indian specimen.]

110. Dulongia acuminata, H.B.K. "Yerba de Viruela."

a. Branchlet with flowers.
Mountains of Songolica, 7,000—9,000 ft. A large bush or small tree. Foliage in decoction used by the Indians to cure small pox; H. Finck, Cordoba, Mexico, 1865.

RHAMNEÆ.

111. Rhamnus catharticus, L.

a. (1.) Male plant.
Dartford, Kent, 21 June, 1856.
a. (2.) Female plant in fruit.
Merstham, Surrey, 27 July, 1858.

112. Rhamnus chlorophorus, Dcne.

a. (1.) Leafy stem only.
a. (2.) Ditto. *R. utilis.* Dcne. From Dr. Lindley.
Sheet *a.* has attached to it seeds of *R. chlorophorus*, Decaisne, from M. Rondot, 1857. An autograph letter from Dr. Lindley attached to the sheet states that the small leaved specimen (*a.* 1.) *R. chlorophorus*, is unquestionably identical with *R. globosus*, Bunge.
b. Shanghai, 1857. "*Rhamnus chlorophorus*, Decaisne."
[This specimen has neither flowers nor fruit, and differs from *R. chlorophorus* in having thinner, broader, and more obovate leaves, distinctly tapering below.]
c. Green-dye plant.
Shanghai; received Oct., 1856.
[This specimen also has neither flowers nor fruit, but differs from both the preceeding (*a* and *b.*) in the entire revolute margin of the leaves, triangular acuminate stipules, and the strongly reticulated under surface of the leaves. Possibly it is the "other plant" alluded to by Dr. Lindley as being "more like a *Ficus* than a *Rhamnus*, which it certainly is not." See *R. utilis.*]
d. Engraving of *R. chlorophorus*, Dcne., by Riocreux (pl. ii.)

113. Rhamnus Frangula, L.

a. (1) Branchlet, with flowers.
Near Lindfield, Sussex, 21 July, 1855.

114. Rhamnus infectorius, L.

a. Branchlets, with flowers and fruits.

(1) Pic de St. Loup, 24 May, 1854. (2) With fruit. Pont du Gard, 30 May, 1854. (3) With fruit. Gap, 2 July, 1857.

115. R. utilis, Dcne.

a. From Dr. Lockhart's garden, Shanghai; received Oct., 1856.

[Identical with specimen *a* (2) under *R. chlorophorus*, *q.v.*]

A note is appended to this specimen in Dr. Lindley's handwriting, 22 May, 1857, stating:—"This is the plant from which, according to Fortune, the green dye is prepared." (See Hanbury Science Papers, p. 125-127.) (?) *R. cornifolius*, according to Dr. Lindley's first opinion.

(*b*) From Mr. Glendinning, Turnham Green, 1857.

An engraving of *R. utilis*, by Riocreux (pl. 1) is placed with this specimen.

(*c*) From Mr. Glendinning, Turnham Green.

"This is the plant Mr. Glendinning calls the narrow leaved variety." It has neither flowers nor fruit.

116. Zizyphus Lotus, Lam. "Ber." (Hind), (Pi.)

a. With flowers and fruit.

Apparently an Indian specimen. [This is one of the plants of which the fruits are said to have been eaten by the Lotophagi.—Treas. Bot., p. 1251.]

117. Zizyphus Spina-Christi, Willd.

a. With flowers and fruit.

Jaffa, 16 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

b. With flowers.

Mejdel Kerûm, near Caiffa, 31 Oct., 1860; Dr. J. D. Hooker and D. Hanbury. "An enormous tree in the burial place outside the village."—D. H.

[This specimen has leaves which are more broadly oval and more obtuse, and the flowers are in much larger and denser clusters than in specimen *a*.]

118. Zizyphus vulgaris, Lam.

a. and *b.* With flowers.

Shanghai, 1857; T. Hanbury.

The sheet bears the Chinese characters for the names—"Tsaou-Tsz-Shoo," *i.e.*, Date-stone Tree, and "Meih-tsaou," *i.e.*, Honey Date.

Sheet *b.* has a pencil drawing of the flowers..

AMPELIDEÆ.

119. [Vitis Gibertii, Baker.]

a. Flowering branchlet.

"No. 3, Butua batata vel Uva do mato," used medicinally in the same cases as "Pareira Brava." Theodor Peckolt, Cantagallo, Brazil, 1867, "with fruit in alcohol, and root."

SAPINDACEÆ.

120. Acer campestre, L.

a. Leafy twig.

Vienne, 1 May, 1866. "The form of leaf bears a remarkable resemblance to that of *Liquidambar orientale*, D. H."

121. [Dodonæa viscosa, L. var. Radlk.]; Dodonæa Burmanniana, D. C.

a. Leafy branchlet.

"Samatha" (Hind); "Shanishád" (Pers); Stewart, 'Punjaub Plants,' p. 31.

This specimen was examined by Dr. Radlkofer in Oct., 1885, and identified as *D. viscosa*, var.

122. [Matayba Guianensis, Aubl.]; Cupania sp. "Parica."

a. b. c. Leafy twigs with flowers.

Santarem, Para; H. W. Bates, 1853.

Attached to sheet *a.* is a note by Dr. C. T. P. von Martius, in which he states:—

"It is without doubt, *Cupania micrantha*, Mart., agreeing totally with its description, given in Herb. Fl. Bras., sub. No. 247, c. 1. To this species must be added as a synonym *Cupania laxiflora*, (Spruce), Benth. Bentham has been perhaps induced to hold his *laxiflora* for different from Martius' *C. micrantha*, with reference to a Cujaban specimen of *C. micrantha* given out in the Herb. Hort. Bras., sub. No. 274, but I believe this is only a "*vegetior*," and thickly flowering form of the *C. micrantha*, growing in the fertile, not the inundated, soil of Cujaba. If this No. 274 should prove different from the true *C. micrantha*, it would be necessary to keep up the name of *C. micrantha*, Mart. (including *C. laxiflora*), and to establish a new name for 274, but I believe that Mr. Bentham shall not find any powerful distinctive note in leaves and flowers."

[As the other two specimens are marked, in Hanbury's writing, "*C. micrantha*, Mart?" I submitted the specimens

to Dr. Radlkofer, in Oct., 1885, during his stay at Kew, where he was working at a monograph of the *Sapindaceæ*, and he identified them as *Matayba guianensis*, Aubl.]

In Benth. and Hook. Gen. Plant, I, p. 400, the genus *Matayba* is sunk under *Ratonia*, D. C. [See also Radlkofer, *Ueber die Gliederung der Familie der Sapindaceæ*, p. 260.]

123. [**Talisia cerasina, Radlk,** (in Sitzungsb. Munich Academy, 1878 ;) **Sapindus cerasinus, Benth. MSS. et Herb.**]

a. Branchlet in flower.

"No. 31. Pitomba, a low tree, of the stature and size of the coffee tree, growing on semi-cultivated ground. A decoction of its leaves is a very general remedy in venereal gonorrhœa. The leaves in large quantities are also used to dye clothing black. The fruit has a pleasant, acid juice." (Extracted from 'Notes on Botanical Specimens,' sent from Santarem, Para, Aug., 1853, by H. W. Bates.)

Drawings in pen and ink, of dissected flowers, by D. H., are attached to this sheet.

ANACARDIACEÆ.

124. **Odina obovata, Hook, f.** (Oliver, Fl. Trop. Africa, vol. i., 1868, p. 447.)

a. With leaves and flower buds, and detached leaves.

Somali Country, E. Africa ; Captain Playfair.

The tree is said to yield a kind of Luban (frankincense), which is not used by the Somalis. Received Dec., 1862.

125. **Pistacia Atlantica, Desf.**

a. (1) Twig, with leaves and fruit.

Ex Herb. E. Cosson. Grande ravine du plateau du territoire de la tribu du Ouled, Krahd Garaba (cercle du Saida), 20 May, 1852.

(2) Twig, with leaves and flowers.

Environs d'Aumale, Algeria ; A. Charoy, April, 1864.

(3) Twig, with leaves and fruit.

Vallée du Chelif, près Milianah, Algeria ; E. Cosson, July,

Var. Palæstina. (P. Palæstina, Boiss.)

a. Branchlet, with leaves and fruit.

Between Safed and Caiffa ; Dr. J. D. Hooker and D. Hanbury, 31 Oct., 1860.

126. Pistacia Lentiscus, L.

a. Leafy branchlet, with flowers. Three specimens.
(1) Toulon, May, 1856. (2) With flattened leaf galls. Grasse, 6 July, 1857. (3) Ditto. South of France; A. C. H., 1858.

b. Leafy branchlets, with flowers.
(1) Toulon, May, 1854; J. H. (2) Toulon, 2 Mar., 1866; W. F. Saunders.

c. Leafy branchlet, with fruit.
Caiffa, 15 Oct., 1860; Dr. J. D. Hooker and D. Hanbury. "Slopes of the hill on which the Convent stands; forms a small bush."

127. Pistacia Terebinthus, L.

a and *b.* Twigs with leaves from the same shrub.
These show extreme variation in the shape and size of leaves on the same branchlet and on separate branchlets.
Monaco, 27 Oct., 1871.

c. Branchlets, with young fruit. (1) From a tree with a stem as thick as a man's body, near the valley of the Crati. Calabria, 5 May, 1872.
(2) Branchlet, with young fruit and leaf galls. From the grounds of the Instituto Agrario Castelnuovo, near Palermo, 21 May, 1872.

d. Branchlets with fruits (and detached fruits imported from Bussorah, 1873).
Smyrna; S. H. Maltass, 1857.

e. Branchlets with flowers and fruit.
Vaucluse, May, 1854. Pont du Gard, 30 May, 1856.

f. (1) Twigs with flowers and a leafy twig, and (2) detached fruits.
(1) Villeneuve les Auvergnes, Vaucluse, May, 1856. (2) Congenies, Gard, Oct., 1849.

g. Twig with fruit and large-leaved twig.
Smyrna, 21 Sept., 1860; Dr. J. D. Hooker, Balansa, and D. Hanbury. "Very large and handsome trees. The turpentine is sometimes collected from them as incisions in the trunk show."

h. Branchlets with fruit and palmate galls on the leafbuds.
Jerusalem, 22 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

"These specimens I gathered from a large solitary tree growing in the yard of a coffee house between the Jaffa and Damascus gates. The tree was covered with these remarkable coralloid galls. I observed the same kind of gall on a terebinth at Safed."—D. H.

128. Pistacia vera, L.

a. Branchlet with detached fruits.

Jerusalem, where there are three trees growing among some olives outside one of the gates.—Dr. D. J. Hooker and D. Hanbury, Sept.-Oct., 1860.

b. Twig with leaves only.

Instituto Agrario Castelnuovo, near Palermo; 21 May, 1872; cultivated, trees grafted.

[The leaves in this specimen are more wedge-shaped below and more obtuse than in specimen *b.*]

c. Leafy twig without flowers or fruit.

This is a hybrid between *Pistacia vera* and *P. Terebinthus.* Instituto Agrario Castelnuovo, Palermo; 21 May, 1872.

d. Branchlet with fruit.

Beyrout, 4 Nov., 1860; Dr. J. D. Hooker and D. Hanbury. From a tree in a courtyard in the town. [The leaves of this specimen are more oblong than in *a.*]

129. Rhus Coriaria, L.

a. Leafy twig, with flower bud.

Toulon, May, 1851.

b. Ditto, without flowers or fruit.

Smyrna, 1854; S. Maltass. "Called in Turkish 'Somaki.' Its leaves are used for dyeing purposes, and the sap of the root is occasionally mixed with Scammony."—S. M.

A specimen of the root is in the Hanbury Materia Medica Collection.

c. Leafy twigs, with flower buds.

Hebron, 22 Oct., 1860; Dr. J. D. Hooker. [This specimen has very small leaflets, and is marked *Rhus Coriaria?*]

d. Twig, with detached fruit.

Beyrout, 9 Nov., 1860; Dr. J. D. Hooker and D. Hanbury.

130. Rhus Cotinus, L. "Wig tree."

a. With flowers and fruit; with detached fruits.

Pariset, near Grenoble, 18 June, 1857.

131. Rhus Syriaca, Boiss. et Bl.

a. Twig, with flower buds and detached fruits.

Mountains overlooking the Wady el Kelt, going from Jerusalem; level country lying between Riha and the Jordan; Marsaba, near the Convent. "The tree is so exceedingly like a *Balsamodendron*, that Dr. Hooker and I mistook it for one until we found the fruit."—D. H. The following appear to be the same: *Rhus dioica*, Willd; *R. oxyacanthoides*, Dum. Cours; *R. zizyphinus*, Tineo.

132. Schinus mollioides, Velloso.

a. (1) Leaves only; Campinas, 1870.

(2) With flowers and fruit.

No. 2 is labelled: "*Schinus terebenthifolius*, Raddi;" San Paulo, 1870; J. Correa de Mello. [The venation of the leaves of the two plants is very distinct; the two species are probably placed on the same sheet for comparison.]

b. (1) Branchlet in flower.

Garden of the Palazzo Orengo, Mentone; Nov., 1871.

(2) Leaves only.

Campinas, Province of San Paulo; J. C. de Mello. [Specimen *b* (2) has leaves showing three or four pairs of leaflets; specimen *a* (1) has only two pairs.]

133. Schinus species.

a. Branchlet without flowers or fruit.

Garden of M. Thuret, Antibes; 29 Nov., 1870. [This specimen resembles *S. Molle*, L. in appearance.]

134. Schinus species.

a. Without flowers or fruit.

Plant received from W. F. Saunders, and cultivated in the greenhouse, Clapham Common; 12 Nov., 1867.

A letter from John Miers, attached to this specimen, states:—

"The plant is not *S. terebinthifolius*, from which it differs in its leaves, having 9 leaflets instead of 7 or 5, the leaflets being much longer, more lanceolate, and more acute, more entire at the margin and more unequal at the base; the petiole, too, is stouter and more swollen at its origin." (It looks like a luxuriant cultivated form of *S. Molloides, Vell.*]

CORIARIACEÆ.

135. Coriaria myrtifolia, L.

a. Branchlet with flowers and fruit.

Montpellier; 21 May, 1854.

MORINGACEÆ.

136. Moringa aptera, Gaertn.

a. Flowering twigs, and detached fruit and seeds.

Engedi, Palestine; B. T. Lowne, 1863-4.

137. Moringa pterygosperma, Gaertn.

a. Leaf and flowering twigs.

Carthagena; 8 April, 1862. "A small tree, common in fences."—S. Hayes.

III.—CALYCIFLORÆ.

LEGUMINOSÆ.

SUBORDER I. PAPILIONACEÆ.

138. Adenocarpus complicatus, Gray (A. parvifolius, D. C.).

a. Twigs with leaves and pods.

Lebanon, 4,000-5,000 ft.; J. D. Hooker and D. Hanbury, 27 Sept., 1860.

139. Alhagi Maurorum, D. C. "Jhawan, jawan, or Jawasa" (Hind.)

a. Twig with leaves.

b. Twigs with leaves and pods.

Dead Sea, northern end, where it grows two or three feet high; 31 Oct, 1860; also banks of Jordan. (2) Damascus; Oct., 1860; Dr. J. D. Hooker and D. Hanbury. [For specimens of the manna of this tree see the Hanbury Collection of Materia Medica.]

140. Anagyris fœtida, L.

a. Twig with leaves and pods.

Mont Major, Arles; 8 May, 1854.

b. Branchlet with flowers and young pods.

Ramleh, Syria; B. T. Lowne, 1863.

141. Andira inermis, H. B. K.

a. Twig with leaves and flowers.

"*Plants of Central America*, No. 13. Slopes of hills and on the banks of the Rio Grande, at Paraiso Station, P.R.R. (Panama), March 15, 1861. A spreading tree twenty to thirty feet high."—S. Hayes.

142. Astragalus angustifolius, Lam.

a. Twigs with flowers and pods.

Summit of Lebanon; Dr. J. D. Hooker and Dr. Hanbury. "Legume very hirsute." Sept. and Oct., 1860.

143. Astragalus aristatus, L'Her. (Fischer, Syn. Astragalorum Tragacantharum, p. 105, 110.)

a. Twig with flowers.

La Grave, Hautes Alpes, Dauphine; 20 June, 1857. Briançon, 28 June, 1837; D. Hanbury.

144. Astragalus Bethlehemicus, Boiss? (Fisch., l.c. p. 79, No. 78.)

a. Twig with flowers.

(1) Consists of three tufts, one of which is marked: "*A. compactus*, Boiss. *fide* Bunge." The flowers form a compact, ovate tuft, the other two are not in flower. Damascus; 8 Oct., 1860. (2) Summit of the pass between Marsaba and Jerusalem; 22 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

145. Astragalus coluteoides, Willd. (fide Bunge). (Fischer, l.c. p. 156 No. 159).

a. Twigs, without flowers or fruit.

Lebanon, near the Cedars; 29 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

b. Twig, with flowers.

Mount Hermon, about 6,000 feet; "Plants of Southern Syria;" B. T. Lowne, 1863-4.

146. Astragalus cruentiflorus, Boiss. (Fischer, l.c. p. 43, No. 40).

a. Leafy twigs.

Lebanon; 29 Sept., 1860.

b. Flowering twigs.

(1) Lebanon, summit of the pass above the Cedars; (2) Lebanon; Dr. J. D. Hooker and D. Hanbury; 1 Oct., 1860.

c. Flowering twigs.

Summit of Lebanon; Dr. J. D. Hooker and D. Hanbury.

147. Astragalus deinacanthus, Boiss. (Fischer, l.c. p. 50, No. 48).

a. (1) Flowering twig; (2) Leafy twig.

1. Ain Ata, Lebanon; 1 Oct., 1860. 2. Antilebanon; 3 Oct., 1860; Dr. J. D. Hooker and D. Hanbury. [A dissected flower is attached to this sheet.]

148. A. gummifer, Labill. (Fischer, l.c. p. 35, No. 31).

a. Flowering twigs and detached stem (two specimens).

(1) Lebanon; 30 Sept., 1860. (2) Lebanon, 4,500 feet; 27 Sept.

(1) A dissected flower and legume and detached petioles are mounted on the sheet. "The leaflets are more hirsute and pointed." "Is this quite the same?"—D. H. (2) This specimen has glabrous leaflets and is in flower. On the same sheet there is a detached

dissected flower, a seed, and a section of stem with tragacanth exuding from the pith. [It appears to be *A. gummifer*, which is stated by Fischer (Syn. Astr. Trag., p. 35) to have glabrous leaflets.] The plant is a small bush with a distinct stem.

149. Astragalus Hermoneus, Boiss. (Fischer, l.c. p. 108, No. 112).

a. Twigs, with detached pods.

Lebanon, 6,000 feet; 28 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

b. Twigs, with detached legumes and dissected flower.

(1) Lebanon, forming dense tufts two or three feet across; altitude 5,000 to 6,000 feet; 29 Sept., 1866. (2) Above the Cedars; 30 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

150. Astragalus hirsutissimus, D. C.

a. Leafy twigs.

Lebanon, 6,000 feet; Sept.-Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

151. Astragalus microcephalus, Willd.

a. (1) Twigs, with leaves. (2) Twig, with flower, and detached, and dissected flower.

(These specimens form a "portion of the large plant showing incisions in the stem, sent as the tragacanth shrub, by the Rev. W. A. Farnsworth, Kaisariyeh, Cappadocia, 1873." This specimen is now in the Materia Medica Museum of the Pharmaceutical Society in Bloomsbury Square.)

152. Astragalus Russelii, Boiss.

a. Twigs, in flower.

Wady Zewerah; "Plants of Southern Syria;" B. T. Lowne, 1863-4; *Astragalus*, sp. 3.

153. Astragalus Sirinicus, Ten.

a. Twigs, in flower.

Col de Nizzavona, Corsica; 3 June, 1868; D. Hanbury.

154. Astragalus Tragacantha, L.

a. (1) Flowering twigs, Marseilles, May, 1851.

(2) Ditto, detached pod and dissected flower.

Cultivated, Clapham Common; June, 1873.

155. Biserrula Pelecinus, L.

a. Plant, with flowers and pods.

Raised in the Garden at Clapham Common from seeds collected at Reggio, Calabria, 1872.

156. Bowdichia pubescens, Benth.

a. Twig, with expanded flowers.

b. Ditto, with flower buds.

"No. 28, 'Barbatimao;' Santarem, Para; H. W. Bates, 1853. A sample of bark received at the same time."

Sheet *b* has the following note on it:—

"No. 28, Barbatimao. Bark used in decoction as a lotion for all kinds of sores, syphilitic and other ulcers. It is much esteemed and procured in the towns, but the tree is local and found only on exposed sandy *campos*. The bark is sold dear in the shops in Para. When the flowers approach æstivation, the trees lose their leaves, and then present a mass of beautiful lilac blossoms. The tree has the habit of the oak, but does not average more than half its size when full grown." (Extract from a letter from H. W. Bates to S. Stevens.)

157. Cicer arietinum, L.

a. Branch, with legumes.

Grasse (Var); 7 July, 1857.

158. Colutea arborescens, L.

a. Twig, with flowers and young pods.

Pic de St. Loup; 21 May, 1854.

159. Coronilla varia, L.

a. Branch in flower.

Pariset, near Grenoble; 18 June, 1857.

160. Cytisus argenteus, L.

a. Branch, with flowers and young pods.

(1) Toulon; May, 1854. (2) Mentone; May, 1866.

161. Dipteryx odorata, Willd.

a. Twig, with flowers and detached leaves.

Trinidad; Dr. Cruger.

162. [Lens esculenta, Mœnch]; Ervum Lens, L.

a. Branch in Flower.

Cultivated, Toulon; 14 May, 1854

163. [Vicia Ervilia, Willd.]; Ervilia sativa, Link.

a. Plant in flower and fruit.

(1) Solliès-Farlede, near Toulon; 17 May, 1854. (2) Gap; 1 July, 1857.

164. Ferreiria spectabilis, Allem.

a. Leafy twig and detached flowering twig.

"No. 26, Angelim pedra. One of the best woods of Brazil; Theodor Peckolt; Cantagallo, Brazil." A pencil sketch of the pods and of a dissected flower is attached to this sheet. [There are pods of this tree in the Hanbury Collection of Materia Medica.]

165. Genista tinctoria, L.

a. Branches, with flowers and ripe pods.

(1) Near Gérardmer, Vosges; 13 Aug., 1855. (2) Mont Dore, 14 Sept., 1858.

166. Geoffræa sp.?

a. Leaves only, and tracing of fruit.

San Juan, New Granada; 3 April, 1862. "A beautiful tree, 60 to 80 feet high, called by the natives, 'Mountain Tamarind.' The fruit is edible. No. 620, Sutton Hayes."

167. Glycyrrhiza brachycarpa, Boiss.

a. Branch, with pods.

Antilebanon, 4,000 feet; 9 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

168. Glycyrrhiza glabra, L.

a. Twig, with flowers.

Clapham, cultivated, 1874.

b. Leafy branch.

Bodicott, near Banbury, 4 Sept., 1872.

c. Leafy branch.

Cultivated, Corigliano, Calabria; 5 May, 1872.

169. Glycyrrhiza glandulifera, W. & R.

a. Leafy branch, with fruit.

Royal Gardens, Kew; 15 Sept., 1873. "*G. glabra*, var. *glandulifera*, Boissier (Flor. Orient, ii., 202)."

170. Lespedeza cuneata, Don. "Nareri."

a. Leafy shoot.

Dr. Tierney Aitchison says, "On Mount Tilla only." [This specimen is labelled in the same writing as Stewart's Punjab Plants.]

171. Lonchocarpus species.

a. Leafy twig, with detached leaf, flowers, and immature pod.

b. Leafy twig, flowering twig and detached leaves, and immature pods.

Empire Station, P. R. R.; gathered 2 March, 1861. "Sutton Hayes, No. 1."

"A fine tree, 60-80 feet high, called by the natives 'Balsamo.' I have not seen the fruit of it. *Myroxylon*, like San Salvador sp., but oil dots are all round, and leaflets always opposite."—Sutton Hayes. [In the Kew Herbarium this species remains still (1891) unnamed. It is the *Lonchocarpus*, No. 17 of Goodman and Salvin, Biol. Centr. Amer., vol. 1, p. 319.]

172. Lonchocarpus sericeus, Kth.

a. Flowering twig.

Plants of Central America. Sutton Hayes, No. 599.

"In dense wet woods, Lion Hill Station, P. R. R.; 14 Feb., 1862. A very lofty tree, 100 feet and over in height."—S. Hayes.

173. Machærium Gardneri, Benth.

a. Leafy twig, with young fruit.

No. 26, "Rabo de bugio." A timber tree. Theodor Peckolt, Cantagallo, Brazil, 1867.

174. Machærium (violaceum, Vog.?), near to M. discolor, Vog.

a. Twig in fruit.

No. 10, "Espinha miuda." Timber used like that of *Myroxylon peruiferum*, but is inodorous. Th. Peckolt, 1867. [The fruits appear to correspond with those of *M. violaceum*, Vogel, from Rio Janeiro; M. Glaziou, No. 6178, March, 1873, in Herb. Kew.]

175. Mucuna altissima, D. C.

a. Detached leaf and flowers.

"Ajo de Carnero," Cauca, New Granada; R. B. White.

176. Myrocarpus fastigiatus, Allem.

a. Leafy shoots, with flowers and young fruits.

Rio de Janeiro; Dr. F. F. Allemão; 1863.

177. Myrocarpus frondosus, Allem.

a. Leaves, flowers, and immature fruit.

Rio de Janeiro; Dr. F. F. Allemão; 1863.

b. Leafy twig, with detached twig bearing fruits and flowers.

No. 4, 'Plantæ Brasilienses'; Joaquim Correa de Méllo; Campinas, Prov. San Paulo, Brazil; 1869.

178. Myrospermum frutescens, Jacq.; (Myrospermum emarginatum, Klotsch). (Bonplandia, 15 Sept., 1857, p. 277).

a. Immature pods, leaflets and detached flowers.

The detached flowers are labelled, apparently in Klotzsch's handwriting: "*Myrospermum emarginatum*, Kl. (*Calusia emarginata*, Bertero), S. Martha." Attached to the sheet is a tracing of leaflets and fruits of *Myrospermum frutescens*, Jacq., from Miller's Herbarium in the British Museum. Hanbury gives also the synonym *Banisteria purpurea*, Miller, Gard. Dict. (8th ed.), 1768.

b. Drawing of specimen of mature fruit in Sir W. J. Hooker's Herbarium. It is labelled: "*Myrospermum emarginatum*, Klotzsch MSS. (*M. frutescens*, Jacq.)"

"Sir W. J. Hooker and Dr. J. D. Hooker, after comparing this with *M. emarginatum*, Klotzsch, concur in regarding it identical. The leaves as well as the ripe fruit here sketched were compared and found to correspond. 29 Oct., 1853."—D. H.

"The seed of this tree bruised and put into spirit is said to be a remedy in rheumatic complaint, by being rubbed with it. It is said to be brought from the Spanish Main, and in great repute among the Spaniards. We have it under three names, viz., 'Guatamare,' 'Guatapana,' and 'Guatapanara.' It has given relief to more than one person in this neighbourhood. This is all of the plant that I could get, when it is in flower I trust to be able to get some."—Lockhart; Trinidad.

c. Leaflets.

Carthagena de Columbia; Billberg; from Dr. Klotzsch.

d. Tracings (1) of twig in flower, with dissected flowers, and of a (2) Leafy twig and a fruiting twig.

Copied from H. B. K., Nov. Gen., vol. vi., tab. 570-571.

e. Fruiting twig and detached leaves.

f. Ditto with older fruits.

Trinidad; H. Prestoe; received 24 Dec., 1868.

g. Flowering twig, with detached fruits and dissected flower.

"Guatamare"; La Ventille, Trinidad; Dr. H. Cruger, 1 Nov., 1861.

h, *i*. Twig, with flower bud and detached mature fruits (two specimens).

(1) Fruits received 7 Feb., 1861. (2) Twig received 1 Nov., 1861.

"Tree, 60 to 100 feet high, common in Trinidad, but apparently introduced, as it is always found in or near cultivated spots. The tree is known by its Spanish or Indian name, 'Guatamare.' Its seeds are employed in rum in many diseases, especially those of the digestive organs. The wounded trunk gives a resin said to be indistinguishable from Balsam of Tolu." Dr. Crüger's letter, Jan. 7, 1864.—D. H.

j. Leafy twig and portions of detached fruits.

Venezuela; 1864; Dr. B. Seemann.

"A large forest tree, 60 feet high, the wood of which has been exported to Hamburg by M. Polly, of Porto Cabello. The bark has, when fresh, a powerful and somewhat disagreeable smell. The natives of the Tucuyo district make no use of the tree. *Vulgo* 'Sereipo,' village of Guadiana, Tucuyo river, March 20, 1864."—B. Seemann. Extremely common in the Tucuyo district.—D. H.

k. Leafy twig and detached fruits.

The "Morro," Taboga, Panama; 1863; Dr. W. T. White.

l, *m*. Young leafy twigs and detached flowers and fruit.

No. 753, "Plants of the Isthmus of Panama;" Sutton Hayes. On the Morro, Taboga; 6 Mar., 1863. A small tree, 18 to 25 feet high. Flowers, rosy white.

n, *o*. Leafy branchlets.

Plato on the Magdalena, New Granada; Mr. John Weir; Dec., 1863.

p. Inflorescence.

q. Fruiting twig without leaves.

r. Leafy twig with young fruits.

Both *q* and *r* are from the same locality and collector, and of the same date as *n*, *o*, and *p*.

s. Leafy twig.

From a plant cultivated in a hot-house; 1867.

179. Myrospermum secundum, Klotzsch. (Bonplandia, 15 Sept., 1857, p. 277.

a. A flower only.

"*Habitat in humidis;* Rio Guarico, *prope* Parapara de Humboldt" [in Klotzsch's handwriting].

180. Myroxylon Hanburyanum, Klotzsch MSS. (Bonplandia, 15 Sept., 1857, p. 275).

a. Bare twig and detached leaves, from a large tree.

River Marañon; from A. J. de Warszewicz.

b. (1) Leaflets and (2) leafy twig from a young tree.

(1) Prov. de Jaen; Baron A. de Humboldt; from Dr. Klotzsch, Berlin; (2) River Marañon.

"A. J. de Warzewicz, who gathered this specimen, was assured by the Indians that the tree affords a white balsam, which was formerly collected." Payta, Feb. 12, 1853.

181. Myroxylon Pereiræ, Klotzsch; (M. Sonsonatense, Klotzsch; Myrospermum Pereiræ, Royle).

a. Leaves, and detached mature fruit, and flowers.

To this sheet are attached some flowers of the Balsam Tree, (figured in the Amer. Journ. Pharm., July, 1860) from Dr. Carson, Philadelphia, Nov., 1860; and a photograph of a leafy twig now in the possession of Sir W. J. Hooker, Sept. 1853. See Klotzsch, Bonplandia, 15 Sept., 1857, p. 274; Royle, Man. Mat. Med. (ed. 2), 1853, p. 414; Pereira, Pharm. Journ., x., p. 280.

b. Engraving of the plant.

From the Amer. Journ. Pharm., July, 1860.

c, d. Leaves, fruiting twigs, and detached fruit.

Cuisinagua, S. S.; leaf of the Balsam Tree of San Salvador; collected by Sutton Hayes, 14 May, 1860, No. 25. [The fruit is represented in all stages of development on sheet *d.*]

e. Leafy twigs, with fruit.

Sonsonaté; Dr. C. Dorat; October, 1860. To this sheet is attached a pen and ink sketch of the tree, labelled: "Balsamo negro, Acajutla."

f. Flowering twig and detached flowers.

Sonsonaté; Dr. C. Dorat; Oct., 1860. A pencil drawing of the flower, and a dissected flower, is attached to this sheet.

g, h, i, j. Flowering branchlet.

Jagua, 14,000 feet; Izalco, San Salvador; Dr. C. Dorat; 20 Nov., 1863. [A carefully dissected flower is attached to sheet *h.*]

k. Twig, with flowers and young fruit.

To this sheet is fastened a beautiful water-colour drawing, labelled at the back: "Dissected flower and young fruit of the 'Balsamo negro,' Indian 'Ooshit,' green or young Balsam, 'Taquasunte.' From Tintepeque, Balsam Coast, San Salvador."—C. Dorat.

l. Flowering twig, and detached mature fruit.

Sonsonaté; Oct., 1860; Dr. C. Dorat.

m. Leafy twig.

Jayua, Izalco Range, San Salvador; Dr. C. Dorat; Sept., 1863.

n, o, p, q. Twig, with detached fruit.

Sheets *n* to *q* from Matlaluca, near Cordova, Mexico. Hugo Finck; received 1 April, 1865. The bark and wood of the tree were sent with these specimens. [See the Hanbury Materia Medica Collection].

r. With leaves only.

From the botanical garden, Trinidad; H. Prestoe; 1866.

s. Leafy twig.

From a large, old plant in the hothouse at Clapham Common; 17 Jan., 1869.

t. Leafy twig.

From a seedling plant raised in the hothouse at Clapham Common; gathered Jan., 1869.

u. Leafy twig.

From a young plant in my hothouse; 25 Dec., 1865. D. H.

v. Leafy twigs.

From the Governor's Gardens, Kandy; 1874; G. H. K. Thwaites.

"The tree is one of those raised from the seeds sent by me to Ceylon in 1861. It first flowered in 1874."—D. H.

w. Seedling plant with seed attached.

Raised from seed received from Dr. Dorat; May, 1867.

x. Fruits.

Labelled "Myroxylon —— ?"

C. T. Appun; Bunzlau, Prussian Silesia. [These fruits are not much narrower towards the pedicel; but the sheet is labelled in the writing of D. H.: "*Myrospermum Pereiræ*, Royle ?"]

On the same sheet are two tracings, one of inflorescence, marked: "Balsam de Peru, Skinner," and the other of fruit, on which is written in Sir W. J. Hooker's handwriting: "Guatemala, Mr. Skinner," and "Balsam of Peru" in G. U. Skinner's handwriting. Traced from a specimen in Sir W. J. Hooker's Herbarium; 29 Oct., 1853. D.H.

182. Myroxylon peruiferum, Linn. f. "Oleo vermelho."

a. Twig, with leaves and flowers.

b, c. With leaves, flowers, and fruit.

From Theodor Peckolt, Cantagallo, Brazil; 1864. Dissected flowers are attached to *c.* [The leaves in these specimens are 2 to 3 inches long, lanceolate, acuminate, with an emarginate apex, and minutely undulate at the margin, so as to appear crenulate.]

d. Twig, with leaves only.

Cultivated in the hothouse, Clapham Common; 13 June, 1871. [The leaves of this specimen exactly resemble those from Dr. Peckolt.]

e, f, g. Twigs, with leaves, flowers, and fruit.

h. Another specimen with leaves and fruits only.

From a fine tree 50 feet high in the garden of the Convent of the Carmelites, Descalzas, at Lima; W. Nation; received 19 Mar., 1869. [These specimens differ from those of Dr. Peckolt in the smaller ($1\frac{1}{2}$ inch long by $\frac{3}{4}$ to 1 inch broad) and more coriaceous leaves, coarsely undulate, but entire at the margin, with the oil glands less prominent. The fruits also are much larger, the largest being $4\frac{1}{2}$ inches long, Dr. Peckolt's being only about $2\frac{1}{2}$ inches in length.]

i, j. Twigs, with leaves, flowers, and fruit in different stages of growth.

k. Twig, with leaves and fruit.

l, m, n, o. Twigs, with leaves, fruits, and section of the heartwood of the tree.

Specimens *k, l, m, n* are marked: "Cabriuva," and were received from Joaquim Correa de Méllo, Campinas, San Paulo, Brazil; Dec., 1863. [The leaves and fruits approach nearly in size and shape to Dr. Peckolt's specimens.

p. Twig, with leaves and detached twig of flowers and fruit. Dec., 1864; marked "*β*."

q. Twig, with leaves (*e*) and another with flowers marked "*β*."
[The leaves and fruit of specimens *p* and *q* are larger than in the preceding specimens; the leaflets of *p* and *q* are oblong-lanceolate; and those of *r* are ovate-lanceolate.]

r. Twig, with leaves and flowers, marked "δ."
Specimen *p*, *q*, and *r* are from the same collection and the same locality as *l* to *o*.

s. Leaflets only.
The leaflets (1) on the upper portion of this sheet are labelled: "Bolivia, Weddell, from the Museum of Paris, from M. Brongniart." Received Jan., 1865. A second specimen (2) is labelled: "Folioles du *Myrospermum peruiferum* de M. Weddell, qui a fourni le baume sec decrit, t. iii., p. 440." A fragment of the dry balsam is attached to this sheet. A third specimen (3) is labelled: "Folioles de *Myrospermum peruiferum*, No. 4,787, de M. Weddell." This specimen is marked by D. H.: "Linnæus' specimen at the Linnean Society exactly resembles this." Specimens 2 and 3 were received from Prof. Guibourt, 22 Oct., 1853, *vide* Hist. des Drog. (ed. 4), tom iii., p. 440.

t. Flowerbuds and a tracing of a leaf.
The flowerbuds on this sheet are marked: "*M. peruiferum*, H. B. K. (type); from the Museum of Paris; received Jan., 1865." The lower portion of the sheet is occupied by a tracing of the leaves of *M. peruiferum*, Kth. (herbier de Kunth), with the following extract from a letter, dated Paris, Oct. 1853, from Prof. Guibourt to D. Hanbury:—

"*Myrospermum peruiferum* de Mutis, Linné et Kunth (voir Hist. des Drogues, t iv., p. 332). Je vous envoie (figure A) ainsique je l'ai fait antérieurement à M. Pereira, le dessin calqué d'une feuille de cette espèce qui se trouve au Museum de Paris. Les folioles sont fermes, souvent un peu cordiformes par le bas; le petiole commun et les nervures des folioles sont glabres (the midrib is hairy on its upper side, D.H.) Les petioles particuliers sont un peu pubescents, le fruit manque. Je vous envoie quelques folioles detachées de *Myrospermum* rapportés par M. Weddell, que l'on doit réunir a cette espèce."

u. Leafy twig (*M. erythroxylum*, Allem).

Rio de Janeiro; Dr. F. F. Allemão; 1863. "Les fleurs ont été detruite par les vers." A drawing of the leaves, flowers, fruits, and very complete dissections of them accompany this sheet.

v. Leafy twig.

w. Twig, with leaves and 3 fruits, and detached leaves.

From the Province of Ceara; Dr. F. F. Allemão; received 2 Nov., 1864.

Appended to this sheet is a long descriptive botanical account of the plant, in Portuguese, from Dr. Allemão, who evidently regarded the tree as a new species; but Mr. Hanbury, in his note book (vii. p. 314), writes as follows:—"Dr. Allemão has been so good as to send me some leaves of this tree (*M. erythroxylum*, Allemão), from an examination of which I am of your (Capanema) opinion that it is the same species as *M. peruiferum*, Linn. f."—D. H.

Forma β.—*Myrospermum pedicellatum*, Lamarck.

a. Leaflets and bud, and tracing of a flowering shoot.

From the type specimen of Joseph de Jussieu, in the Museum of the Jardin des Plantes, Paris. The tracing, taken 6 February, 1865, is from *Lamarck, Ill. Pl.* 341. Communicated by M. Brongniart, per J. Triana; received Jan., 1865. See Encyclopédie Méthodique, Botanique, tome iv., p. 191.

b. Leaflets and flowers, and tracing of fruit.

The leaflets and flowers were received from Dr. Klotzsch, 30 Aug., 1853, under the name of *Myroxylon pedicellatum*, Klotzsch; *M. peruiferum*, Kl., in Hayne's Arzney-Gewächse, vol. xiv., t. 2; *Myrospermum pedicellatum*, Lamarck. The tracing is that of the pods of (*Myroxylon pedicellatum*, Klotzsch) "*Myrospermum balsamiferum*," in Pavon's collection in the British Museum.

Of these specimens Hanbury remarks:—"Four specimens of the above, marked thus, are in Pavon's Herbarium in the British Museum; all have flowers and fruits also in a more or less young state; in none does the fruit appear quite mature. J. J. Bennett and Professor Guibourt agree with me as to the identity of these four specimens of the above." —D.H., 20 Sept., 1853.

Hanbury has also placed the word "No! D. H., 5 Aug., 1865," against the words, *Myrospermum pedicellatum*, Lamarck, thus indicating that he does not believe it to be identical with *Myroxylon pedicellatum*, Klotzsch, (Bonplandia, 15 Sept., 1857, p. 276), as may also be seen by the following memorandum attached to this specimen:

"*Myrospermum pedicellatum*, Lamarck, of which the original specimen, collected by J. de Jussieu, is at Paris, I regard as identical with *M. peruiferum*, Linn. f., and consequently as distinct from *Myroxylon pedicellatum*, Klotsch. Of Klotsch's *M. pedicellatum*, the only specimens I know are those derived from Ruiz and Pavon's Herbarium. These were confounded by Lambert with *Myroxylon punctatum*, Klotzsch, a plant with large leaves and pods. *Myroxylon pedicellatum*, Klotzsch, has always (as it seems to me) an oval (not oblong) leaf which never dries flat. The leaf is also greyish, the flowers dry brown as if the standard were deep yellow when fresh. I saw in Paris (if I am not mistaken, but Triana maintains that I am) at the Museum, 28 July, 1864, a scrap of this plant attached to a sheet of *M. punctatum*, and pointed it out to Triana, who thereupon marked it in pencil."

Forma γ.—*Myroxylon pubescens, H. B. K.* "*Tache.*"

a. Leafy twig, with inflorescence and detached inflorescence.

Ibagué, New Granada: received from H. F. Stahlschmidt, Ambalema, 1 July, 1865, who writes:—

"Los esquiletos qui hé descado fueron tomados en Ibagué de un arbol que tendrá 25 años i cuya altura no pasa de tres métros"

b. Twig and detached leaf, fruits, and leaflets.

Labelled in H. F. Stahlschmidt's writing: "Seeds of the Tache, from Ibagué; 12 Feb., 1865." Received by D. H., 16 May, 1865.

c. Leaves and fruit.

Received from the same locality, and at the same date as *b.*

[To H. F. Stahlschmidt's specimens a letter is attached, giving a lengthy botanical description of the plant, and a notice of its medicinal use, in the form of a fumigation made of the balsamic resin, in neuralgia and rheumatic pains; and of a tincture, employed as a substitute for Tincture of Tolu.]

d. Portions of inflorescence and leaves.

From a tree near Quilichas, Valley of the Cauca, 2,000 metres above the level of the sea: mean temperature, 23° Cent.; R. B. White; 1869.

e. Leafy twig, and detached flower and fruit.
From Rio Blanco, near Popayan, 1,550 metres above the level of the sea; mean temperature, 19° Cent.; 1869.

f. Leafy twig, with fruit and detached fruit.

g. Leafy twig and detached fruits.
Received from the same locality and at the same date. The above all belong to the tree called "Tache."

h, i, j. Leafy twigs.
Truna, Valley of Popayan; trees 20 feet high. From R. Cross; April, 1870. [Mr. Cross's specimens are not labelled "Tache."]

k. Pen and ink sketch of leaves and pod of *Myroxylon pubescens*, Kunth.
"From a specimen in the Museum at Paris."—D. H. The sketch which is marked B has, apparently in Guibourt's writing, the words: "Petioles et nervures couverts d'un poil roux serré."

The following note is attached to the base of the sheet:—
"4°—*Myrospermum pubescens* de Kunth (Hist. des Drogues, Tome iv., p. 332). Le dessin B que je vous envoie, represente des folioles detachées et un fruit mur, que l'on trouve au Museum de Paris."

"Cette espèce differe du *M. peruiferum* par ses folioles généralement plus allongées ou plus étroites, et plus rarement cordiformes à la base, et par ses nervures et pétioles (partiales) tout converts de poils roux et serrés."—Extract from a letter dated Paris, October, 1853, from Professor Guibourt to D. Hanbury.

l. Leaflets, flowers, and fruits; four specimens.
(1) Leaves of *M. pubescens*, H. B. K., ex Herb. Klotzsch. (2) Leaves and flowers. The leaves are labelled in D. H.'s writing: "*Myroxylon pubescens*, H. B. K., from Dr. Lindley's Herbarium, 26 Jan., 1851." The flowers are labelled apparently in Lindley's writing: "*M. pedicellatum*, v. Balsamo del Peru, New Grenada, La Gasca." (3) Fruit, "Spruce, No. 5,075." (4) Leaflets. Ibagué, New Grenada; J. Goudot.

m. Leaves and portion of fruit. Labelled apparently in Gustave Wallis's handwriting:
"The presumed leaves of the Cumaru do campo, Rio Branco, Province of Maranhâo, Brazil," and in D. Hanbury's writing as follows:

"The seeds are highly esteemed by the natives, both civilised and Indians. 'The Indian,' says M. W., 'adorns himself with long chains, and the white uses them for *remedios* in certain cases.'"—Letter dated Barro do Rio Negro, 20 June, 1864.

Forma δ.—*Myroxylon punctatum*, Klotzsch.

a. Tracing of leaves, flowers, and pods.

Traced from Hayne's Arzney-Gewächse.

b. Large yellowish leaflets (*a*) and detached green leaflets in a separate cover (*b*).

Myrospermum, River Marañon, A. J. de Warszewicz. "Much resembles *Myrospermum punctatum*, Klotzsch, as contained in Pavon's collection in the British Museum, under the designation: '*Myrospermum balsamiferum.*' In the *Myrospermum balsamiferum* at the British Museum, the leaflets are usually more acute than in these." A. J. de Warszewicz asserts that the yellow leaves (*a*) are from large trees, and the green leaves (*b*) from younger trees. But they are so different I can scarcely believe them to be of the same genus.

c. Leaflets, flowers, fruit, and balsam.

From Dr. Klotzsch; 30 Aug., 1853. See *Myroxylon punctatum*, Klotzsch, in Hayne's Arzney-Gewächse (Bd. iii. t. 12 of the Pharmaceutical Society's copy), vol xiv. t. 12. J. J. Bennett and Prof. Guibourt fully concur with me in considering this plant identical with specimens in Pavon's collection marked: "*Myrospermum balsamiferum* (British Museum; 20 Sept., 1853."—D.H.

"Ruiz, who gives an account of this tree, which was published by Lambert in 1821, says that it grows in the mountains of Panatahvas, in the forests of Puzuzo, Muña, Cuchero, Paxaten, Pampahermosa, and in many other countries near the river Marañon, in low, warm, and sunny situations; moreover, that it blossoms in August, September, and October. Both fruits and bark are said to be collected, but no balsam." —D.H. Note-book, vii., p. 308.

Forma ζ.—*Myroxylon robiniæfolium*, Kl.

a, b, c. Leafy twig.

[Chongon, near Guayaquil, 1862; R. Spruce. These specimens vary very much in size and shape of leaf, some of the leaflets being as small as those of the Lima specimens.]

d. Detached leaves and fruits and leaflets.

[Chongon, near Guayaquil, 1865; Dr. A. Destruge. On the same sheet are some fruits received from T. J. Riofrio, Guayaquil, per G. C. Bruce, 15 Oct., 1863, labelled: "Semillas del Arbol de Balsamo."]

e. f. Leafy twigs.

Sheet *e* is labelled: "*Myroxylon robiniæfolium*, Klotzsch (Bonplandia, 15 Sept., 1857, p. 276); *Myrospermum robiniæfolium* of De Warszewicz's letter; Chongon, Guayaquil. Specimens of the bark were sent with this. See A. J. de Warszewicz's letter dated La Paz, Bolivia, 17 May, 1852; also letter dated Payta, 12 Feb., 1853." There is a note in pencil on sheet *e*, apparently in De Warszewicz's writing, as follows: "*Myrospermum robiniæfolium (M. suberosum)*; in Spanish, 'Balasmo odoroso'; Chongon, Guayaquil." "Probably identical with *M. peruiferum*, L. fils."—D.H. Sheet *f* is labelled also: "A balsam was formerly obtained by boiling the bark of this species."

183. Myroxylon Toluifera, H.B.K.

a. Flowering twigs, with flowers and young pods, and detached flowers and leaflets.

A coloured drawing of the flowers, apparently made by A. Göring, is labelled:—

"Tree, 80 feet high to the first branches, 6 feet in circumference at 5 feet from the ground, no lianas attached to stem."—D.H.

It has written on it, in Göring's writing: "Natural size of the flower of *Myroxylon Toluifera*; they are sometimes smaller or larger, but not much. The only developed leaf of the flower is white." A pencil sketch of the tree by A. Göring is also attached to this sheet. The specimen was collected by A. Göring at San Estoban, near Puerto Cabello, Venezuela, 1869.

b. Leaves and flowers with dissection of flowers.

From the same locality, and at the same date.

[The dissection shows that there are 4 linear, almost capillary petals besides the spathulate petal (*vexillum*) mentioned by A. Göring, and 10 stamens of equal length.]

c, d. Twigs, bearing flowers and young pods.

From a tree 70 feet high, and from the same locality, and collected at the same date.

e, f, g. Leafy twigs, and full grown pods.

Venezuela, A. Göring; received Dec., 1868.

h. Leaves and pods.

Venezuela, A. Göring; received 13 Oct., 1868.

i. Leaves, pods, and detached seeds.

Venezuela, A. Göring; received 28 April, 1871.

The following note on this specimen is in D. Hanbury's writing :—

"This branch was received with a large supply of pods, which, though of full size and quite ripe, were rarely found to contain a perfect seed. The pods with good seeds when placed in earth soon threw up shoots and afforded healthy plants. Some pods were sent to Mr. Thwaites, Ceylon, and some also to Mr. Binnendyk, Buitenzorg, Java."—D.H.

j, *k*. Leafy twigs.

Received also specimens of the bark of the tree.—D.H.

"The leaves of the balsam of Tolu tree were collected about one league from the town of Mahates, which is on the Digne, about 13 leagues from Carthagena, on the 2nd April, 1862, the tree at this time having neither flowers nor fruit. I saw the tree also at San Juan, New Granada, which is 25 leagues from Carthagena. I am told it grows in the neighbourhood of Turbaco, but I could not ride to the spot, and I was unable to walk."—S. Hayes.

l. Leaves only.

m. Leaves and portion of detached fruit.

"Balsamo" *incolarum ;* Village of Guadima, Tucuyo river, Dr. Seeman ; Venezuela ; 20 Mar., 1864.

"Extremely common in the Tucuyo district, where, however, no balsam is collected, though the natives use the fruits."—Dr. Seemann.

n, *o*, *p*, *q*. Leafy twigs and detached fruits.

The Montaña, near Plato, on the River Magdalena, New Grenada ; Jno. Weir ; Dec., 1863.

r, *s*. Leafy twig.

"Specimens of the foliage of the first tree I had cut, a young and vigorous tree which bore no fruit."—J. W.

t. Leafy twig.

"Shoots from the stump of a tree, which was cut a few months ago in making a clearing for a hut in the forest."—J. W.

Specimens *g* to *s* are from the same locality and collector. The young leaves of specimen *t* are very small.

u. Leafy twig.

A shoot from a plant raised at Clapham from seeds sent by A. Göring ; 31 Aug., 1874.

v. Leafy twig.

Near Carthagena, New Grenada ; A. J. de Warszewicz.

w. Leaves and young flower shoots.

Vulgo "Balsamo," Villa Vicencio, bassin du Rio Meta, Nouvelle Grenada, Prov. de Bogotá ; hauteur de 400 mètres. 'Voyage de J. Triana,' 1856-57.

x. Sketches of leaflets.

(1) From specimens in the British Museum, sketched by D. Hanbury. (2) From specimens in French Herbaria, sketched by Professor Guibourt.

(1) This includes (*a*) 3 ordinary and 1 terminal leaflet, and is labelled: "Balsam of Tolu," R.H., 1758; "Herbarium Sloanianum," vol. 195, p. 28; and (*b*) a terminal leaflet labelled: *Toluifera Balsamum*, L., in Miller's Herbarium.

(2) This includes (*a*) two leaflets labelled: "Turbaco" herbier de Kunth; (*b*) two leaflets labelled respectively: foliole inférieure and avant dernière foliole, la dernière formant la flêche est beaucoup plus petite; (*c*) two leaflets marked respectively: "foliole inférieure?" mal rapportée—ce doit ere une foliole supérieuse—une foliole supérieure? mal rapportée—ce doit etre une foliole inférieure; "Du Marañons;" (*d*) two leaflets labelled: "*Myrospermum toluiferum*," Kunth, Jaen de Bracamoros, herbier de Bonpland. The following note at the foot of the sheet is in the handwriting of D. Hanbury:—

"*Myrospermum Toluiferum* de Kunth, (Hist. des Drogues, tom. iii., p. 438, et tom. iv., p. 333). Cette espéce est bien caracterisée par ses mais feuilles, les fruits manquent jusqu'a present. Je vous envoiè 4 esquises de folioles prises sur des specimens differents."—Extract from a letter dated Paris, October, 1853, from Professor Guibourt to D. H.

y. Tracing of leaves and flowers, and dissections of flowers and fruits.

The tracing, apparently by D. Hanbury, is labelled in his handwriting: "*Myroxylon toluiferum*, A.R.; *Myrospermum toluiferum*, A. R., in the text." Ramon de la Sagra, Histoire de l'Ile de Cuba; botanique par Achille Richard (Paris, 1845, 8vo), p. 397 Atlas, tab. 39. Crescit in sylvis circa Canasi, in mense Junio florens.

The following quotation from Ramon de la Sagra is transcribed on this sheet:—

"Observation". Ce n'est pas sans quelque hèsitation que je rapporte cette espèce au *Myrospermum toluiferum*. Cette espèce est en effet, fort peu connue, et je ne connais pas encore une description de ses fleurs et de ses fruits.

Cependant les échantillons que nous avons sous les yeux s'accordent si bieu avec la description que nous avons faite nous-même des feuilles, d'apres l'échantillon authentique du *Myrospermum toluiferum* recueillé aux environs de Tolu, par M. de Humboldt, que nous avons cru pouvoir y rapporter l'arbre de l'île de Cuba. Cet arbre y est connu des habitants comme donnant une matière balsamique, qu'ils désignent sous le nom de "Baume du Pérou," mais en général on en fait assez peu usage (l.c. p. 398).

z. Detached leaflets and fruit.

(Dr. Morales, Cuba, to C. Wright; C. Wright to Asa Gray; Asa Gray to me.)

Dr. Morales asserts that the tree is not indigenous to Cuba, but has probably been introduced from South America. Against the specimen of fruit D. Hanbury has written: "An odoriferous resin (exactly as in M. Pereiræ) in cells at the extremity of the legume."

aa. Flowering twigs, with detached fruits and leaflets (two specimens).

The fruit is labelled G.D.H. Inza, New Granada. Robert Cross; Oct., 1863.

"On the 28th Oct., 1863, I came to Inza, where I remained several days, until the bridge across the Paez had been replaced by another equally dangerous. During my stay at Inza I procured specimens of a comparatively rare tree in New Granada, 'Quino-Quino,' a species of Myrospermum."—Letter of R. Cross, dated 10 Dec., 1864, to the Under Secretary of State for India.

184. Physostigma venenosum, Balf.

a. Leafy shoots.

Cultivated at Clapham, 1864.

185. Platypodium elegans; Vogel.

a. Leafy shoot and pods.

b. Twigs, with flowers, 1867.

Campinas, Prov. S. Paulo, Plantæ Brasilienses, J. Correa de Mello.

c. Detached leaves and mature pod.

d. Detached leaves, bark, and fruits.

Frijolillo, (*P. grandiflorum*, Benth,) between Gorgona and Matachin Panama. S. Hayes; 12 Mar., 1861. From S. W. W. J. Hooker; 6 June, 1861 (*P. elegans*, Vog. ?).—D.H. The following note by S. Hayes is attached to the specimen *d*:—

"Fruit and bark of a large tree growing in a wood along the P. R. R. between Gorgona and Matachin, collected 12 Mar., 1861. Early in this month the leaves fall, and soon after the fruit ripens. The first trees I saw were naked of leaves, and bore only fruit. The bark is very rough, the

trunks of the trees being very uneven with deep crevices and projecting angles, sometimes as if twisted. These trunks are from one to two feet in diameter, of good hard wood, excellent for fuel, and of a yellowish colour. They are, with their spreading tops, sixty or seventy feet in height. I have specimens of the leaves, as good as I can get at this season of the year, and shall send some of them; and that there may be no mistake or confusion in getting together the fruits of one tree and the leaves of another, I shall place a little of the fruit with them. The native name of the tree is "Frijolillo." I could not fail to observe the great resemblance this tree bears to the balsam tree of San Salvador, but the leaves are very different and the juice of the tree dries up to a kind of gum, like kino, and is not balsamic. May not this tree be a *Pterocarpus*, and one of those mistaken for the balsam of Tolu?"—S. Hayes.

"At Cathagena it is called "Cajou"; on the Isthmus, "Frijolillo." —S. Hayes.

"In the number of its leaflets this tree agrees with *P. elegans*, Vog.; but it appears to me, however, very doubtful if *P. elegans* and *P. grandiflorum*, Benth., be really distinct"—D. H.

186. Pterocarpus Draco, L.

a. Leaves and detached inflorescence, and flowers.

Plants of Central America, No. 83. In swampy woods at Frijoli Station, Panama, May, 1861. A large tree, 50 to 70 feet high.—S. Hayes.

187. Pterocarpus rufescens, Benth.

a. Leaf, inflorescence, fruit, and detached flowers.

"No. 597. In woods near Matachin, P. R. R.; 10 Feb., 1862 (flowers and leaves); fruit ripe on the last of March. A tall tree, 60 to 70 feet high."—S. Hayes.

188. Retama monosperma, Boiss.

a. Leafless twig, with detached pod.

Dead Sea, Northern End; Sept. to Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

189. [Cytisus purgans, Benth.]; Sarothamnus purgans, Godr. and Gren.

a. With flowers.

Langogne (Lozère); 2 June, 1856.

190. [Cytisus scoparius, Link.]; Spartium scoparium, L.

a. Flowering twig, with detached fruits and flowers.

Dartford, Kent; 7 June, 1856.

191. Sesbania (Ægyptiaca, Pers.?) "Jhanjan" (Hind.)
a. Twig, with leaves and pods.
Stewart, 'Punjab Plants,' p. 75.

192. Sophora Griffithii, Stocks. "Zergul."
a. Leafy twig.
No locality given.

193. Sophora Japonica, Linn.
a. Flowering branchlet.
Royal Gardens, Kew, 1853.

194. Spartium junceum, L.
a. Flowering shoot.
Vaucluse; 5 May, 1854.

195. Tephrosia apollinea, D. C.
a. Twig, with flowers and young fruit.
Sandy ground; Wady Halfeh; 11 Jan., 1851; Dr. Bromfield.

196. Trifolium repens? L.
a. Flowering stems.
Maldon, Essex; 15 July, 1860; D. H.
In the two specimens on this sheet the teeth of the calyx are developed into trifoliate leaflets, and the flowers on long slender pedicels. Attached to the sheet is a letter from Dr. Lindley to the effect that the monstrosity was figured some years before, but that he had not seen it before.

197. Trigonella Fœnum-græcum, L.
a. Branch, with flowers and fruit.
Montpellier; May, 1854.

SUBORDER II. CÆSALPINIEÆ.

198. Bauhinia species "Kachnar" (Hi).
a. Leafy twig.
No locality given.

199. Cæsalpinia Bonduc, L. "Karanjua" (Hind).
a. Twig with flower buds.
Stewart, 'Punjab Plants,' p. 69.

200. Campsiandra laurifolia, Benth. (Walp. Rep. v., p. 568.)

a, b. Leafy twigs with flowers, and (*b*) detached flower.

H. W. Bates, Para.

201. Cassia Brasiliana, Lam.

a. Twig with detached flowers.

'Plants of the Isthmus of Panama,' No. 754 ; S. Hayes.

202. Cassia Fistula, L.

a. Twig in flower.

Lower Egypt ; 1860 ; S. Stafford Allen, (with legumes). The following note from the above-named gentleman is attached to this sheet.

"Specimens of the ripe pod, with some dried leaves and flowers, gathered near Cairo, 28 June, 1864. The tree is not uncommon in the gardens round Cairo ; is known to the Arabs under the name of Heyar Shembi, and is said to be used as a purgative. The flowers, which were rather past their prime at the above date, hung all over the the tree in long drooping spikes, and had an agreeable smell. The ripe dried pods hung singly and in small bunches at the same time ; but if required for use would doubtless have been gathered before many of them had been eaten into by insects."—S. S. Allen.

203. Cassia Marilandica, L.

a. With flowers and fruit on separate twigs.

Banks of streams, Cooper's Point ; flowers, 2 Oct., 1860 ; fruit, 9 Jan.

204. Cassia moschata, H.B.K.

a, b, c. Leafy twig and detached flowers.

Plants of the Isthmus of Panama, No. 58 ; S. Hayes.

In woods, Paraiso Station, Panama ; March, 1863.

A tree 30–40 feet high. Petals yellow, at length turning to a brick yellow. "Cañafistola de Purgar." [Sheet *a* has a figure of the plant and fruit taken from Linn. Soc. Trans., vol. xxiv., pl. 26.]

d. Young leaves, detached flowers and portion of fruit; and twig of a young plant cultivated at Clapham, 1865. A pen and ink sketch of the corolla and stamens and dissected flower are attached to this sheet.

"On slopes of hills near Rio Grande Sta. P.R.R. ; 20 Feb., 1861. A spreading tree 20–40 feet high. Flowers yellowish-brown. The fruit of this tree is called by the natives "Canafistola de purgar" and used as a laxative. It is often nearly 2 feet in length." S. Hayes.

"Germen glabrous, except in one small spot along its upper side, where it is beset with erect, bristly, white hairs. In *C. Brasiliana* the germen is altogether hirsute."—D.H. Identical with a specimen collected by Spruce on the river Casiquiari and numbered 3,300. In Mr. Bentham's Herbarium it is marked as allied to *C. moschata.*

205. Cassia obtusata, Hayne, (Arney-Gewachse ix. 43).

a. With flowers and pods.

Egypt; 1863; T. W. Beddome.

206. [Cassia occidentalis, L.]; Cassia Absus, L. "Chaksu."

a. Leafy shoot with flowers.

[Hanbury adopted temporarily the name given in Stewart, in 'Punjab Plants,' but the specimen is undoubtedly *C. occidentalis* L.]

207. Cassia reticulata, Willd. "Guayava."

a. Leaf and detached flowers.

Sonsonaté, State of Salvador; Dr. C. Dorat; Oct., 1860.

208. Ceratonia Siliqua, L.

a. Flowering branchlet.

Caiffa, Syria; 15 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

b. Ditto, with young pods and detached ripe fruit.

Beyrout, Syria, Dr. J. D. Hooper and D. Hanbury.

209. Copaifera Langsdorffii, Desf.

a. Twigs in flower, and detached leaves, flowers, and fruits.

Campinas, Brazil, J. C. de Mello; received 1865.

"Agrees best with *C. Langsdorffii.* Leaves pellucid-punctate!"—D.H.

110. Copaifera officinalis, Jacq. (C. Jacquini, Desf.)

a. Branchlet, with flowerbuds.

b. Ditto, with flowers.

Trinidad, Dr. Crüger, 1862.

c, d. With young fruits and detached ripe fruits.

"Along the line of the Panama railroad, about three miles from Panama; Sept., 1861. A fine tree 40–60 ft. high. Fruit ripe in February;" S. Hayes, No. 410.

e. Leafy twig.

Cultivated in the hothouse at Clapham Common; 21 Feb. 1868.

f. Leafy twig.

"*Copaifera*, sp. nov." The Gualaca Chiriqui (with bottle No. 2); A. J. de Warszewicz; May, 1851.

"The fruit not found to agree with any specimen in the British Museum. Compared with the plates and descriptions in Hayne's Getreue Darstellung und Beschreibung der in der Arzneikunde gebraüchlichen Gewächse, Berlin, 1827, it appeared most to resemble *Copaifera Jussieui*.—D. H.

211. Copaifera pubiflora, Benth?

a. Branchlet in flower.

Cantagallo, Brazil; Theodor Peckolt; 1864.

"Very near to *C. pubiflora*, Benth., with which, as well as with other specimens of *Copaifera*, Mr. Bentham and I compared it 18 Mar., 1864. Differs from M. Bentham's species *C. pubiflora* in having the leaflets more acuminate."—D. H.

212. [Dimorphandra oleifera, Triana]; Mora sp.

a. Flowering twig, with leaves.

Plants of Central America, Sutton Hayes, No. 69.

"The fruit of this tree is a great pod from 6 to 10 inches long and 4 to 5 inches thick, with two fully ripened seeds. Often I am told by the natives from Carthagena that it is the same tree as that from which the "Aceite de Canimi" (which I think must be Gum Animi) is obtained along that coast. I have cut into the trees in the swamp, near Panama, and I find a beautiful balsam exudes. The wood, as far as I have examined, is close grained, and of a very light yellowish colour, and very different from that of the *Mora excelsa*."—S. Hayes.

"In the tidal swamps bordering the Rio Grande, near Panama; 1 June, 1861. A spreading tree, 30 to 40 feet high. I have only seen this tree growing in swampy ground, almost isolated in great patches of *Acrostichum aureum*."—S. Hayes.

[This specimen corresponds well with *Dimorphandra oleifera*, Triana, in the Kew Herbarium.]

213. Parkinsonia aculeata, D.C.

a. Flowering twig, with leaves and young pods.

Stewart, 'Punjab Plants,' p. 73.

Native name, "Nilayati babul," i.e., foreign acacia.

214. Prioria copaifera, Griseb.

a. Flowering twig, with leaves and detached fruit.

Plants of Central America, Sutton Hayes, No. 49.

Very common in swamps along the line of the P. R. R.; Feb., 1861. One of the largest trees on the Isthmus, 100 feet high or more.

SUBORDER III. MIMOSEÆ.

215. Acacia arabica, Willd. "Kikar" (Pi).

a. Flowering twig.

Stewart, 'Punjab Plants,' p. 50.

216. Acacia Catechu, Willd.

a. Twig, and detached spike of flowers.

With a specimen of the wood, and the extract made therefrom. From F. E. G. Mathews, Naini Tal, N.W. India, July, 1871. [See Hanbury Collection of Materia Medica.]

217. Acacia Farnesiana, Willd. (Mimosa Farnesiana, L., Vachellia Farnesiana, W. & A.)

a. Flowering twigs.

Cultivated at Cannes, Provence, 1858.

b. (1) Leafy twig.

Cultivated at Larnaka, Cyprus, 24 Sept., 1860. Dr. D. J. Hooker and D. Hanbury.

(2) Flowering twig and pod detached. Cultivated at Jerusalem, Oct., 1860. "Noticed it also near Beyrout, apparently wild."—D.H.

218. Acacia Seyal, Delil.

a. Leafy twigs.

Engedi; Plants of Southern Syria, 1863-4; B. T. Lowne.

219. Enterolobium ellipticum, Benth.

a. Leafy twig, detached flower, and pencil sketch of pod.

No. 4, with pods (*vide* Hanbury Materia Medica Collection), Joaquim Correa de Méllo, Campinas, San Paulo, Brazil, 1865. The flowers are from the same specimen. "The legume has a velvety surface."—D.H.

220. Enterolobium Timbo-uva, Mart.

a. Leaves, with pod and seed detached.

"Raised from seed in hothouse at Clapham. Tree about 8 feet high where these leaves were gathered, 1866." D.H.

221. Inga globulifera, Benth.

a. Flowering twigs.

No. 641, Pithecolobium sp. "In open woods, Paraiso Station, Panama. A tree 15 to 20 feet high; flowers very fragrant."—S. Hayes.

[In Kew Herbarium this plant is labelled No. 680. "Plants of the Isthmus of Panama."—S. Hayes.]

[The dried flowers have an odour resembling fenugreek.]

222. [Inga Lindeniana, Benth. Mimoseæ, p. 622, No. 101]; **Inga Mucuna,** Walp. and Duchas.

a. Flowering twig, and leaves and detached flowers.

Dr. Dorat, Sonsonaté; 7 Sept., 1863. [The following note, extracted from a letter from Dr. Dorat, is written on this sheet]:—

"I also send a flower of the "Guijiniquil," a large tree producing a very large and long pod resembling a bean pod, with large seeds, much relished here. The tree produces in the dry season a very odoriferous resin or gum of healing properties, and somewhat resembling India-rubber, as it hardens by washing with alum."

(One ought to see the legume.—D. H.)

223. Lagonychium Stephanianum, Bieb. (Prosopis Stephaniana, Kth.)

a. Flowering and fruiting twigs.

(1) Leafy twig, with attached pods Caiffa; 1 Nov., 1860; a weed in the fields. (2) Leafy twig, with ripe pods. Between Riha (ancient Jericho ?) and the Jordan; bushes 4–5 ft. high; 21 Oct., 1860. Dr. D. J. Hooker and D. Hanbury. (3) Twig, with flower-buds; Akka, Syria; E. Atkinson. (4) Twigs and young pods; Larnaka, Cyprus; 24 Sept., 1860.—D.H. A weed in the fields by the roadside.

224. Prosopis spicigera, L. "Jand or jhand" (Pi., Hi.)

a. Leafy twig.

Stewart, Punjab Plants, p. 74.

ROSACEÆ.

Tribe I. Chrysobalaneæ.

225. Chrysobalanus Icaco, Adans.

a. Flowering twig.

Dr. Dorat, Sonsonate, 1863.

TRIBE II. PRUNEÆ.

226. Prunus Mahaleb, L.

a. Flowering and fruiting twigs.

(1) Vienne, Isère, 27 April, 1854 (flowers). (2) Mont Major, Arles, 8 May, 1854 (fruits). (3) Near Grenoble, 18 June, 1857 (fruits).

227. Prunus Padus, L.

a. (1) Flowering twig; (2) fruiting twig.

(1) Val St. Christophe, 23 June, 1857; (2) Prémol, near Uriage, Aug., 1864.

228. Prunus prostrata, Labill. (Cerasus prostrata, Loisl.)

a. (1) Flowering and (2) leafy twigs.

(1) Mount Hermon, 6,000 feet; B. T. Lowne, 1863-6 (flowers). (2) Lebanon, 6,000 feet; 28 Sept., 1860; Dr. J. D. Hooker and D. Hanbury (leaves). "A stunted shrub clinging to the rock."

TRIBE VI. POTENTILLEÆ.

229. Geum urbanum, L.

a. Plant, with flowers and rhizome.

Gravesend, July 1856.

230. Potentilla Tormentilla, Nestler.

a. Plant, with flowers and rhizome.

Wandsworth Common, 1854.

TRIBE VII. POTERIEÆ.

231. Agrimonia Eupatoria, L.

a. Plant in flower.

Merstham, Surrey; 27 July, 1858.

232. Brayera anthelmintica, Kth.; (Hagenia Abyssinica, Lam.)

a. Separate twigs bearing (1) male and (2) female inflorescence.

From the imported drug.

b. Male inflorescence.

From Dr. Th. W. C. Martius, Erlangen; 1862.

TRIBE VIII. ROSEÆ.

233. Rosa bifera, Poiret, Encyclopédie Redonté, p. 107.

Called "Rose de Puteaux," because cultivated especially about Puteaux, near Paris, for medicinal use. From the Jardin Botanique de l'Ecole de Medicine, Paris; 21 June, 1872. "A specimen is in Herb. Gay. at Kew."—D.H.

234. Rosa centifolia, L.

a. Flowering twig *(flore subsimplice).*

Hort. Bot. Giessen; from Professor Phœbus, Giessen; 1864.

b. Flowering twig.

Cultivated at Mitcham; 7 July, 1859. "Pereira considered it to be var. *a; vulgaris, f. foliacea* of D.C."—D.H.

235. Rosa Damascena, var.

a. With flowers and buds.

This is the rose cultivated in Turkey for the production of Otto of Rose. Sent by Professor Dr. Baur, of Constantinople to his father, Dr. Blaubeuren, of Würtemburg, who has the plant in cultivation. Hugo von Mohl examined this rose; see Wiggers in Husemann, Jahresbericht, 1867, p. 350. J. G. Baker says: "This rose is certainly *R. turbinata* Ait., *R. campanulata* Ehrh., *R. francofurtensis* Hort.; Nov. 1874."—D.H. A letter from Dr. Baur is attached to this specimen.

b. Flowering twig.

Flower produced at Clapham in summer of 1874. From a plant given me by Dr. Baur, of Blaubeuren.

c. Flowering twig.

Golfe de Juan, near Cannes; May, 1866; cultivated for its flowers, which are distilled to make rose water. —D.H.

236. Rosa Gallica, L.

a. Flowering twigs.

Cultivated, Mitcham; 7 July, 1859. According to Pereira it is var. δ *officinalis* D.C.

b. Ditto, flowers semi-double, with detached fruit.

From the garden at Clapham Common; 1873.

Var. Damascena, Miller. (So called by J. G. Baker), Nov., 1876.

a. Twigs with flo er-buds.

"Rose cultivated for the production of attar; from Vice-Consul Dupuis, Adrianople; 1874." The specimens on the upper portion of this sheet are marked: "Rose cultivated at Kazanlik, near Adrianople, for distilling attar or rose oil; received in a packet some days later than the others.

b. Twigs with flowers.
[These are rather better specimens than *a*; they are from the same source and bear the same date.]

TRIBE X. POMEÆ.

237. [Pyrus Cydonia, L.] Cydonia vulgaris, Pers.

a. Twig with young fruit and section of immature fruit.
Near Gap, where it is very common by the road-sides; 16 Aug., 1864.

b. (1 and 2) Twigs and flowers (1) and young fruit (2).
(1) Les Pialoux, near Valence; 30 April, 1854 (flowers).
(2) Orange; 2 May, 1854 (young fruit).

HAMAMELIDEÆ.

238. Liquidambar Altingiana, Blume.

a. Twigs, with flowers.
Assam collection; Herb Griffith, No. 920.

b. Twig, with fruit.
Assam collection; Herb Griffith, No. 920. [This species has serrate but undivided leaves.]

239. Liquidambar Formosana, Hance.

a. Leaves and fruit.
Leaves from Herb. H. F. Hance, Whampoa; May, 1857. Fruit, Formosa (per B. Swinhoe to Kew).

b. Leafy twig.
Herb. H. F. Hance, No. 11209. "Prope monasterium versus cacumina montes Pakwan, supra urbem Cantonem; Julio, 1867. Arbor 50 pedalis et ultra."

240. Liquidambar orientale, Mill. (L. imberbe, Ait.)

a, b. Leafy twigs, and fruiting twig without leaves, two sheets.
Coast of Asia Minor, opposite the Island of Rhodes.
From S. H. Maltass, 1855.
"Liquid storax is obtained from this tree. See my paper on storax in the Pharmaceutical Journal and Transactions for Feb. and Mar., 1857 (3), xvi., p. 461." —D. H.

c. Leafy twig, with detached fruit.
Coast of Asia Minor, opposite the Island of Rhodes, S. H. Maltass, 1855. An engraving of the fruit (taken from Pharm. Journ. (1), xvi., p. 462) accompanies this specimen.

d. Leafy twig, with fruit.

Bot. Garden, Marseilles; 14 Nov., 1860. Dr. J. D. Hooker and D. Hanbury.

e. Three twigs, in flower, with detached leaves.

Bot. Garden, St. Mandriér, near Toulon; M. Phillipe. A letter from M. Phillipe, dated 4 June, 1860, accompanies this specimen, stating that he has forwarded the specimens desired.

f. Leafy twigs.

Bot. Garden, Venice; 13 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

241. Liquidambar styraciflua, L.

a. Twig, with fruit.

Guatemala, 1862. From G. U. Skinner to Dr. Pereira with some of the balsamic semi-fluid resin of the tree.—D. H.

b. Twig, with detached fruit.

Bot. Gardens, Turin; 11 Sept., 1860.—D. H.

c. Leafy twig.

From Mr. Bockett's garden, Clapham Common; 8 Aug., 1874.

COMBRETACEÆ.

242. Gyrocarpus asiaticus, Willd. "Palo Lagarto."

a. Fruiting twig, without leaves.

"The other specimen which I send is without the flower. It is called here "Tambor edionda" (stinking Tambor); also, more commonly, "Palo de Lagarto" (crocodile tree). It is much smaller than the true Tambor, and perfectly useless, the wood being soft."—Dr. Dorat, Sonsonate, 12 Aug., 1863, to D. Hanbury.

MYRTACEÆ.

243. Couratari legalis, Mart.

a. Flowering twig, with unexpanded flowers.

No. 297, Cantagallo, Brazil; Theodor Peckolt, 1864. On the sheet is a pen and ink sketch of the flower, and a pencil drawing of the young fruit and united stamens, separately delineated. [This plant affords the Jequitiba bark used as a tonic in baths for convalescents.]

244. Marlieria glomerata, Benth. (Rubachia glomerata, Berg.)

a. Flowering twig.

No. 24, Cámbucá do Mato. Theodor Peckolt, Cantagallo, Brazil, 1867, Fruit edible.

PASSIFLOREÆ.

TRIBE II. PAPAYACEÆ.

245. Papaya sp. "Chamburu de Quito."

a. Stem leaf.

b. Stem leaf.

c. Small leaves from the stem.

The leaves from a plant cultivated at Palazzo Orengo; 17 May, 1869.

This plant blossomed in the open border at Clapham Common, Sept., 1874; producing male flowers, with a few solitary females. [See notes on *Papayaceæ*, by De Mello and Spruce; Jour. Linn. Soc., Bot. vol. x. (1869), p. 11.] To specimen *a* is attached a drawing of the flowers, and to *c*, one of the tree as grown at Palazzo Orengo, showing the small intermediate leaves. An engraving of *Carica aurantiaca* also accompanies these specimens.

FICOIDEÆ.

246. Orygia trianthemoides. "Makhan bhuta;" "Kemigoram."

a. With flower and fruit.

247. Trianthema sp. (T. obcordata, Roxb.?) "Wasa."

a. Leafy branchlet.

Apparently from India, but no locality given.

UMBELLIFERÆ.

SERIES I. HETEROSCIADEÆ.

248. Hydrocotyle asiatica, L.

a. Plant in fruit; received 22 Feb., 1858.

India. A beautiful coloured drawing of the plant accompanies this specimen, on which is written in Dr. Cleghorn's handwriting: "Madras, in a Betel Garden, H. Cleghorn, Jan., 1858." [The specimen and drawing were sent by Dr. Cleghorn.]

249. Hydrocotyle vulgaris, L.

a. Plant in flowers and fruit.

Clapham Common, 27 Sept., 1857.

250. Sanicula europæa, L.

a. Plant, with flowers and young fruit.
Lindfield, Sussex, 21 July, 1853.

SERIES II. HAPLOZYGIÆ.

251. Ægopodium Podagraria, L.

a. Plant in flower.
Dorking, 25 June, 1858.

252. Æthusa Cynapium, L.

a. Flowering, and fruiting branch and root.
Clapham, 13 Aug., 1854.

b. Large radical leaves, and a flowering branch.
In the garden at Clapham Common; a common weed in the horseradish bed; July, 1874. "When the plant is young and vigorous as in this specimen, it has a considerable resemblance to hemlock."

253. Ammi Visnaga, Lam.

a. Flowering twig, and detached.
Fruiting umbel.
Smyrna; 21 Sept., 1860. Larnaka, Cyprus; 24 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

254. Carum Carui, L.

(The Mogador Plant.)

a. Young plant, with root, showing radical leaves and root.
b. Ditto.
c. Ditto, with unexpanded flowers.
d. Ditto, with immature fruit and flower.
e. Ditto, with green fully developed fruit.
f. Ditto, with ripe fruit.
Cultivated at Clapham, July, 1873.
g. Ditto, with immature fruit.
Specimen (*g*) was raised from Morocco seed by F. J. Hanbury, 1872.

(The Essex Plant.)

a. (1) Radical leaves and root, and (2) fruiting branch.
(1) Near Witham, Essex, where it is cultivated on a large scale, in fields, 31 July, 1872; (2) from the Witham plant, cultivated at Clapham, 1878.

b. Radical leaves only, 2 June, 1873.

c. Flowering plant.

Grown, as well as 1*a*, in the garden at Clapham Common, from a root brought from near Witham, Essex, 2 June, 1873.

255. Conium maculatum, L.

a. Branch with flowers and young fruit.

Erith, Kent, July, 1859.

256. Ferula alliacea, Boiss.

a, *b.* Leaves and umbels of young fruit and detached flowering umbels.

"Plant which produces the variety of Assafœtida known at Bombay as Hing. Grows, according to Dr. Dynock, in Yezd and Kerman, from one of which places this specimen was sent."—See Dr. D's letter of 21 Aug., 1874."

To this sheet a memorandum is attached, signed W. Dymock, as follows:—

"Blossom, fertile and unfertile, from the same plant."

"Abortive flowers (with) stylopodium, very irregularly lobed or notched round the margin. The umbels are glabrous, no male flowers could be found; young fruit quite glabrous, grooved, not (as in Scorodosma) plump and hairy; 11 Nov., 1874."

A sketch in pencil of abortive flowers and young fruit is attached to this sheet. [The umbels in the dried specimen have stout peduncles barely an inch long, although the pedicels are $1\frac{1}{2}$ to $1\frac{3}{4}$ inches long.]

257. [Ferula Narthex, Boiss.] Ferula Assafœtida, Linn. (according to Falconer).

a. Leaf, portion of root.

Astore, Dr. Falconer (J. D. N.)

[Dr. H. Trimen, who examined this specimen when describing the assafœtida plants in "Medicinal Plants," labelled it in pencil: "*Narthex Assafœtida*, Falc.; *Ferula Narthex*, Boiss." Some of the leaflets are crenate serrate towards the tips, and Dr. O. Stapf, who described *F. Polakii*, assures me (E. M. H.) that this plant is identical with *F. Narthex*, Boiss, and that the leaf in living plants shows all gradations from entire to strongly serrate margins. It would appear, therefore, that *F. Narthex*, Boiss, *F. Polakii*, Stapf, and *F. fœtidissima*, Regel and Schmal, are forms of one species.—See note under *c* and *d*.]

b. Branch with ripe fruiting umbels, but without leaves.

Ferula Assafœtida, *L.*, Kashmir, Dr. Falconer ex. Herb. Hooker. On this sheet are attached 4 specimens of detached fruits, and 1 of flowers.

(1) Fruits.

Scorodosma fœtidum, Bunge. Anguzeh (Pers.), Herat.; Assafœtida, Kæmpfer. [This label is apparently in the handwriting of Professor Maximowicz. Dr. H. Trimen has labelled it in pencil *Ferula Scorodosma*, Bth. and Hooker, which the fruits undoubtedly are.]

(2) Fruits.

"*Ferula erubescens*, Boiss. (Ann Sc. Nat., 1844, p. 316, ex. parte), Planta 5 to 6 ft. in faucibus alpis, Kuhdæna, 16 July, 1842. Kotschy, Plant. Persic. Aust., (606). [These fruits have a marked *alliaceous taste*. The plant does not produce galbanum, and belongs to the *F. rubricaulis* of Boiss. Fl. Orient., vol. ii., p. 995, and to the section Scorodosma, in which the vittæ are not visible externally. See Pharm. Journ. (3) xix., p. 355. In Pharmacographia the *F. rubricaulis*, mentioned as a source of galbanum, is the alliaceous plant. It is figured by Berg as *F. erubescens*. Bergund Schmidt, *Officinelle Gewachse*, iv., tab. 31.]

(3) Fruits.

Ferula Assafœtida, L., Hango, Piti, W. Tibet; T. Thomson; 24 Aug. 1847. Alt.; 10,000 to 12,000 ft. These fruits correspond fully with those of *F. Narthex*.

(4) Fruits.

Dorema Assafœtida, Kermanshah, Persia; 10 Oct., 1851. W. K. Loftus. [The fruits have an alliaceous taste.]

(5) Flowers.

Flores, Kashmir, T. Thomson; 29 Sept. 1848. [The petals are white, but may originally have been yellow. Both the pedicels and flowers are free from tomentum.]

[If this specimen be correctly labelled, the plant of Loftus is nearly allied to *F. alliacea*, Boiss, as stated in Bentley and Trimen, "Medicinal Plants," vol. ii., No. 127. The specimen in the British Museum Herbarium, from W. K. Loftus, has young leaves of the same type as *F. alliacea*, Boiss; and the fruits in the Hanbury Herbarium resemble those of *F. rubricaulis*, Boiss.

c, *d*. Leaf.

This is a leaf of the assafœtida plant of the Edinburgh Botanic Gardens (*Narthex Assafœtida*, Falc), "given me by Professor Balfour, and cultivated for several years under a south wall in the garden at Clapham Common."

[This specimen has some of the ultimate segments distinctly serrate at the apex, with three to five teeth, and one, rarely more, teeth on the lower half of some of the segments. This feature can also be observed in Falconer's original specimen in the Kew Herbarium.]

e. Portion of leaf.

From the Apothecaries' Garden, Chelsea; May, 1849.

[This specimen has very broad segments, like some of those of *F. fœtidissima* in the Society's Herbarium, but the segments are entire, not serrate. The tips of the segments are, however, imperfect. On this sheet are placed some from the Botanical Gardens, Edinburgh, 1859, which agree with those of *F. Narthex.*]

258. Ferula glauca, L.

a. Leaf.

b. Inflorescence, and detached umbel of fruits, and pen and ink sketch of a flower.

"From a plant which flowered under the south wall at Clapham Common, May, June, 1874. The leaves are not glaucous beneath, but the stem is of a beautiful glaucous purple."

259. Ferula nodiflora, L., var. α genuina, Gr. and Godr. (F. communis, D. C.)

a. Portion of leaf.

Carte, Corsica; June, 1868.

[On this sheet a portion of a leaf of *F. glauca* is placed side by side with one of *F. nodiflora*, var. α *genuina*; Gr. Godr., showing the more capillary, erecto-patent segments of the latter as contrasted with the distinctly patent, almost divaricate, shorter segments of *F. glauca, L.*]

b. Portion of inflorescence bearing flowers, and pencil drawing of the growing plants.

260. Fœniculum dulce, D. C.

a. Leaves and detached umbels of ripe fruit.

Grows to a height of from 2 to 6 feet. Cultivated for its seeds at Jeunas, near Nismes; 21 Oct., 1859.

b. Flowering and ripe fruiting umbels.

Raised from Nismes seed, Clapham Common; 25 Aug., 1872.

261. Fœniculum vulgare, Gaertn.

a. Small plant, with leaves and detached ripe fruit.
Raised at Clapham, from seed imported from Bombay; 29 Aug., 1871.

b. Portion of leafy stem, and flowering and fruiting umbels.
Smyrna; Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

c. Leaves, flowering and young fruiting umbels.
Wandsworth Common; escaped? 5 Sept., 1854.

d. With flowers and young fruit. *(Fœniculum officinale, All.)*
Clapham, near London; cultivated; 1859. "This is the plant cultivated in English gardens for culinary purposes."—D. H.

e. Flowering branches.

f. Leaf and detached umbel of fruit.
Bologna fennel; garden of the Palazzo Orengo, La Mortola, near Mentone; 16 April, 1872. Plant about 1½ feet high; stem thick.

g. Branch in flower.

262. Fœniculum piperitum, D. C.

a. Radical leaves and fruiting branch.
Nazareth, Syria (very abundant); 28 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

b, c. Young plants showing radical leaves.
La Mortola, near Mentone; May, 1872.

263. Pimpinella Saxifraga, L.

a. Plant, with root, flowers, and immature fruit.
Hertford Heath; 16 Sept., 1854.

264. Seseli montanum, L. (S. multicaule, Jacq.) Hort. Vindob., tab. 129.

a. Plant, with root, flowers and fruit, and detached fruits.
Dijon; 11 Oct., 1859.

265. Seseli tortuosum, L.

a. Plant, with portion of root and in flower.
St. Remy, Bouches du Rhone; 18 Oct., 1859.

266. Sison Amomum, L.

a. Plant in fruit.
Turin; 11 Sept., 1860.

SERIES III. DIPLOZYGIÆ.

267. Coriandrum sativum, L.

a. Plant in flower, with radical leaves and root.

b. Fruiting stem with radical leaves.

Near Witham, Essex, where it is cultivated in fields; 31 July, 1872.

268. Daucus Carota, L.

a. (1 and 2) With flower and detached fruits.

1. Gravesend; July, 1854. 2. Wandsworth Common, Aug., 1854.

269. Thapsia garganica, L.

a. Plant, with flowers and fruit.

Capaci, near Palermo, 18 May, 1872.

GAMOPETALÆ.

SERIES I. INFERÆ.

RUBIACEÆ.

270. Esenbeckia cymosa, Benth. MSS.

a. Branchlet in flower, and a specimen of the bark.

From De Warszewicz.

271. Gardenia tetrasperma, Roxb. "Chunja-wali."

a. Leafy twig.

Probably an Indian specimen; no locality given.

272. Spermacoce lævis, Griseb. (? Borreria parviflora, Meyer.)

a. Plant in flower.

Specimen d'une autre Borreria; Dr. A. Destruge, Guayaquil.

[The leaves of this plant are broader than those of *Spermacoce* species, and are decidedly reticulate on the upper surface, almost like the leaves of a melastomaceous plant.]

273. Spermacoce species.

a. Plant in flower.

Guayaquil, Dr. A. Destruge; received Feb., 1865.

(1) To this sheet is attached a small portion of the plant in blossom, flowered in the open air at Clapham, Sept., 1865.—*Borreria Spruceа* of Dr. Destruge. (2) A specimen from the same locality and collection.

DIPSACEÆ.

274. Scabiosa Olivieri, Coult. "Sher singh."

a. Entire plant in flower.

COMPOSITÆ.

TRIBE III. ASTEROIDEÆ.

275. Conyza absinthifolia, D. C. "Zergul" or "Jarzme" (Pu); "Chota" (Hind).

a. Plant in flower.

276. Conyza gnaphalioides, H. B. K.; Heterochæta stricta, Benth. "Monte Rucio."

a. Plant in flower, with root.

Attached to this specimen is a letter signed R.S., 17 Jan., 1865, in which it is stated that the writer was completely cured of ascarides, by an enema composed of a strong decoction of the "Monte Rucio," and he considers it a powerful and safe anthelmintic. "It can be had in any quantity in the Andes of the north of Peru, especially around Ayabaca.'

277. Erigeron canadense, L.

a. Plant in flower.

Railway Banks, Battersea; 9 Sept., 1854.

TRIBE IV. INULOIDEÆ.

278. Blumea grandis, D. C.

a. Leafy twig.

From F. H. Ewer; Canton; sent as the plant from which Ngai camphor is made; 1873.

279. Blumea oxyodonta, D. C.

a, b, c. Flowering stem.

Paris Exhibition, 1878. In the collection of drugs from the Dutch East Indies.

280. Inula Helenium, L.

a. Leaves only.

No locality given.

281. [Iphiona rotundifolia, O. & H.] (Oliver Fl. Trop. Africa, vol. iii., p. 360).

a. Leafy and flowering twigs.

Somali Country; Capt. Playfair; received Dec., 1862.

This is the plant which yields most of the drug called by Vaughan "Dagaboot" (more correctly "Gagaboot.") See Phar. Journ. (1), vol. xii., p. 385.

282. Iphiona scabra, D.C.

a. Plant in flower.

Aden; T. W. H. Tolbort; 1869.

283. [Pulicaria sp.] Platychæte sp.

a. Twig in flower.

This specimen bears no locality or date.

284. [Pluchea pinnatifida, Hook f.] (Oliver Fl. Trop. Africa, vol. iv., p. 330).

a. Flowering branch.

Somali Country; Capt. Playfair. This is one of the plants, the stalks of which constitute the drug called by Vaughan "Dagaboot" (more properly "Gagaboot").

TRIBE V. HELIANTHOIDEÆ.

285. Acanthospermum xanthioides, D.C. "Picao da praia."

a. Plants in flower and fruit.

Bergno, Cemètiere de St. J. Batiste; 16 June, 1872; from M. Glaziou.

286. Eclipta erecta, L. "Changra" (Hind.)

a. Flowering twig.

Stewart, 'Punjab Plants,' p. 126.

287. Verbesina persicifolia, D.C. "Guachin."

a. Flowering stem (without root) and detached flowerhead.

H. Finck; Cordova, Mexico; 1865.

"A decoction of the root (half an ounce to a pint of water) is given in all complaints having reference to the sexual organs of females."

Near to *V. helianthoides*, H. B. K. (*fide* Hemsley). A letter is attached to this specimen from C. H. Schultes giving the name *V. persicifolia* to the plant.

288. Xanthium spinosum, L.

a. Entire plant in flower.

1. St. Remy, (Bouches du Rhone); 18 Oct., 1859.

TRIBE VII. ANTHEMIDEÆ.

289. Anthemis altissima, D.C.

a. Plant in flower.

Raised at Clapham, 27 July, 1872, from seeds received from the Botanical Garden, Hamburg.

[This plant was labelled by D. Hanbury *Anacyclus officinarum* Haynes, the name under which he received the seed. The correct name was given by Dr. H. Trimen, when looking through the Herbarium for information for "Medicinal Plants."]

290. Anthemis Cotula, L.

a. Plant in flower.
Maldon, Essex; 10 Sept., 1855.

291. Anthemis nobilis, L.

a. Plant in flower.
Wandsworth Common; Aug., 1854.

b. Ditto, *flore pleno.*
Cultivated at Mitcham.

c. Ditto.
Plant from Mitcham, cultivated in the Garden at Clapham Common; 1873.

292. Artemisia Absinthium, L.

a. Branch in flower.
Drachenfels, on the Rhine; 20 Aug., 1855.

293. Artemisia elegans, Roxb. "Duranga."

a. Leafy branch.
Stewart, 'Punjab Plants,' p. 120.

294. Artemisia vestita, Wall. "Tarkha" (Pers.)

a. Leafy branch.
Stewart, 'Punjab Plants,' p. 120.

295. Artemisia vulgaris, L.

a. Branch in flower.
Battersea Fields; 9 Sept., 1854.

296. Artemisia species.

a. Flowering branch.
From Pastor Thust, Sarepta, Southern Russia; 1872.

297. Artemisia species.

a. Plant in flower.
Arid hill above Damascus, Syria; 8 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

298. Matricaria Chamomilla, L.

a. Entire plant in flower.
Clapham; July, 1854.

b. Flowering branch.
St. Mandrier, near Toulon; 15 May, 1854.

299. Matricaria Parthenium, L.

a. (1) Flowering branches.

(2) Ditto, *flore pleno.*

b. Ditto, *flore pleno.*

Garden at Addiscombe Farm, near Croydon; 17 July, 1872.

c. Ditto.

Gravesend; July, 1854.

d. Flowering branch.

Old cottage garden, near Chesterfield; 22 July, 1872.

TRIBE VIII. SENECIONIDEÆ.

300. Arnica montana, L.

a. Plant, with root and flower and fruit.

(1) Gérardmer, Vosges; 12 Aug., 1855. (2) *Flore pallido,* Ballon de Servance; 16 Aug., 1855.

b. Plant in flower (*flore pallido*).

Meadows near Arona in the Lago Maggiore; June, 1852; D. & T. H.

301. Tussilago Farfara, L.

a. (1) Flowering scapes only.

Penshurst; 13 April, 1855.

(2) Plant with leaves.

Wandsworth Common; June, 1857.

TRIBE XI. CYNAROIDEÆ.

302. Carthamus tinctorius, L.

a. Flowering branch.

Stuttgardt; cultivated; Sept., 1862.

303. Carthamus oxyacantha, Bieb. "Kashbiri."

a. Flowering branch.

Stewart, 'Punjab Plants,' p. 123.

"Parched seeds eaten, also oil made from them."

304. Cnicus benedictus, L.

a. Flowering branch.

Montpellier; May, 1854.

305. Echinops echinatus, Roxb. "Joz or Karor."

a. Flowering twig.

Apparently an Indian specimen; no name given.

TRIBE XII. MUTISIACEÆ.

306. Chuquiragua insignis, Humb. and Bonpl.

a. Flowering tops.

From one small package imported as a drug in 1864.

TRIBE XIII. CICHORIACEÆ.

307. Cichorium Intybus, L.

a. Radical leaves and flowering branch, and detached flowers.

Battersea Fields; 9 Sept., 1854.

308. Lactuca virosa, L.

a. Flowering stem.

Royat, near Clermont Ferrand; 23 Sept., 1858.

309. Microrhynchus nudicaulis, Less. "Machala?"

a. Flowering scape, without leaves.

Stewart, 'Punjab Plants,' p. 127.

b. Plant, with radical leaves and inflorescence. "Bhatal."

No locality given.

SERIES II. HETEROMERÆ.

VACCINIACEÆ.

310. Vaccinium uliginosum, L.

a. Branches bearing (1) flowers and (2) fruit.

(1) Hohneck, Vosges; 13 Aug., 1855. (2) Mont Doré; Sept., 1858.

311. Vaccinium Vitis-Idæa, L.

a. Branches bearing flowers and young fruit.

(1) Valley of the Nologne, Gérardmer, Vosges; Aug., 1855. (2) Pariset, near Grenoble; 18 June, 1857.

ERICACEÆ.

312. Arctostaphylos officinalis, Winn. et Grab. (Arbutus Uva-Ursi, L.)

a. Branch bearing fruit.

Pariset, near Grenoble; 18 June, 1857.

MYRSINEÆ.

313. Moesa picta, Hochst.

a. Branch in fruit.

From Dr. Th. W. C. Martius, Erlangen, 1862.

("*Moesa lanceolata*, Forsk., *fide* Henkel; 2 Oct., 1863.")—D. H.

SAPOTACEÆ.

314. Chrysophyllum Cainito, L.

a. Flowering twigs.

A large tree, common about Panama; Sutton Hayes, No. 636; 25 Sept., 1862.

315. Isonandra Gutta, Hook.

a. Leaves and portion of stem, with flower buds.

From Dr. W. H. De Vriese; 1857.

EBENACEÆ.

316. Diospyros Lotus, L.

a. Leafy twig.

Botanical Garden, Trieste; 15 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

STYRACEÆ.

317. Styrax Benzoin, Dryander.

a. Flowering branchlets.

Java; received 1868. Also fruits (for which see the Hanbury Collection of Materia Medica).

318. Styrax officinale, L.

a. Branchlets, bearing flowers.

(1) Sochia, Asia Minor; May, 1860; A. O. Clarke. (2) Syria, grows in the Lebanon (Afga), woods on Mount Carmel, Mount Tabor, about Nazareth, Jenin, &c., &c.; Dr. J. D. Hooker and D. Hanbury; 1860.

b. Branches bearing flowers, and detached fruits.

Solliès-Farlède, near Toulon; 17 May, 1854.

SERIES III. BICARPELLATÆ.

OLEACEÆ.

319. Fraxinus Bungeana, D. C.

a. Twig, with the Pe-la insect on it, and detached leaves.

Received from Dr. Bretschneider, through Dr. Hance; 16 Nov., 1874. On this specimen is attached an extract of a letter from Dr. Bretschneider, Pekin, to Dr. H. F. Hance, British Vice-consul, Whampoa:

". . . Vousi trouverez quelques spécimens de l'arbrisseau qui nourrit l'insècte à cire et dont on tire la cire végétale (Pe-la). Ces branches malheureusement sans fleurs ou fruits, m'ont été apportées par un paysan des montagnes. L'arbrissean se trouve à l'etat sauvage dans les

montagnes à l'orient du "Po-hu-shan." Son nom indigène est "Siao-k'u li." Il a des fleurs blanches. Les feuilles sont très amères (k'u=amer en Chinois). On en tire de la cire végétale qu'on vend à Pekin, et qu'on dit meilleure que celle du sud, que comme vous savez, est produite sur une espèce de *Ligustrum* et un *Fraxinus*. Voila tout les informations que je puis vous donner sur cette plante intéressante. J'ignorais jusqu'à present que l'insecte à cire se trouve aux environs de Pekin. . . . Je crois que notre ami Mons. D. Hanbury serait bien aise de posséder un specimen de cet arbrisseau, car il a publiée quelques notes sur la cire végétale."

b. (1) Leafy twig, with flowers.

Ex. Herb. S. Petrop; specimen collected by Bunge, a copy of whose ticket is on the sheet, and is as follows :—

"*Fraxinus floribunda* Wall? Conferenda videtur diversa foliorum forma; floret Aprili et Maio, in montes Hun-huanssy and Ssi-jüi-ssy."

(2) Leafy twig, with flowers.

Near Peking; collected by Dr. S. U. Bushell; received Nov., 1874.

320. Fraxinus Chinensis, Roxb.

a. Branchlet, with detached flowers and fruit.

There are attached to this sheet a drawing of the male and female insect, and a leaf of a plant from Dr. McCarter, 1867. "The tree upon which the wax insect feeds." From Thomas Hanbury, 1858.

b. Branchlet, with detached flowers.

"Wax tree." Shanghai; cultivated; 1857. At Shanghai, the flowers are produced in April before the leaves appear.

Attached to this sheet is a letter from Dr. J. D. Hooker; dated July 25th, 1859, as follows :—

"I am strongly inclined to believe that your *Fraxinus* is *F. chinensis*. Roxb.; Fl. Ind. i., 150; D. C. Prod. viii., 277., albeit that it does not agree well with the description. I find a drawing of it amongst Roxburgh's, which I have now at Kew."

321. Fraxinus excelsior, L. Var. oxyphylla.

a. Branchlets in fruit.

Botanical Gardens, Naples; 23 May, 1872.

b. Branchlet in fruit.

Palermo; received from Prof. Todaro with the names (*Fraxinus rostrata*, Gussone, *F. oxyphylla*, Bieb.; *F. oxycarpa*, Willd).

c. Leafy twig, with flowers.

d. (1) Twig, with fruit from a wild tree.
(2) Twig, with pale leaves.
Cultivated for manna at Castelbuono, Madonie, Sicily; from Prof. Todaro, Palermo; 1872.

e. Two leafy twigs.
(1) Varieta detta Areva, cultivated at Castelbuono; (2) Varieta del Pittore, in fruit, cultivated at Castelbuono.

f. Leafy twigs, with fruit.
Civita Vecchia; 24 May, 1872.

g. Leafless flowering, and leafy fruiting twig.
Valdemona, Sicily; from Prof. Todaro; 1872. [The bracts are unusually downy and the style is persistent on the young fruits.]

h. Fruiting leafy twig.
Palermo; from Prof. Parlatore, Florence; 1868.

i. Flowering leafless twig, and fruiting leafy twig.
(1) Flowers; Wimbledon; 28 April, 1855. (2) Merstham; 27 July, 1858.

j. Leafy twig.
Clapham Common; 1864; leaflets large, slightly serrated.

Var. monophylla. (F. monophylla, Desf.; F. heterophylla, Willd.)

a. Leafy shoot.
[Leaflets large, mostly solitary, and coarsely serrate.]

b. Fruiting twig.
Clapham Common; 1864; [Leaves trifid or ternate, coarsely serrate, incised towards the apex.

c. Leafy shoot.
[A form resembling *monophylla* in the shape of the leaflets, but with 3–7 and slightly serrated leaflets.]

322. Fraxinus Ornus, L.

a. Twig with flowers and another with fruit.
Kew Gardens; May and Aug., 1859.
To this specimen is attached a copy of the description of *F. Ornus*, L. and *F. rotundifolia*, Lam., copied from D.C. Prod. viii., p. 274.

b. Twig in fruit.
Monaco; 28 May, 1866.

c. Twig in flower.
Turbia, near Monaco; 27 May, 1866.

d. Leafy twig.
Corsica; June, 1868.

e. Ditto.
Roadside near Civita Vechia (planted ?); 24 May, 1872.

f. Leafy twig with fruit.
Cultivated for grafting (coltivato por inastarla); Castelbuono, Sicily; from Prof. Todaro; 1872.

g. Leafy twig with fruit.
Madonie, Sicily; from Prof. Todaro, as *F. Ornus f. rotundifolia*; 1872.

h. Leafy twig with flowers.
Cultivated for manna at Castelbuono, Madonie, Sicily; from Prof. Todaro; Palermo; 1872.

i. Leafy twig with fruit.
This is labelled: "var. caps. apice angustatis." To this sheet is attached an envelope containing a leaf and seed of *F. Bungeana* from Dr. H. F. Hance; received 15 July, 1872.

j. Leafy twig, with fruit.
Vicaretto, Madonie, Sicily; from Prof. Todaro; 1872.

k, l. Leafy twigs, with fruit.
Cultivated for manna; Instituto agrario Castelnuovo, near Palermo; 21 May, 1872. [One specimen has lanceolate acuminate, and the other cuspidate leaflets.]

m. Leafy twigs, with fruit.

n. A sterile branch.
Botanical Gardens, Palermo; 17 May, 1872. [In specimen *n* the leaves are more oblong and cuspidate than in *m*.]

o. Leafy twig, with fruit.

p. Leafy twig.
Cultivated for manna at Capaci, near Palermo; 18 May, 1872. [The leaflets taper more at the base in *o* than in *p*.]

q. Leafy twig, with fruit.

From a tree, the bark of which had been gashed for manna; Park of La Favorita, near Palermo; 19 May, 1872.

r, *s*. Leafy twigs, with flowers.

Cultivated for manna at Chiaranda, near Palermo; from Prof. Todaro, Palermo; May, 1872. [Specimen *s* has the leaflets more obtuse than, and four times as long as, those of *r*.]

t. (1) Leafy twig, with young fruit and rounded leaflets.

t. (2) Leafy twig, with small leaflets.

Eza, near Nice; uncultivated; 4 June, 1872.

u. Ditto, with large leaflets.

v. Leafy twig, with the fruits all abortive.

Eza, near Nice; 4 June, 1872. [The leaflets are very long and narrow.]

w, *x*, *y*. Sterile branches and shoots.

Near the valley of the Crati, Calabria; 5 May, 1872. [The leaflets vary in form in these specimens.]

z. Leafy twigs.

Corsica; June, 1868. [The leaflets are nearly orbicular.]

Var. Bungeana, Hance.

a. Leafy twig in fruit.

A lofty tree; mountains of Pa-hua-shan, three days' journey from Pekin. "Frêne des montaignes de Pekin, pour Mons. D. Hanbury, from Dr. Bretschneider, 1874; received 16 Nov., 1874."—D.H.

323. Jasminum floribundum, R. Br.

a. Twig, with leaves and young fruit.

From Dr. T. W. C. Martius, Erlangen; 1862.

324. Jasminum fruticans, L.

a. Twigs, with flower and fruit.

Near Avignon; 5 and 6 May, 1854.

325. Jasminum grandiflorum, L.

a. Twig, with flowers.

Cannes; 7 July, 1857. Cultivated on the large scale on account of its flowers, which are used in the manufacture of perfumery.

326. Jasminum officinale, L.

a. Twig in flower.

Cannes; 7 July, 1857. Cultivated as the stock upon which to graft *Jasminum grandiflorum*, the flowers of which are used by the manufacturing perfumers.

327. Ligustrum Ibota, Siebold.

a. Twig bearing flowers.

Nagaski, Japan; "Coll. Pharmacognostica," T. D. Vrijdag-Zijnen; Herb. No. 741; 1857. See Siebold et Zuccarini, Fl. Jap., 167, No. 565; Siebold, 'Acta Batav,' vol. xii., p. 36.

The following extract from a letter, dated La Haye, le 10 Mai, 1857, from Mons. T. D. Vrijdag-Zijnen, referring to these specimens, is attached to this sheet:—

"Je me permets de vous observer que je possède votre *Chinese Insect wax* comme production Japonnaise du *Ligustrum Ibota*, S. et Z. la çire elle-même porte dans notre Musée Japonnais le nom de *Ibota wax*."

"Le Dr. Blechrode, parlant de quelques objets de l'Exposition Universelle à Londres, dit d'avoir rencontré le cire exposée comme '*Ibutta* ou *Jubeta* wax,' produit par le *Ligustrum glabrum* de Kæmpfer. Le fragment en ma possession doit son origine au Musée mentionnée et le Dr. Von Siebold, autorité compétente en cas de produits Japonnais a confirme aussi bien la determination de la cire que du Ligustrum."—D.H.

328. Olea chrysophylla, Lam.

a. Branch, with flowers and fruit.

From Dr. Th. W. C. Martius, Erlangen; 1862.

329. Olea europæa, L. (Willd ?)

a. (1 and 2) Leafy twigs.

(1) Smyrna.

(2) Near Ramah (between Safed and Caiffa); 31 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

b. Branchlet bearing flowers.

Toulon; 12 May, 1866.

c. Branchlet bearing (1) flowers and (2 and 3) fruit.

(1) Rognac, near Marseilles; 13 July, 1857.

(2) Young fruit; Congeniês, near Nismes; Nov., 1858.

(3) Nearly mature fruit. A. C. H. Jerusalem; E. Atkinson; 1860.

d. Branchlet bearing fruit.

South wall at Clapham Common; 10 Jan., 1864.

330. Phillyrea angustifolia, L.

a. Branches bearing flowers and fruit.

(1) Cannes; 8 July, 1857; young fruit. (2) Toulon; May, 1854; flowers.

SALVADORACEÆ.

331. Salvadora oleoides, Dcne.

a. Leafy twig.

Stewart, 'Punjab Plants,' p. 175. Native name: "Jit," or "thal," or "jil," and of the fruit, "pilu."

332. Salvadora persica, Royle.

a. Branch in flower.

Engedi, 'Plants of Southern Syria,' B. T. Lowne; 1863-4.

APOCYNACEÆ.

333. Echites peltata, Vell.

a. Flowering branch.

b. Branch bearing ripe fruit.

Joaquim Correa de Méllo; Campinas, Brazil; 1867; 13 June, 1866.

334. Geissospermum Vellosii, Allem.

a. Branch in flower.

From M. Glaziou, Rio de Janeiro, labelled, apparently by him: "Chemin de la Bijnea;" 14 Feb., 1872.

335. Nerium Oleander, L.

a. Branch bearing flower and fruit.

Shore at Mejdel, Lake of Tiberias; 30 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

336. Symplocos salicifolia, Griseb. (near to **S. lanceolata** A. D. C.)

a. Branches with flowers and young fruits.

No. 21. "Congonha miuda" (*i.e.* small mate); Theodor Peckolt; Cantagallo, Brazil; 1867.

337. Vinca major, L.

a. Branch bearing fruit.

Uriage, near Grenoble; Aug., 1864. Probably not wild.

338. Vinca media, Link et Hoffm.

a. Branch in flower.

Castelnau, near Montpellier; March, 1851; from Albert Moitessier, Montpellier.

339. Vinca minor, L.

a. Plant with flower and fruit.

(1) Vienne, (Isère); 27 April, 1854. (2) Plombières, Vosges; 10 Aug., 1855. (3) Nutfield, Surrey; 19 March, 1859. (4) Corps, (Dauphiny); 17 Aug., 1864; in fruit.

ASCLEPIADACEÆ.

340. Asclepias tuberosa, L.

a. Flowering branch.

Gloucester, New Jersey; 30 June, 1860.

341. Hemidesmus indicus, R. Br.

a. Roots with leaves attached.

Specimens selected from a bundle of the roots sent by Dr. L. W. Stewart; Madras, 1865.

b, c. Branches in flower.

Ex Herb. Wight., Ind. Oriental. Sheet *c* has a pod containing ripe seeds attached to it.

342. Tylophora asthmatica, W. et Arn.

a. Twig, detached leaves and pod.

Mr. Moodeen Sheriff; Madras; 1868. Picked out of a specimen of the leaves as collected and dried for medicinal purposes.

343. Vincetoxicum officinale, Mœnch.

a. Flowering branch.

Toulon; 14 May, 1854.

b. Branches with flower and fruit.

Drachenfels, Rhine; 20 Aug., 1855.

LOGANIACEÆ.

344. [B. Lindleyana, Fort.]; Buddleia, sp. nov.?

a. Branch in flower.

No. 14, "Catanga de Mocha." "Affords an aromatic volatile oil." Theodor Peckolt, Cantagallo, Brazil; 1867. [This plant is a native of China.]

345. Buddleia polystachya, Fres.

a. Branch in flower.

From Dr. Th. W. C. Martius, Erlangen; 1862.

346. Spigelia Marilandica, L.

a. Flowering stem, and leafy stem with rhizome.

Specimens taken from the imported drug, 1872.

347. Spigelia pedunculata, Roem. et Schult. "Yerba de Huambia."

a. Plant in flower.

The poison plant of Guambia and Pitayo.

348. Strychnos M'Boundou, Heckel.

a. Leaves and portion of tap root.

"I likewise send a few leaves of the M'boundou or M'bomdu, the ordeal-tree mentioned by Paul du Chaillu. I could obtain any number of the plants."—Letter of R. B. N. Walker, dated Gaboon, 2 Oct., 1865. [See Cauvet, Matière Médicale, tom. ii., p. 662; and Pharm. Journ. (3) xxi., p. 928, and p. 920, No. 4.

GENTIANACEÆ.

349. Erythræa Centaurium, Pers.

a. Entire plant in flower.

Deal, Kent; July, 1844.

b. Ditto.

Grasse; 7 and 8 July, 1857.

350. Erythræa ramosissima, Pers.

a. Entire plant in flower.

Plain of the Leontes, between Damascus and Beyrout, Syria; 10 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

351. Gentiana lutea, L.

a. Flowering stem, with fruit.

Hohneck, Vosges; 13 Aug., 1855.

352. Gentiana cruciata, L.

a. Stem in flower.

Salzburg; 10 April, 1862.

353. Gentiana punctata, L.

a. Entire plant in flower, without root.

Col de Lautaret, Dauphiné; 27 June, 1857.

354. Menyanthes trifoliata, L.

a. Entire plant in flower.

Scotland; June, 1861.

BORAGINACEÆ.

Tribe I. Cordieæ.

355. Cordia Myxa, L. "Lasura" (Hl. & Pi.)

a. Leafy twig.

Stewart, 'Punjab Plants,' p. 152.

356. Cordia Sebestena, L.

a. Leaves only.

From Mr. Hugo Finck, Cordova, Mexico, 1866. Compared at the British Museum and Kew Herbarium. The specimen has as a label, apparently in Mr. Finck's handwriting, as follows:—

"*Diospyros formosissima*, a beautiful tree having bunches of large orange coloured, serrated, bell-shaped flowers. Wood, coal black with veins like mahogany. A native of Tierra Caliente."

Tribe III. Heliotropieæ.

357. Heliotropium europæum, L. "Mamana."

a. Plant in flower.

Stewart, 'Punjab Plants,' p. 154.

b. Flowering twig. "Pipal búti."

No locality given.

Tribe IV. Boragineæ.

358. Anchusa officinalis, L.

a. Plant in flower.

Briançon; 28 June, 1857.

359. Borago officinalis, L.

a. Plant in flower.

Toulon; May, 1854.

360. Cynoglossum officinale, L.

a. Branch in flower, and detached radical leaf.

Gravesend; July, 1854.

361. Symphytum officinale, L.

a. Flowering branch.

Battersea Fields; 9 Sept., 1854.

Var. patens, *floribus purpureis.*

a. Flowering branch.

Nancy, France; Aug., 1855.

CONVOLVULACEÆ.

362. [Convolvulus Hermanniæ, L'Herit.]

a. With leaves, and flowers, and fruits.

Cultivated in the garden, Clapham Common; 19 Oct., 1869. From seeds sent from Peru, by C. Farris.

363. Convolvulus Jalapa, Linn. (Convolvulus Jalapa, Bot. Mag. p. 1572).

a. Leafy stem, with detached flowers and seeds.

From Hugo Finck, Cordova, Mexico, 1866, and labelled "*Convolvulus Mechoacana,*" with large bulbs in a box, and some fresh seeds. (The seeds are covered at the upper end with a dense tuft of silky hairs, half an inch long.)

b. Leafy stem and detached flowers.

"From one of the tubers sent by Mr. Hugo Finck, cultivated in my hothouse, the leaves of this specimen were gathered. The flowers on this sheet were produced from a tuber I sent to Mr. G. Thuret, of Antibes." A label from M. Thuret, is attached to the sheet as follows:—"*Ipomœa Mechoacana,* Nutt.; flores purpurascente, Antibes; sub dio cult.; 17 Oct., 1866. A tracing from the figure in Bot. Mag., p. 1572, is also attached to this sheet.

c. Leafy stem, with detached and dissected flower.

Plant originally from H. Finck; cultivated at Clapham; Dec., 1868.

d. Leafy stem, with detached flower and leaf buds, and seeds from Mexico.

Cultivated at Clapham; 1 July, 1869; flowers in October.

364. Convolvulus Scammonia, L.

a, b. Leafy stem, with flowers.

Smyrna; 1854; Mr. S. H. Maltass.

c. Leafy stem, with flowers.

Cultivated in the garden at Clapham; 1854.

d. Stem, with very small leaves and flowers.

Cultivated in the garden at Clapham; 3 Oct., 1869.

365. Convolvulus scoparius, L. f. (Rhodorrhiza scoparia, Webb. et Berthel.)

a, b. Branch, with flowers.

Rocky hillsides, Barraco Santo, S.E. coast of Teneriffe; Dr. Carl Bolle; Aug., 1856; received from Dr. Bolle, 12 Nov., 1856.

366. [Ipomœa Purga, Hayne]: Exogonium Purga, Benth.

a, b. Leafy stem, with flowers.

Nov., 1867; cultivated at Clapham Common. Sheet *a* has attached to it a coloured illustration of the plant from Bot. Mag., p. 4280.

c. Leafy stem.

Clapham Common; 22 Sept., 1873.

d. Leafy stem, with flowers.

"Ootacamund, Madras, 1868. From tubers given by me to Mr. Broughton."

e. Horizontal subterranean stem, with young tubercles attached, and detached sections of tuber.

Cultivated; Oct., 1873.

367. Ipomœa simulans, Hanbury.

a, b. Leafy stem, with flowers and young fruits.

Sent as the plant which affords Tampico jalap; Sierra Gorda, Province of Guanajuato, Mexico; H. Finck, 1869. See *Journ. Linn. Soc.* (Botany), vol. xi., tab. 2.

SOLANACEÆ.

368. Datura alba, Nees.

a. Shoot, with flowers.

From a plant raised in an open border, Clapham Common; 4 Sept., 1871; from seed sent by Dr. G. Bidie of Madras. A pencil sketch of the flowers accompanies this specimen.

369. Datura Tatula, L.

a. Shoot, with flowers and young fruit, and detached flowers.

Garden, Clapham Common; 1872.

370. Hyoscyamus niger, L.

f. annuus.

a. Branch, with flowers and young fruits.

Bodicott, near Banbury, Oxfordshire; a stray plant; 4 Sept., 1872. Mr. Usher does not cultivate this variety.

f. biennis.

a. Leaves.

From rosettes of plants in their first year, with flowers and fruit.

b. Leaves.

From plants in their second year; Bodicott, near Banbury; 4 Sept., 1872.

371. Mandragora officinalis, Mill.

a. Leaves and flowers.

Nablous; 'Plants of Southern Syria;' B. T. Lowne; 1863-4.

372. Physalis Alkekengi, L.

a. Plant in fruit.

(1) Vineyard, Mont Rognon, near Clermont Ferrand, Auvergne; 21 Sept., 1858.

373. Solanum Dulcamara, L.

a. Branch, with flower and fruit. Two specimens.

(1) Clapham; 1854 (flower). (2) Clapham; 1873 (fruit).

374. Solanum nigrum, L. "Maku." (Hind).

a. Plant in fruit.

Stewart, 'Punjab Plants,' p. 160. [The leaves of this specimen are sparingly dentate.]

375. Solanum Jacquini, Willd. (S. xanthocarpum, Schrad.)

a. Small branch, with flowers and fruit.

(1) In fruit, Wady el Kelt, especially near Riha (the ancient Jericho), forming considerable bushes; 28 Oct., 1860; Dr. J. D. Hooker and D. Hanbury.

(2) With flower and fruit on separate branches; Jericho; B. T. Lowne; 1863-4.

376. Solanum torvum, Sw. "Frega plata."

a. Flowering branch.

Sonsonaté, State of San Salvador; Dr. Charles Dorat; Oct., 1860. Used as sarsaparilla.

377. Withania coagulans, Dunal. "Panir."

a. Fruiting branch.

Stewart, 'Punjab Plants,' p. 161.

378. Withania somnifera, Dunal.

a. Branches, with flowers and young fruit.
Rhodes; 22 Sept., 1860; D. H.

b. Ditto. "Iskand," or "Isband."
Stewart, 'Punjab Plants.' p. 161.

SCROPHULARINEÆ.

379. Digitalis purpurea, L.

a. Plant in flower.
Dorking; 25 June, 1858.

b. Leaves.
(No locality given); 1874.

380. Scrophularia nodosa, L.

a. Branch in flower.
Erith, Kent; 8 July, 1859.

381. Verbascum sinuatum, L. (?)

a. Flowering branch.
Lebanon; Sept., 1861; Dr. J. D. Hooker and D. Hanbury.

b. Flowering branch and detached radical leaves.
La Mortola, Mentone; 9 July, 1867.

"Should be *foliis caulinis integris decurrentibus.*"—D.H.
[In *a* the upper leaves are not decurrent, and the margins are irregularly sinuate-crenate.]

OROBANCHACEÆ.

382. Epiphegus Americanus, Nutt. (E. Virginianus, Bart.; Orobanche Virginiana, L.)

a. Plant in flower.
Schuylkill Falls; in damp places on the roots of beech trees; 10 June, 1868; E. Parrish.

[A specimen of the root of this plant occurs in the collection of North American drugs in the London Museum of the Pharmaceutical Society.]

PEDALINEÆ.

383. Sesamum Indicum, L.

a. A branch in flower and another in fruit.
Larnaka, Cyprus; 24 Sept., 1860; D.H.

[The seeds are of a pale brown colour, but are immature. It is therefore uncertain if it belongs to the variety with pale brown seeds.]

ACANTHACEÆ.

384. Dicliptera Roxburghii, Nees. "Zermasti."
a. Twig in flower.
Stewart, 'Punjab Plants,' p. 165.

SELAGINEÆ.

385. Globularia Alypum, L.
a. Twigs in flower (two specimens).
(1) Toulon; May, 1854. (2) Toulon; 12 May, 1866.

VERBENACEÆ.

386. Lantana alba, Miller. "Aspangul."
a. Twig in flower.
Common on all the hills; Dr. J. E. T. Aitchison.

387. Lippia citriodora, Kth.
a. Branch in flower.
No. 8, "Cidrilha;" Theodor Peckolt, Cantagallo, Brazil; 1867.

388. Lippia nodiflora, Reil. "Bokhan" (Pi).
a. Leafy twig.
Stewart, 'Punjab Plants," p. 166.

389. Verbena officinalis, L.
a. Plant in flower.
Gravesend; July, 1854.

390. Vitex Agnus-castus, L.
a. Branch (1) in fruit and (2) in flower.
(1) Valence; 16 Oct., 1859. (2) Smyrna; 21 Sept., 1861. "Very common in Syria."—D. H.

391. Vitex Negundo, L. "Samalu" (Hind).
a. Leafy twig.
Stewart, 'Punjab Plants,' p. 166.

LABIATÆ.

392. Ajuga Chamæpitys, Schreb.
a. Plant in flower (two specimens).
(1) Sollies-Farlède (Var.); 17 May, 1854. (2) Dartford, Kent; 21 June, 1856.

393. Ballota limbata, Benth. "Kanspiri." (Pu.)

a. Leafy branch.

Stewart, 'Punjab Plants,' p. 167.

394. Cunila mariana, L.

a. Plant in flower.

Schuylkill Falls; 10 June, 1860.

395. Dracocephalum Royleanum, Wall. (Lallemantia Royleana, Benth.) "Tukhm bilang."

a. Plant bearing fruit.

Stewart, 'Punjab Plants,' p. 168. "The seeds are considered cooling and sedative."

396. Hyssopus officinalis, L.

a. Plant in flower.

Val de Queyras, Dauphiny; Aug., 1864.

397. Lavandula dentata, L.

a. Plant in flower.

Cultivated La Mortola, near Mentone; 1 June, 1872.

398. Lavandula latifolia, Villars. (L. Spica, D.C.; L. Spica, var. β, L.)

a. Branch in flower. "Aspic."

Congenies (Gard.); Oct., 1849.

b. Branch in flower.

St. Remy, Bouches du Rhone; 18 Oct., 1859.

c. Branch in flower.

High land between Nice and Mentone; Aug., 1867. [This specimen has linear bracts overtopping the flowers.]

399. Lavandula Spica, L. (excl. var. β.)

a. Branch in flower.

(1) Bourg d'Oysans; 21 June, 1857.

(2) Valley of the Nervia, near Ventimiglia; 11 June, 1872. This specimen has rhomboidal bracts and interrupted whorls of flowers.

b. Branch in flower.

Cultivated, Mitcham; 1850

400. Lavandula Stœchas, L.

a. Branch in flower.

(1) Toulon; 14 May, 1854.

(2) Hyères; 14 May, 1866.

[The Hyères islands were formerly called the Stœchades from the abundance of this plant in the islands.]

401. Lavandula vera, D. C.

a. Branch in flower.

High land between Nice and Mentone; July, 1867.

Growing in company with *L. latifolia*, Vill., which, however, was scarcely in flower.

[This specimen has rhomboidal bracts, and the lowest whorl of flowers are separated from the rest of the spike.]

402. Marrubium vulgare, L.

a. Plant in flower.

Larnaka, Cyprus; 24 Sept., 1860. [A very woolly specimen.]

403. Melissa officinalis, L.

a. Plant in flower.

Cannes, South of France; 8 Aug., 1857. "Naturalized?"

404. Mentha piperita, L.

a. Branch in flower.

Cultivated at Mitcham by Mr. Arthur; Aug., 1869. Attached to this sheet are some leaves of the Chinese Peppermint Oil Plant, from Dr. H. F. Hance, 1872, [*Mentha arvensis*, var. *glabrata*, Holmes], with detached leaves.

b. Branch in flower.

"Black" peppermint; from Mr. Carter, Thornton Heath, near Croydon; 18 Aug., 1870.

c. Branch in flower, with detached leaves (*Mentha piperita*, Huds.).

"White" peppermint; from Mr. Carter, Thornton Heath, near Croydon; 18 Aug., 1870.

405. Mentha Pulegium, L.

a. Plant in flower.

(1) Dry and sterile places; Grasse, 7 July, 1852.

(2) Reigate; 27 July, 1858. [This is a specimen of a small form of *Mentha arvensis*, placed here for comparison ?]

(3) Smyrna; 21 Sept., 1860.

406. Mentha viridis, L.

a. Plant in flower.

Wandsworth Common; 5 Sept., 1851. To this sheet is attached a specimen of the spearmint used for the manufacture of essential oil by H. G. Hotchkiss, Lyons, Mayne County, U.S.A., 1871.

407. Nepeta Glechoma, Benth. (Glechoma hederacea, Smith.)

a. Plant in flower.

Wimbledon; 28 April, 1855.

408. Nepeta ruderalis, Ham. "Mastiara" (Pu).

a. Plant in flower.

Stewart, 'Punjab Plants,' p. 170.

409. Origanum vulgare, L.

a. Plant in flower.

Near Sheerness; 1850. This is the plant we distilled at Plough Court. See Pharm. Journ., vol. x., p. 324.—D. H.

b. Plant in flower.

Approaching var. *prismaticum*, Gaud., but with larger and more lanceolate leaves; Rhine, Sept., 1862.

β **prismaticum, Gaud.** (*O. creticum*, D.C. fl. fr. 2, p. 558).

a. Plant in flower.

Draguignan; 10 July, 1857.

410. Plectranthus rugosus, Benth. "Togal" or "Diwana sarman." (Pu.

a, *b.* Leafy twigs.

"In great luxuriance on Mount Tilla;" (Dr. J. E. T. Aitchison). "Used in bedding to keep off fleas;" (Stewart).

411. Rosmarinus officinalis, L.

a. Branches in flower and fruit.

Solliès-Farlède (Var.); 17 May, 1854.

412. Satureia hortensis, L.

a. Plant in flower.

(1) Congenies, near Nismes; 21 Oct., 1859.

413. Satureia montana, L.

a. Plant in flower.

(1 and 2) Garrigues, Congenies; Oct., 1849.

(3) Congenies, near Nismes; 18 Oct., 1859.

414. Salvia Moorcroftiana, Wall. "Papar."

a. (1) Fruiting branch, and (2) Flowering branch.

(1) From T. W. H. Tolbort. (2) Raised from seed of the same; flowered at Clapham; 25 Aug., 1871. Stewart, 'Punjab Plants,' p. 172.

415. Salvia officinalis, L.

a. Branch in flower.

Villeneuve les Avignon; 2 May, 1866.

b. Branchlets and detached fruiting stem.

Caiffa, Syria; 15 Oct., 1860. Dr. J. D. Hooker and D. Hanbury.

[The leaves are more densely tomentose, and more ovate than in specimen *a*, and are nearly entire at the margin.]

416. Salvia pratensis, L.

a. Plant in flower.

Vienne (Isère); 27 April, 1854.

417. Salvia Sclarea, L.

a. Plant in flower.

Near Cannes, South of France; 7 July, 1857.

418. Salvia triloba, L.

a. Flowering branch, with two galls at its base.

"Plants of Southern Syria"; B. T. Lowne, 1863-4.

419. Teucrium Chamædrys, L.

a. Flowering branch.

Bourg d'Oysans, Dauphiné; 25 June, 1857.

420. Teucrium Creticum, L.

a. Branch in flower.

Safed, Syria; E. Atkinson; 1860.

421. Teucrium montanum, L. (German "Poley mountain.")

a. Plant in flower.

(1) Bourg d'Oysans, Dauphiné; 21 June, 1857.

(2) Dijon; 11 Oct., 1859.

422. Teucrium Polium, L. (French "Poley mountain.")

a. (1 and 2) Plant in flower.

(1) Sommires (Gard.); 29 May, 1854.

(2) Smyrna; S. H. Maltass; 1854. [The latter is a more robust specimen, with a denser white pubescence.]

b. Plant in flower.

Grasse (Var.); 6 July, 1857.

423. Teucrium Scorodonia, L.

a. Plant in flower.

Hertford; 16 Sept., 1854.

424. Thymus Chamædrys, Fries.

a. Plant in flower.

Wandsworth Common; Aug., 1854.

b. Ditto.

Ben Voirlich, Loch Lomond, near the summit; 27 June, 1861.

c. (1 and 2) Ditto.

(1) Pont du Gard; 30 May, 1854.

(2) Plombières, Vosges; Aug., 1855.

d. Ditto.

Valence; 14 Oct., 1859.

[The Valence specimen (*d*) is much more hairy than are the specimens *a*, *b*, *c*.]

425. Thymus vulgaris, L.

a. Plant in flower. Three specimens.

(1) Vaucluse; 5 May, 1854. (2) Pic de St. Loup; 24 May, 1854. (3) Congenies; 1850, C. A. Majolier.

Specimen 3 is labelled: "Examined by Bentham, see my paper on Oil of Thyme sold as Oil of Origanum." Pharm. Journ., vol. v., p. 6.—D. H.

PLANTAGINACEÆ.

426. Plantago Psyllium, L.

a. Plant in flower.

Toulon; May, 1854.

MONOCHLAMYDEÆ.

SERIES I. CURVEMBRYEÆ.

NYCTAGINACEÆ.

427. Boerhavia diffusa, L. β procumbens, Roxb. "Kawar khaira."

a. Plant in flower.

Stewart, 'Punjab Plants,' p. 182.

428. Neea species.

a. Leaves and inflorescence, with immature fruits and detached fruits.

"No. 359. *Pisonia* or *Neesia*, perhaps a new species. In damp thick woods, Lion Hill Station, Panama; 16 Sept., 1862."

"A shrub, 4 to 6 feet high. This is a most interesting little shrub, and Hooker has referred it to Pisonia, and thinks it may be new. It is more like Neesia to me, the stamens in all the flowers I have seen being included. It is a very neat shrub, the branchlets and leaves shining, and of a purplish red tinge."—S. Hayes.

[This plant is mentioned in Godman and Salvin's Biologia Centr., Amer. (Bot.), vol. iii., p. 9, No. 3., but the species is not determined, the material being insufficient.]

AMARANTACEÆ.

429. Aerua javanica, Juss. "Bui." (Pi.)

a. Flowering twig.

Stewart, 'Punjab Plants.'

CHENOPODIACEÆ.

430. Caroxylon fœtidum, Moq. "Lana."

a. Flowering branch.

Stewart, 'Punjab Plants,' p. 177.

431. Chenopodium album, L. "Sarman or Drag."

a. Flowering branch.

Sometimes eaten as a potherb.

Stewart, 'Punjab Plants,' p. 178.

432. [Chenopodium ambrosioides, L.] Chenopodium "ambrosiacum."

a. Flowering branch.

Raised at Clapham Common from seed from the Cape of Good Hope; 1860.

433. [Chenopodium Botrys, L.] Chenopodium ambrosioides, L.

a. Plant in flower.

Cultivated in the garden at Clapham Common; 1869.

434. Panderia pilosa, F. and M. "Bui."

a. Leafy twig.

Stewart, 'Punjab Plants,' p. 179.

435. Salsola Kali, L.

a. Flowering branch.

Sea shore, Whitby; Aug., 1854; W. F. S.

b. Flowering branch.

Smyrna; 21 Sept., 1866; D.H.

[The leaves in this specimen are shorter, broader at the base, and more rigid than in the British plant.]

436. Suæda fruticosa, Moq. "Lani" (Pi.)

a. Leafy branchlet.

Stewart, 'Punjab Plants,' p. 180.

[This specimen has not the erect habit of the British plant.]

PHYTOLACCACEÆ.

437. [Gallesia Gorazema, Moq. Mart. Fl. Bras. xiv. (11) p. 331.]

a. Flowering branchlet.

No. 14 "Pao d' alho"; Theodor Peckolt; Cantagallo, Brazil.

[The flowers when moistened, and indeed the whole plant, according to the note (in Martius, Fl. Bras.) upon this plant, give off a strong alliaceous odour, whence the Portuguese name.]

438. Rivina lævis, L.

a. Branch in flower and fruit.

Sonsonaté, San Salvador; Dr. Chas. Dorat; received 2 Feb., 1861.

A shrub with red berries called "Chiliquiste," found in great quantity on low ground near the coast. The Indians use the expressed juice of the berries as a rich and very firm dye of a dark orange colour. The root is very poisonous.

439. Phytolacca Abyssinica, Hoffm.

a. Branch in flower.

Abyssinia; from Dr. Th. W. C. Martius, Erlangen.

POLYGONACEÆ.

440. Polygonum Bistorta, L.

a. The plant in flower, without the rhizome.

Le Puy; 3 June, 1854.

441. Rheum officinale, Baillon.

a. A very small leaf.

Cultivated at Clapham Common; 2 May, 1873.

b. Portion of large leaf.

From a plant in the open ground, Clapham Common; Oct., 1873.

c. Ditto, with thin section of dried root.

To this sheet is attached a cutting from 'The Garden,' 23 May, 1874, giving an account and illustration of *Rheum officinale.*

d. Inflorescence.

"From the original plant given me by M. Baillon."—D. H., 1874.

e. Ditto, with detached spikelet of young fruit and ripe fruits.

Clapham Common; 1874.

442. Rheum Rhaponticum, L.

a. Very small leaves.

b. Young leaf and detached fruits.

Cultivated for the sake of its root by Mr. Usher, Bodicott, near Banbury; 4 Sept., 1872.

For remarks concerning the cultivation, see 'Pharmacographia,' 2nd ed., p. 501; 'Journ. Soc. Arts,' vol. xv., p. 282; and 'Science Papers,' p. 411.

SERIES III. MULTIOVULATÆ TERRESTRES.

CYTINACEÆ.

443. Cytinus Hypocistus, Adans.

a. Plant in flower, attached to the root of a *Cistus.*

S. Raphael, near Fréjus; May, 1866.

"It exudes a quantity of tasteless mucilage upon being subjected to pressure."

ARISTOLOCHIACEÆ.

444. Aristolochia Clematitis, L.

a. Branch in flower (three specimens).

(1) Orange; 2 May, 1864. (2) Villeneuve-les-Avignon; 6 May, 1854. (3) Epinay sur Seine, near Paris; 5 Aug., 1855.

445. Aristolochia odoratissima, L.

a. Branch, with flowers and detached flowers, and portion of stem.

Cordova, Mexico; from Hugo Finck; 1864.

446. Aristolochia Pistolochia, L.

a. Plant, with rhizome in flower.

Solliès-Farlède, near Toulon; 17 May, 1854.

447. Aristolochia rotunda, L.

a. Branches in flower, with detached root.

(1) Orange; 3 May, 1854. (2) Sommières (Gard).

448. Asarum europæum, L.

a. Plant in flower, with rhizome (three specimens).

(1) Grounds of Redleaf, near Penshurst; not wild; 13 April, 1855. (2) Ballon d'Alsace, Vosges; Aug., 1855. (3) Clapham (cultivated); 29 March, 1861.

SERIES IV. MICREMBRYEÆ.

PIPERACEÆ.

449. Piper aduncum, L.

a. Branchlet, with inflorescence.

Imported and offered for sale as Matico; Oct., 1863.

[The specimens on the upper half of the sheet are nearly glabrous, but the two lower leaves on this sheet have villous hairs on the veins of the under surface, and are marked "hairy"; the hairs are, however, longer than those of *P. angustifolium*, R. et P., and the leaves evidently belong to another species.]

450. Piper angustifolium, Ruiz. et Pav.

a. Shoot with inflorescence.

True Matico; from a commercial sample; 1864.

451. Piper caninum, Linn. f. "Sirie andjieng."

a. Branchlet, with female spikes and detached spikes.

b. Branchlet, with fruit.

Java; 1862; Dr. J. E. De Vrij, Buitenzorg; 1866.

452. Piper Cubeba, L. f. (Cubeba officinalis, Miq.) "Kœmoekoes."

a. Branchlet, with spike of fruit.

b. Ditto, with female flowers.

Java; 1862; Dr. J. E. De Vrij.

453. Piper nigrum, L.

a. Branchlet, with spike of fruit and detached spikes.
Baikul, Canara; Dr. Thos. Thomson; Dec., 1871.

454. Saururus annuus, L.

a. Branchlet, with inflorescence and fruit.
Ponds and swamps, Red Bank; 13 July, 1860.
[The label is apparently in Sutton Hayes' handwriting.]

SERIES V. DAPHNALES.

LAURINEÆ.

455. Cinnamomum Burmanni, Bl. var. Sumatrense.

a. Twigs, with inflorescence.
Java, S. B.; 1868.

456. Cinnamomum Camphora, Nees; (Laurus Camphora, L.)

a. Flowering branchlet (two specimens).
(1) Sent by Dr. D. J Macgowan, of Ningpo, as the tree upon which the Chinese white wax insect feeds, in a letter dated 20 May, 1856; received 5 Aug., 1856.
(2) "*Cinnamomum Camphora*," Hort. Bot. Pisa; 24 April, 1872.

457. Cinnamomum Cassia, Bl.

a. Two leaves.

Purchased by G. Sampson of a nurseryman near Canton, as the true Cassia, and which is now planted in the small public gardens in the foreign settlement there. It grows singularly slowly, and has shown no disposition to flower.—Letter from Dr. H. F. Hance, Whampoa, 4 Feb 1872. [The Cassia plant has since been identified. See Journ. Linn. Soc. Bot., vol. xx., p. 22.]

These leaves, however, have the peculiar sweetness and flavour of the thick Chinese Cinnamon, and have a more lanceolate and less oblong leaf than *C. Cassia*, Bl.

458. C. citriodorum, Thw. (D.C. Prod., xv., 22.) **"Pangiri Koorondoo" (Singh).**

a. Leafy twig, with detached pieces of bark and leaves.
Ratnapoora district, about Galagana, in Ceylon. It flowers in April and May, and fruits in August and September. [The bark tastes more like cloves than like cinnamon].

459. Cinnamomum iners, Reinw.

a. Flowering twig.
Dr. E. J. Waring, Travancore, 1863. "Yields bark; is indigenous in Travancore; the buds are not sold in the bazaar."—E. J. W. "The bark is collected; it is quite devoid of the flavour of cinnamon."—D. H.

460. Cinnamomum pedatinervium, Meissn.

a. Leafy twig and detached stem bark.

Viti or Fiji Islands; Dr. B. Seemann, 1860, with a large specimen of the bark.

"*Vulgo* 'Macou,' pronounced 'mathou' bark; used as a sudoritic, and for scenting cocoa nut oil."—B. S.

[The bark has a flavour resembling sassafras.]

461. Cinnamomum Zeylanicum, Breyne.

a. Branchlet, with flowers.

b. Ditto.

"From a tree growing in my garden at Trevandrum, said to have been introduced from Ceylon."—Dr. E. J. Waring, Travancore; "With specimens of the bark."

462. Laurus Benzoin, L. (Benzoin odoriferum, Nees).

a. Twigs, with fruit, and detached fruit.

Moist woods, Belmont; 29 Sept., 1860.

463. Laurus nobilis, L.

a. Twigs, (1) with young fruit, and (2) with ripe fruit.

Toulon; 13 May, 1866.

b. With mature fruit.

Mount Carmel, near Caiffa, Syria; 2 Nov., 1860; Dr. J. D. Hooker.

464. [Massoia aromatica, Becc.] Sassafras Göesianum, T. and B.

a. Leafy twig.

"Massooi" *incolarum*, Cat. Pl. Hort. Bot. Bogoriensi 1866, p. 94; Java; S Binnendyk; 1867.

[This specimen labelled *Sassafras Göesianum* T. and B. has been compared with typical *Massoia aromatica* at Kew. See Pharm. Journ. (3) xix., p. 791.]

465. Nectandra leucothyrsus, Meissn. (D. C. Prodr. xvi., p. 160; Mart. Fl. Bras. fasc. 41, p. 269.)

a. Twig with flowers.

Cantagallo, Brazil; Dr. Theodor Peckolt; 1867. "Canella branca do brejo; timber excellent."

466. [Nectandra sp.] "Canela."

a. Leaves only.

From near Ventanas and Zapotal, Ecuador; Dr. Destruge; 1867. [The leaves closely resemble those of *N. leucothyrsus*, but the leaves are more tapering below.]

PROTEACEÆ.

467. Grevillea robusta, Cunn.

a. Leafy twig, with detached inflorescence.

Giardino di Domenico Bergomino, Palermo; 18 May, 1872.

THYMELACEÆ.

468. Daphne Gnidium, L.

a. (1 and 2) Flowering branchlets.

(1) Grasse; 6 July, 1887.

(2) Ile Sainte Marguerite; 7 July, 1857.

469. Daphne Laureola, L.

a. With flowers and detached flowers.

Hitchin, Hertfordshire; March, 1857; B. H.

470. Daphne Mezereum, L.

a. Twigs, with flowers.

Col de Lautaret, Dauphiné; 27 June, 1857.

SERIES VII. UNISEXUALES.

EUPHORBIACEÆ.

TRIBE I. EUPHORBIEÆ.

471. Euphorbia hypericifolia, L. "Dodak."

a. Branch in flower and fruit.

Stewart, 'Punjab Plants,' p. 194.

472. Euphorbia Ipecacuanha, L.

a. Branch in flower.

Sandy soil; Camden, New Jersey; 6 Aug., 1860.

473. Euphorbia thymifolia, Bur. "Dodak."

a. Plant in flower and fruit.

Stewart, 'Punjab Plants,' p. 195. The native name, "dodak," means "milky."

474. Pedilanthus Finckii, Boiss. (D.C. Prod., xv., 126, 1.)

a. Flowering stem, with leaves.

Found in a single spot at the source of the Atoyac river, in a very damp situation; Cordova, Mexico, 1865; H. Finck.

A letter from Boissier is attached to this specimen, dated Geneva, 25 May, 1860, in which he states that "the plant is a new species, and forms a distinct section of the genus by reason of the structure of its appendix."

He also adds that he has named it after the friend who sent it to Mr. D. Hanbury.

TRIBE III. BUXEÆ.

475. Buxus sempervirens, L.

a. Twigs in flowers and fruit (three specimens).

(1) Les Pialoux, near Valence; 29 April, 1854. (2) Fruit; Box Hill; 1 June, 1867. (3) Flowers; Box Hill; 10 April, 1868.

TRIBE VI. CROTONEÆ.

476. [Aleurites cordata, R. Br.] (Elæococcus verrucosus, Juss; **Dryandra cordata**, Fl. Jap. tab. 27, p. 267).

a. Leafy twig.

477. Chrozophora tinctoria, Necker. (Croton tinctorium, L.)

a. Branchlets in fruit.

Stewart, 'Punjab Plants,' p. 193. Native name "Nil buta"—*i.e.*, blue plant.

b. Plants, with flower and fruit (three specimens).

(1) Grand Gallarques; Oct., 1849; see Pharm. Journ., vol. ix., p. 308. (2) Laverune, near Montpellier; 31 July, 1851; Albert Moitepier. (3) Smyrna; 20 Sept., 1860.

478. Croton Draco, Cham. et Schl.

a. Leaves and inflorescence.

"Plants of Central America, No. 442. On the hill at Paraiso Station, Panama; Dec., 1861. Small tree 20 to 30 feet high."—Sutton Hayes.

479. Croton Eluteria, Bennett.

a. Leafy twigs (two specimens).

(1) Bahamas, per Hon. J. C. Lees; 1858. (2) Found among the bark offered for sale in London, 1871.

"*Elutheria*, L., Hort. Cliff, p. 486, and consequently *Clutia Eluteria* of Sp. Pl. (1st ed.), p. 1042, excl. synon. Flora Zeylan., and of all Linnæus's subsequent works (not *Croton Eluteria, Sw.*)"

480. Jatropha (nudicaulis, Benth.) "Huanarpo."

a. Fleshy stem, with detached leaves and flowers.

Peru; Dr. Bowen; 29 Feb., 1864. "The specimen at Kew has a much slenderer stem. I examined it 18 March, 1864."—D.H. It differs from *Jatropha podagrica*, Hook, in the form of leaf (foliis 5-fidis) shorter flower-stalks, etc., etc.

A portion of a letter from Dr. Bowen, dated March, 1864, is attached to this specimen, and is as follows:—

"Huanarpo:—from near Huaras, on the road from Casina (the port); grows at an altitude of 4000 to 6000 feet above the level of the sea. It also grows in many other places on the coast of Peru, at the same altitude in the 'Quebradas' (ravines or gullies), on the west slope of the Andes."

A letter from Dr. J. D. Hooker is also attached to the sheet, dated Kew, 26 Feb., 1864, in which he refers the plant to *Jatropha podagrica*, Hook., Bot. Mag., p. 4736, and states that the gentlemen who sent it to him are anxious to have some preparations made of the drug.

481. Jatropha podagrica, Hook. (? **Jatropha nudicaulis,** Dr. Dorat.)

a. Plant in flower.

"Ruibarbo blanco," Dr. C. Dorat, Sonsonaté, State of Salvador; Oct., 1860.

"The bulb-shaped base of the stem, dried at the fire, and then ground, is used as a purgative." See Bot. Mag., No. 4376.

482. [Jatropha urens, L.] (Cnidoscolus quinquelobus, Pohl.)

a. Leaves and imperfect flowers.

No. 30. "Urtiga branca" Santarem, Para, Brazil; H. W. Bates; 1853.

"An arborescent nettle, with small white flowers. The decoction of the root is a much esteemed and effective remedy, being taken internally in bloody flux. It has been known to stop the disease in a forward state when all other remedies had failed."

"A moderate-sized root yields a teacupful of the decoction, which is the usual dose."—H. W. B.

483. [Mallotus Philippinensis], Mull.; Rottlera tinctoria, Roxb.

a. Twigs, with female inflorescence.

b. Twig, with female inflorescence.

c. Twigs, with female inflorescence, and mature fruits.

d. Ditto, and detached fruits.

From a tree cultivated in the Royal Botanical Garden, Calcutta; collected 25 Jan., 1868, by Dr. T. Anderson.

484. Omphalea [oleifera, Hemsl.] "Tambor."

a. Leaf and inflorescence.

Sonsonaté; Dr. C. Dorat; August, 1863.

"Tambor:—the fruit about the size of a pear, containing three beans, jet black, and by pressure yielding a very fine oil in large quantity, rather pleasant to the taste, and resembling Castor oil in its purgative effect, with the advantage that it does not gripe."

"The leaf is large (I send a small one), and is used for packing cheese on account of its strength.

"Flowers in December, fruit ripe in February or March.

"The seeds are covered with an exceedingly hard, black, and thin epidermis, with a white soft pulp containing the oil, which besides its purgative property burns well; the seeds grow in large bunches."—Dr. Dorat.

[This plant has been examined, and is described as a new species by Mr. W. B. Hemsley, F.R.S., in the Pharm. Journ. (3), vol. xiii., p. 301.]

This specimen is, therefore, a type specimen of the species.

485. Ricinus communis, L.

a. Flowering branch.

b. Fruiting branch.

Cultivated; La Mortola, near Mentone; 1872.

c. Branch, with flowers and young fruit.

A small tree; Beyrout, Syria; 3 Nov., 1860.—D. H.

BALANOPHOREÆ.

486. Cynomorium coccineum, L.

a. Plant in flower.

Ain Teshkah, 'Plants of Southern Syria;' B. T. Lowne; 1857.

URTICACEÆ.

Tribe I. Ulmeæ.

487. Ulmus campestris, Smith.

a. Leafy twig, bearing red galls.

Fréjus, South of France; May, 1866.

488. Ulmus major, Smith.

a. (1) Leafy twigs, with flowers, and (2) with fruits and detached fruits.

Plantation, Bedford Lane, Clapham; 1858, 1859.

489. Ulmus suberosa, Ehrh. (According to Babington's 'Manual.')

a. (1) Leafy twig; (2) twigs with flowers and (3) fruit.

Clapham; 1858, 1859.

Tribe III. Cannabineæ.

490. Cannabis sativa, L.

a. Branch of female plant bearing fruit.

b. Branch of male plant in flower.

Campinas, S. Paulo, Brazil; J. Correa de Méllo; 1865.

c. Branch of male plant in bud.

Natal, S. Africa; received from Rev. Dr. Callaway, 1857, under the name of "Insango."

491. Humulus Lupulus, L.

a. Specimen, with both male and female inflorescence on the same shoot.

Uriage, near Grenoble; Aug., 1864.

TRIBE IV. MOREÆ.

492. Broussonetia papyrifera, Vent. "Paper Mulberry."

a. Leafy twig and twig in flower.

Toulon; May, 1854; cultivated. [The flowering twig has ovate leaves, the leafy one has palmatifid leaves only, the youngest remaining ovate.]

493. Dorstenia Contrayerva, L.

a. Plant in flower, with root attached.

Cultivated; 1866.

TRIBE VII. URTICÆ.

494. Urtica pilulifera, L.

a. Stem, with flowers and young fruit (two specimens).

(1) Montmajor, near Arles; 8 May, 1854. (2) Montpellier; 25 May, 1854.

PLATANACEÆ.

495. Platanus orientalis, L.

a. Twig in fruit.

Antilebanon, Syria; Sept., Oct., 1860; Dr. J. D. Hooker.

MYRICACEÆ.

496. Comptonia asplenifolia, Ait.

a. Leafy twig.

Sandy fields, Gloucester, New Jersey; 27 Nov., 1860.

497. Myrica species.

a. Branch, with male catkins.

The following letter, received 23 Aug., 1872, is attached to this specimen:—

"British Consulate, Swatow,
"4 July, 1872.

"My dear Hanbury,—I send by this mail a small bag containing about a dozen seeds of the so-called 'Arbutus.' It grows in the garden of the Consulate, and is, I believe, a *Myrica*.

"The smaller seeds are from fruit bought in the market; the larger ones from my garden. The latter had less edible fruit than the others, as the trees had not had their proper allowance of manure during the winter. I send a specimen of the male catkins of the tree. The fruit when unripe is covered with a resinous exudation, and the taste or smell of resin will cling often to the ripe fruit unless the tree has been well manured.—Yours very truly,

"W. Gavin Stronach."

498. Myrica cerifera, L.

a. Leafy twig.

(1) Pine woods, on sandy soil, Camden, New Jersey; 1866; E. Parish.

499. Myrica Gale, L.

a. Leafy twig, with catkins.

Inversnaid, Scotland; June, 1861.

CUPULIFERÆ.

500. Castanea vulgaris, Lam.

a. Twig in flower.

Erith, Kent; very abundant; July, 1859.

501. Quercus Ægilops, L.

a. Twigs with fruit.

Caiffa; 1 Nov, 1860; Dr. J. D. Hooker and D. Hanbury.

b. Twigs, with fruit.

Carmel; 2 Nov., 1860; Dr. J. D. Hooker.

502. Quercus infectoria, Oliv.

a. Twig, with fruit (two specimens).

(1) Antilebanon, Syria; Dr. J. D. Hooker and D. Hanbury. (2) Samaria.

b. Twigs, with two kinds of galls.

Smyrna; Sept., 1860; D. H.

503. Quercus pubescens, Willd.

a. Twigs, with male and female flowers and calyces. Four specimens.

(1) Bois de Boulogne, Paris; 23 April, 1854. (2) Les Pialoux, near Valence; 16 Oct., 1859. (3) Vienne; 1866. (4) Carpentras; 6 May, 1866.

504. Quercus Robur., L.; var. pedunculata.

a. Twigs, with fruit.

Clapham; cultivated; 1874.

505. Quercus hispanica, Lamb?

a. Twigs, with flowers and detached fruit.

Three specimens, labelled respectively: Christmas, 1864; 8 Jan., 1865; Spring, 1865. Garden of Mr. Brown, Clapham Common.

Attached to these specimens is a letter from Dr. F. Welwitsch, in which he expresses the opinion that it may be the *Quercus Hispanica*, Lamb.

506. Quercus Suber, L.

a. Twigs, with male flowers, and detached cupules and bark.

SERIES VIII. ORDINES ANOMALI.

SALICINEÆ.

507. Salix Capræa, L.

a. Twigs, with male and female flowers, without leaves.

Reigate; 19 March, 1859.

GYMNOSPERMEÆ.

CONIFERÆ.

TRIBE I. CUPRESSINEÆ

508. Cupressus sempervirens, L.

a. Twigs, with fruit.

Jerusalem (enclosure of the Mosque of Omar); 20 Oct., 1860; D. H.

509. Juniperus communis, L.

a. Twigs, with male catkins and fruit.

(1) Les Pialoux, near Valence; 29 April, 1854; with fruit.

(2) Reigate; 14 May, 1857; with male catkins.

510. Juniperus Oxycedrus, L.

a. Twigs, with fruit.

Solliès-Farlède (Var.); 17 May, 1854.

511. Juniperus Sabina, L.

a. (1) Twigs with fruit; (2) twig, with male catkins.

Val Queyras; Aug., 1864.

[The leaves in these specimens are small and closely imbricate, as in *Cupressus sempervirens, L.*, except a few at the base of the twigs. It thus represents the drug as imported from Italy.]

512. Juniperus Virginiana, L.

a. Leafy twigs, with young male catkins.
Royal Gardens, Kew; 3 Feb., 1869.
The lower specimen is labelled thus: "From this we distilled the oil." [The upper specimen has small densely imbricate leaves; and the lower one longer and more spreading leaves.]

TRIBE III. TAXEÆ.

513. Taxus baccata, L.

a. Twigs, with male catkins.
Box Hill, Surrey; 10 April, 1868.

TRIBE VI. ABIETINEÆ.

514. [Cedrus Libanotica, Lk.]: Pinus Cedrus, L.

a. Leafy twigs, with male catkins.
Lebanon; 30 Sept., 1860; Dr. J. D. Hooker and D. Hanbury.

The cedars are about 390 in number; some of them are very large; one near the summit has a circumference of trunk of 40¾ feet. Another (an enormous split trunk) measured 37½ feet; another 28½ feet. The cedars form a small wood 6,220 feet above the level of the sea.—D. H.

515. Larix Europæa, D. C.

a. Twigs, with male and female catkins.
(1) Briançon; 29 June, 1857.
(2) Box Hill, Surrey; cultivated; 10 April, 1868.

516. Pinus Cembra, L.

a. Leafy twig, with male catkins and detached cones.
Halstadt, near Ischl; Sept., 1862.

517. Pinus Halepensis, Mill.

a. Leafy twigs, with cone and young male catkins.
Toulon; 13 May, 1854.

b. Ditto, with young shoots.
Ile Sainte Marguérite, near Cannes; 7 Aug., 1857.

518. Pinus Pinaster, Soland.

a. Leafy twig, with male catkins.
Ile Sainte Marguérite, Provence; 7 July, 1857.

519. Pinus Pumilio, Hænke (*fide* J. B. Verlot).

a. Twigs, with mature cones and male catkins.
Dachstein, Styrian Alps; 16 Sept., 1862.

b. Twigs, with immature cones.
Lac de Luitel, near Uriage, Dauphiny; 19 Aug., 1861. "A few small stunted trees in the bog near the Lake." [The scales of the cones in this specimen are reflexed.]

520. Pinus sylvestris, L.

a. Twigs, with young cones and male catkins.
(1) Les Pialoux, near Valence; 29 April, 1854.
(2) Henbury, near Bristol; 18 Sept., 1864.

MONOCOTYLEDONES.

SERIES I. MICROSPERMEÆ.

ORCHIDEÆ.

521. Orchis mascula, L.

a. Plant in flower, with root attached.
Reigate, 14 May, 1857. A sketch of the flower and dissected flower accompanies this specimen.

SERIES II. EPIGYNÆ.

SCITAMINEÆ.

TRIBE I. ZINGIBEREÆ.

522. Alpinia calcarata, Roxb.

a. Leafy stem, with inflorescence and detached and dissected flower.
Cultivated at Clapham in a hothouse, Dec., 1865. A pencil drawing of flowers is attached to this specimen, and the following label: "Style and stigma hirsute, ovary covered with silken hairs, staminodes separate."

523. Alpinia Chinensis, Roxb.

a. Rhizome, with leaves of flower, half of stem, and detached flower.

b. Upper half of stem and inflorescence.
"No. 1209, Herb.; H. F. Hance. In silvis umbrosis insulæ Hong Kong; April, 1866."

524. Alpinia Galanga, L.

a. Leaves and flowering spike, and detached flowers.

Cultivated in the Royal Botanical Gardens, Peradeniya, Ceylon. (C. P. 3729.)

525. Alpinia mutica, Roxb.

a. Leafy stem, with inflorescence.

From a plant raised in hothouse at Clapham Common, from seed received from S. Binnendyk, Java; gathered 1869.

526. Amomum angustifolium, Sonnerat. (*A. Daniellii*, Hook, f.)

a. Leaves and detached fruits and seeds.

"No. 1170, Fernando Po.; all through the forests; Gustav Mann;" received Jan., 1862, with the flowers in spirit.

To this sheet a coloured drawing of the flower is attached, "from a sketch by G. Mann."—D. H.

b. Root, leaves, inflorescence, dissected flower, and seeds ripened at Clapham. Raised from seeds sent from Mauritius to the Paris Exhibition of 1867, under the name of *A. angustifolium.* The plant flowered in June, 1871.

Attached to this sheet is a coloured drawing of the flower, sketched in the hothouse, Clapham Common, 20 June, 1876. "The plant agrees well with the figure among Roxburgh's drawings now at Kew."

c. Leaves.

Labelled *A. nemorosum*, Bojer, Mauritius; L. Bouton. Received April, 1863.

d. Leaf and fruit spikes.

A coloured drawing of the flower and an uncoloured one of the fresh fruit, as well as a paper on *A. nemorosum*, taken from the Journ. Linn. Soc., vol. xiii., p. 154, 155, accompanies this specimen.

This sheet is labelled: *A. Daniellii*, Hook, f.; Akassa, River Nun, March, April, 1865; E. J. L. Simmonds. No. 2, also specimens in alcohol.

e. Dissected flowers and coloured drawing.

This sheet is labelled: *A. angustifolium*, Sonnerat (*A. Daniellii* Hook, f.).

Flowers of plant raised from seed, received from E. J. L. Simmonds; this plant produced fruits in 1867. The drawing is dated 19 June, 1867. [The whole of the flower is coloured yellow.]

f. Coloured drawing of rhizome, stem, and inflorescence.

Labelled: *A. nemorosum*, Bojer; *A. angustifolium*, Sonnerat. Copied from a sketch by E. Fleurot, Port Louis, Mauritius.

At the back of this sheet is written: "The original sketch accompanied the specimens referred to in the Pharm. Journ., vol. 13, p. 639. This copy was made by my sister-in-law, E. H." [In this drawing the whole of the flower, except the yellow labellum, is represented of a red colour as in *b* and *d*, whereas in drawing *e* it is wholly yellow.]

g. Leaf, dried fruits, and detached seeds.

River Gaboon; Gustav Mann, No. 1035; July, 1861. The flower in spirit is at Kew. [A drawing of the inflorescence and seed is attached to this sheet.]

h. Leaf, with portion of stem and detached inflorescence.

Same locality and date as *g*.

i. Pencil drawing of spikes of fruit.

No. 1053; G. Mann.

j. Leaves, fruits, and drawings of inflorescence.

Ex Herbarium, Royal Gardens, Kew; *Amomum*, 1053. (*A. Daniellii*, Hook, f.) West Africa, lat. O.; collected by G. Mann. Received Nov., 1861.

k. Leaf, and detached dried fruits and seeds.

Fernando Po; "all through the forest," Gustav Mann. Received Jan., 1862, with the flowers in spirit, and a coloured sketch of ditto.

l. Coloured drawing of *A. Daniellii*, Hook., f., copied from Curtis's Botanical Magazine, tab. 4,764 (red flowers).

m. Coloured drawing of *A. Clusii*; Curtis's Botanical Magazine, tab. 5,250 (yellow flowers).

In the text accompanying the drawing the following remarks by Mr. Hanbury occur:—

"I am obliged to conclude that *A. Daniellii* varies in colour of flower from yellow to crimson; also considerably in the size of the fruit, in the latter being more or less furrowed; in the length of the scape, being

simple or branched; and bearing one, two, or many fruits; and in the leaves being six inches to a foot or more long.

"The flowers do not differ much wherever grown, the apex of the anther is somewhat truncated, the seeds always brilliantly polished. I consider it to be the *A. Clusii*, Smith, and the *Amomum à grandes feuilles, du Sénégal*, of Guibourt."

n. A coloured drawing of the fruits of *A. nemorosum*, Bojer, copied from a sketch by E. Fleurot, Port Louis, Mauritius.

From the above it will be evident that Hanbury considers *A. nemorosum*, Bojer: *A. Daniellii*, Hook, f.: *A. Clusii*, Smith: as identical with *A. angustifolium*, Sonnerat. See Hanbury Science Papers, p. 113.

o. Leaf and portion of stem, from a bundle of dried leaves, the label of which had become detached and could not be found.

Old Calabar; W. G. Milne; received Oct., 1863.

p. A tracing of the leaf of the plant called "Barsalo," sent by C. Barter, and labelled: "Niger Expedition, 52,657, *A. Daniellii*, Hook, f."

527. **Amomum arundinaceum, O. and H.** ('Journ. Linn. Soc.,' vol. vii. p. 109.)

a. Leaves and detached seeds.

A pencil drawing of the flower and fruit is attached to this specimen, and the following notes: "No. 1903; G. Mann; Corisco Bay; Oct., 1862; 4 to 5 feet high." The flowers and fruits in spirit were sent to Kew. (The seeds have not any aromatic flavour.)

528. **Amomum Cardamomum, L.**

a. Rhizome, with inflorescence and detached spike of fruit (two specimens).

(1) From Java. (2) Bought in a drug shop at Singapore by Thos. Hanbury, who states in a memorandum attached to the sheet: "I have tried to get more like this on the bunch at almost every shop in the place, but could not succeed; this I found in an old bottle in a Chinese chemist's shop."—T. H.

b. Rhizome and lower half of leafy stem.

c. Upper half of leafy stem.

From R. Hunter, Bangkok, Siam; Feb., 1855.

d. Rhizome and leafy stem.

e. Rhizome and leafy stem, scape and detached scapes and flowers.

Cultivated in a hothouse at Clapham Common from seeds received from the Botanic Gardens in Java; flowered 4 June, 1868; fruit apparently mature 15 Nov., 1868.

Accompanying sheet *e* is a pencil drawing of the different organs of the flower and the following remarks: "*A. Cardamomum*, L.; 22 April, 1873. Staminodes 2, distinct. The stamen is prostrate on the labellum, not erect beneath the dorsal lobe of the outer perianth. There appears to be no horn-like process at the base of the labellum as in the African species. Ovary shaggy; the flat stigma is firmly lodged between the lobes of the anther, the style accomodating itself to the position by a convenient twist."

529. Amomum cereum, Hook, f.

a. Lower part of the stem with leaves and scape and detached seeds.

b. Leaves.

Cape Palmas, West Coast of Africa; Rev. A. Crummell; May, 1859. [Seeds small, angular, leaden grey, and glossy.]

530. Amomum citratum, Pereira, ('Pharm. Journ.,' vol. ix., p. 313). **(Mungulu of the Natives).**

a. Leaf, detached fruit and seeds, and pencil drawing of inflorescence.

River Gaboon, West Africa; No. 1052; G. Mann; 1861. "Grows 15 feet high."

b. A second specimen of No. 1052.

G. Mann; from the Royal Herbarium, Kew.

An engraving of a village near the Gaboon river accompanies this specimen. See 'Journ. Linn. Soc.,' vii., p. 110.

c. Root, stem, leaves, and detached fruits and seeds.

No. 1051. Gaboon River, W. Africa; G. Mann; 1861.

531. Amomum giganteum, O. and H. (Kombegombe).

a. (1 and 2) Large leaf on two sheets. A drawing of inflorescence and flower accompanies this specimen.

b. (1 and 2) Portion of stem, with large and small leaves on two sheets. This specimen shows the variation in the size of the leaf. See 'Journ. Linn. Soc.,' vii., p. 110.

532. Amomum Granum-Paradisi, L., quoad Hook, f.

a. Rhizome, with detached stem, leaves, and inflorescence.

Royal Botanic Gardens, Trinidad; grown from West African seeds sent by me. The fruit has been sent in fluid.—D. H.

b. Rhizome, with stem, detached leaves, scape of fruit, and detached seeds.

Sierra Leone; Rev. J. Hall; 1865.

Also flowers, fruit and leaf in alcohol. Plant, 9 to 10 feet high. The leaves were attached to the rhizome when received. [The seeds taste like cajeput.]

c. Two leaves, and tracing of scape and flower.

(1) Leaf of the plant figured in Bot. Mag., p. 4603. (2) Bot. Gardens, Trinidad, W. Indies; from a plant raised from seeds which I sent.—D. H.

Attached to this specimen is a letter from Sir W. J. Hooker, stating that specimens (corresponding with those from which the plant figured in Bot. Mag. were raised) are preserved in the Kew Herbarium.

533. Amomum latifolium, Afz.

a. Lower half of leafy stem leaves.

b. Upper half of leafy stem.

Raised from seeds, Clapham Common; 27 Aug., 1874; D. H.

c. Rhizome, stem, and leaf.

Sierra Leone; Dr. W. F. Daniell; Ex Herb. Kew.

d. Leaves, and drawing of the fruits.

Specimens from Sierra Leone; Rev. J. Hall; 1865. The leaves were sent dried, the fruits in alcohol.

e. Leaves, fruit and seeds.

Prince's Island; G. Mann; received Dec., 1861; no number; adopted number, 1054B.

f. Leaves.

Ex Herb., Royal Garden, Kew; No. 1054B; Island of St. Thomas, W. Africa; lat. o; collected by G. Mann; received Nov., 1861. Drawing of flower, 18 Jan., 1862.—D. H. Also coloured one of fruit received in fresh state from S. A. Benson, 22 April, 1853. Grand Bassa, with section of fresh fruit, some seeds of which were sent to Rollison of Tooting.

534. Amomum limbatum, O. and H.

a. Leaves and detached leaves.

Fernando Po; "all through the forest;" G. Mann; No. 1171. Flower light purple. Plant 12ft. high. Received Jan., 1862, with the flowers and fruit in spirit. [A drawing of the scape and flowers and fruit is also attached.]

[The seeds hardly differ in size, colour, shape, or taste from those of *A. angustifolium*, but the shape of the flower and the smooth fruit as represented in the drawing are unlike those of that species.]

For a description of this species, see 'Jour. Linn. Soc.,' vol. vii., p. 110.

535. Amomum longiscapum, Hook, f. ("Amomum sp. X.Y.Z.")

a. Stem, leaves, and detached scape.

The scape from Dr. Daniell, Sierra Leone, 1854. The foliage gathered on 27 Aug., 1874, from a plant I raised at Clapham Common from seeds collected on Sugar Loaf Mountain, Sierra Leone, and given me by Mr. Bockstall, missionary, 6 July, 1871.

b. Ditto.

c. Stem and leaves from plant in hothouse; 10 Oct., 1873. Leaves spotted with red on the under side.

536. Amomum Mannii, O. and H.

a. Leaves and drawing of inflorescence.

No. 1902; Gustav Mann; Corisco Bay, Oct., 1862. Plant four to five feet high. The flowers are preserved in spirit at Kew. See 'Jour. Linn. Soc.,' vol. viii., page 110.

537. Amomum maximum, Roxb.

a. Rhizome, stem leaves, scapes of fruit and detached seeds.

Hangoosa, Java; S. Binnendyk. Some seeds were sent to Kew, 30 June, 1871, and others sowed at Clapham Common, 29 June, 1871.

[Seeds small elliptical, dull brown, taste unpleasant, scarcely aromatic.]

538. Amomum Melagueta, Roxb. Small variety.

a. Rhizome and leaves, and young fruit.

b. Ditto, with detatched leaves.

Sierra Leone; Rev. W. Young; 1854. This is the small variety producing the small Grains of Paradise. Dr. Daniell gave me a fruit of this variety, under the name of "Tokolo M'pomah." *Vide* Hooker in 'Journ. Bot.,' vol. vi., p. 293.

c. Stem, leaves, and flower.

Cultivated in hothouse, Clapham Common; May, 1873.

d. Flowers and dissected flower.

From a plant which I raised from Grains of Paradise; found in commerce; April, 1873.

e. Leaves only.

Ex Kew Herbarium; Island of St. Thomas, West Africa; G. Mann; No. 1054A; received Nov., 1861.

f. Detached leaves and scape and seeds.

Prince's Island; Gustav Mann; (no number, adopted number 1054B); received Dec., 1861.

A pencil drawing of 1054B, by D. H., accompanies sheet *e*, and a coloured drawing of a fruit with a pencil sketch of a transverse section of a fruit, received in the fresh state from S. A. Benson, Grand Bassa, Liberia; 22 April, 1853.

539. Amomum pieraroides, Beddome MSS.

a. Stem, leaves, and fruit.

Anamallies, in dense, moist forests, 2,000 to 3,000 feet elevation. Flowers in July; from Capt. Beddome; 1861.

A drawing by Fitch of the dissected flower and fruit, and a sketch of the structure of the stigma by D. H. accompanies this specimen.

"The cup-shaped stigma is gibbous in front, with the hairs on its margin dissected, not upright, but over the cup; the hairs of the other side are directed upwards."—D. H.

b. Stem, leaf, and detached dissected flower.

Both these specimens are marked in pencil, but not in D. H.'s writing.

Probably *A. hypoleucum*, Thw.

540. Amomum pilosum, O. and H.

a. Stem and leaves and detached seeds.

No. 1415; G. Mann; Fernando Po; 1862; 6—8 feet high; corolla yellow.

Drawings of flower and fruit accompany this specimen. [Seeds very small with large double arillus]. See 'Journ. Linn. Soc.,' vol. vii., p. 110.

541. Amomum rostratum, O. and H. (*non A. cereum*, Hook., f.) Hook. 'Journ. Bot.' vol. vi. (1854), p. 296.

a. Stem, leaves, and detached fruit and seeds.

Cape Palmas, West Coast of Africa; Rev. A. Crummell; received May, 1859. [Seeds leaden grey, angular, polished, slightly aromatic.]

b. Upper half of leafy stem.

c. Ditto.

542. Amomum sceptrum, O. and H. ('Journ. Linn. Soc.,' vii., p. 109.)

a. Leaves and detached fruit and seeds.

River Gaboon; July, 1861; very common at Ambas Bay, where it borders the shore; grows 6 feet high; G. Mann; No. 1034. Flowers in spirit at Kew. A drawing of the flowers and sketch of the fruit, which is "attached to a scape about 8 inches long," accompanies this specimen. [Seeds brown, angular, glossy, faintly aromatic.]

b. Leaves and detached seed.

Old Calabar; W. G. Milne; received Oct., 1863. One of the leaves is from jar No. 5, containing the fruit from which the seeds were taken. The remainder of the leaves are from a bundle E, sent at the same time, but of which the label could not be found. With flowers and fruit in spirit. [The seeds are larger and more tapering below than those of specimen *a.*]

c. Leaves and scape, with fruit and detached seeds.
From bottle; W. G. Milne; No. 17.

d. Leaves and scape with fruit.
Akassa, River Nun; March—April, 1865; No. 3; E. J. L. Simmonds. With specimens in alcohol; no flowers. A sketch of fruit is attached to this sheet.

e. Leaf and detached fruits and seeds.
Akassa, River Nun; No. 1; E. J. L. Simmonds; March—April, 1865. With specimens in alcohol. A drawing of the flower is also attached to this specimen.

"Colour of flowers a pale lilac, fading into white near the scape; inside whitish; throat of labellum pale orange; upper division of perianth hood-shaped, ridged at the top; lateral divisions lanceolate; labellum 3-lobed. Fruit fleshy, crimson. Leaves very fragrant when bruised. Plant 6 feet high or more."—E. J. L. S.'s letters; 9 Mar., 5 April, 1865.

f. Stem and leaves.
From a seedling plant, cultivated at Clapham; 1867.

g. Rhizome, with lower half of leafy stem.
Hothouse at Clapham; 24 Sept., 1872.

h. Upper half of leafy stem of specimen *g*.

543. Amomum subsericeum, O. and H. 'Journ. Linn. Soc.,' vol. vii., p. 100 (Yange).

a. Leaf and seeds.
No. 1; R. Walker, Gaboon; five to six feet high. Fruit and leaves in acetic acid. (Seeds of the same size and shape as *b*.)

b. Leaves and detached fruit and seeds.
No. 1; 904, G. Mann, Gaboon River and Corisco Bay; Oct., 1862; the plant grows from 10 to 12 feet high.

The underside of the leaf covered with fine short tomentum. Flowers and fruit in spirit sent to Kew. A drawing of rhizome, scape, and flower, is attached to this sheet. [The seeds of this specimen are of a greenish brown colour, and are very like those of *A. angustifolium*.]

c. Leaves.
Old Calabar; Rev. W. G. Milne; received Oct., 1863.

544. Amomum subulatum, Roxb.

a, *b*. Leaves and detached fruit.

From Col. Richard C. Lawrence, Resident, Nepal; received 23 Jan., 1872; per Dr. Cleghorn. "Dry Cardamoms; crop of 1870."

A large coloured drawing of the plant, giving full dissections of flower and fruit, which is attached to the above specimen, has the following remarks written upon it:

"*Amomum subulatum*, Roxb., from a plant cultivated in a swamp in a Cinchona plantation, Mungpo; 6 Jan., 1874; G. King. It yields the Cardamom of Nepal, which is exported to the plains under the name of Kala or Burra Elachi. Kala means black, and Burra large. Height of plant 3 feet; except where marked it is drawn to natural size."

c. Leaves.

From C. H. Wood, Rungbee, Darjeeling; received 24 Oct., 1874. Flowers of Nepaul cardamoms, preserved in spirit; dried leaves wrapped around the bottle. (See 'Journ. Linn. Soc.,' vol. xvii., p. 5.)

545. Amomum sulcatum, O. and H.

a. Rhizomes, and scapes of fruits.

From the Hon. J. T. Gibson, Cape Palmas; 1873.

b. Leaves and pencil sketch of ligule.

This specimen is marked: "Amomum, remarkable for its long acute ligule." From the Hon. J. T. Gibson, Cape Palmas; March, 1873.

c. Leaves.

Cape Palmas; Rev. J. T. Gibson; March, 1873.

546. Amomum species.

a. Leaves.

Cape Palmas; Rev. C. C. Hoffmann; 1865; with flowers and fruits in alcohol.

This species has a ribbed fruit.

b. Seedling plant attached to seed.

Sent by N. Wilson in 1867 as *A. Melagueta*, Roxb., but it is not that species.

[The seeds resemble in appearance those of *A. sylvestre*. See *Renealmia sylvestris* (No. 557).]

547. Amomum xanthioides, Wallich.

a. Rhizome, scape, stem, leaves, and detached fruits.

From R. Hunter, Bangkok, Siam; 1857; grows 10 feet high. A detached scape of mature fruit from the Rev. C. Parish is fastened on the same sheet.

b. Ditto.

From R. Hunter, Bangkok; 1857.

548. Amomum species.

a. Scape of flowers and fruit.

Ceylon; March, 1836; from Dr. Wright; Feb., 1863. "Has a very large leaf; the fruit comes very near that of *A. xanthioides*, Wall."

549. Amomum species.

a. Stem and leaves.

No. 77, Mann; of the garden list, Kew.

550. Amomum species (native name "Bla" or Blay).

a. Leaves.

Grand Bassa, Liberia; 10 Feb., 1853; S. A. Benson; No. 17.

"The pulp of the fruit, which has an agreeable acid taste, is eaten, and its juice used medicinally. Fruits and leafy stems attached to rhizome sent in acetic acid."

551. Elettaria cannæcarpa, Wight. (Amomum aculeatum, Roxb.)

a. Rhizome, leaves and flowering scape.

Ayamalay Forests; Capt. Beddome.

b. Ditto.

With specimens of flowers and fruit in alcohol. *Amomum muricatum*, Beddome, MSS. A drawing of the dissected flowers labelled, *Elettaria cannæcarpa*, Wight, is attached to this sheet.

c. Ditto.

Ayamalay Forests; Capt. Beddome.

552. Elettaria Cardamomum, Maton.

a. Rhizome and base of stem.

Cultivated under the name of *E. Cardamomum*, Maton, but has never flowered; Oct., 1865; D. H.

b. Upper part of leafy stem.

Var. β major.

a. Leaf a flowering scape.

Ant. Prov., Ceylon ; March, 1866 ; G. W. H. K. Thwaites.

b. Leafy stem, with flower scape.

Ayamalay, near Paulaghaut ; Sept., 1850 ; Ex Herb. Wight ; 22 June, 1859.

553. Elettaria speciosa, Bl. : var. fructibus purpureis.

a. Leaves.

Tepoes Bener, Java ; S. Binnendyk ; received 1865. [Seeds small, elliptical, angular, greyish black, nearly tasteless.]

554. [Globba Schomburgkii, Bot. Mag. (t. 6298)].

a. Flowering branch.

Siam ; T. Christy, Jr. ; 1867.

555. Hedychium Gardnerianum, Wall. (H. speciosum, Wall.)

a. Inflorescence and dissected flower.

Cultivated specimen ; 1861 ; grown in England.

b. Leaves and detatched seed.

Seed large, greyish, almost plano-convex, with a brownish branched arillus. Flavour strongly aromatic, resembling a mixture of cummin and turpentine. At the back of sheet *b* the following memorandum occurs :

"The flowers are generally in twos, each two being surrounded by a concave green bract. Within the bract is a tubercular transparent sheath, and within this the two flowers, one of them surrounded at the base by two smaller sheathing bracts of unequal size. Each flower has a transparent sheath or tube growing from the upper part of the ovary and embracing the tube of the perianth. From examination of the recent flowers."—D. H., 1866.

556. Hedychium spicatum, Sm.

a. Slender rhizome and leaves.

The plant is said to afford the rhizome sold as "Kapur Kachri" ; from near Swatow, China ; 1872. [The taste of the rhizome is very similar to that of the drug.]

557. [Renealmia sylvestris, Griseb.] (Amomum sylvestre, Sw.)

a. Stem and scape, and detatched leaves, fruit, and seed.
Jamaica; Mr. Wilson; 1861.
[Seeds angular, brown, glossy, having a bitter taste, and a flavour intermediate between that of lemon and opium.]

[Seeds angular brown, glossy, having a bitter taste and a flavour intermediate between lemon and opium].

TRIBE II. MARANTEÆ.

558. Maranta arundinacea, L.

a. Stem, leaves, and flower.
Hothouse, Clapham Common; 1873.

559. [Thaumatococcus Daniellii, Bth. & Hook.] Monostiche Daniellii, Horan.

a. Stem, leaf, and fruit.
Ambas Bay, W. Trop. Africa; 1859-1863. Collected by G. Mann. Ex. Herb., Kew.

HÆMODORACEÆ.

560. Ophiopogon japonicus, Ker.

a. Plant in flower, with rhizome.
Cultivated in the garden at Clapham Common; 11 Oct., 1866.

IRIDEÆ.

561. Crocus sativus, L.

a. Entire plant in flower.
Garden, Clapham Common; 11 Oct., 1868.

562. Crocus speciosus, Bieberst.

a. Flower and dissections of flower.
Clapham Common, cultivated; Oct., 1855.

563. Crocus vernus, Allem.

a. Plant in flower.
Col de Lautaret, Dauphiné; June, 1857.

b. Entire plant and dissected flowers.
March, 1866. (No locality).

564. Iris Florentina, L.

a. Flowers.
Garden at Clapham Common; July, 1873.

b. Leaves and flowers and detached bracts.
The Certosa, near Florence; 28 April, 1872.

565. Iris Germanica, L.

a. Inflorescence.
Cultivated in garden, Clapham Common; June, 1873.

b. Leaves, portion of rhizome, and flowers.

c. Inflorescence.
Florence; 28 April, 1872.

566. Iris pallida, Lam.

a. Inflorescence with detached bracts.
Florence; 28 April, 1872.

DIOSCOREACEÆ.

567. Tamus communis, L.

a. Flowering stem, with male flowers.
Near Lindfield, Sussex; 21 July, 1855.

b. With fruit.
Hertford Heath; 16 Sept., 1854.

SERIES III. CORONARIEÆ.

LILIACEÆ.

TRIBE I. SMILACEÆ.

568. Smilax aspera, L.

a. Leafy stem.

b. Leafy stem.

c. Ditto in fruit.
Toulon; May, 1854.
[In *a* the leaves have the cordate base turned outwards, giving a hastate aspect to the leaves. Those of *b* are turned inwards, so that the leaves appear more truly cordate or nearly reniform. In the fruiting twig *c* the leaves are smaller and cordate lancolate.]

d. Two flowering stems and fruiting twig.
Between Safed and Mijdel Kerum; climbing the trees; very fine. Common about Beyrout, Syria; Dr. J. D. Hooker and D. Hanbury; Sept. and Oct., 1860.
[The three twigs on sheet *d* all show a wide divergence in the form of the bracts, being cordate-triangular in one, elongate-hastate in the second, and broadly cordate-ovate in the third.]

569. Smilax Mauritanica, Poir.

a. Flowering twig.

Hort. Bot.; Grenoble; 19 June, 1857; M. Verlot. ("*Smilax Mauritanica*" of the Bot. Gardens.)

570. [Smilax ornata, Hook. f.] Smilax officinalis, H. B. K.

a, b. Leaves.

c. Leaf and stem.

d. Leaf and roots.

a, b, Royal gardens, Kew; 15 Sept., 1873. *c, d,* Ditto; 21 March, 1871.

These specimens have quadrangular stems with compressed prickles at the angles, and a few prickles on the midrib of the leaves, and the roots have the orange tint of the Jamaica root.

a, b. Leaves and quadrangular prickly stem and detached root.

Government Botanical gardens, Castleton, Jamaica; received from J. H. Kemble, Kingston, Jamaica; 2 Dec., 1871.

[The stems are quadrangular, with compressed prickles at the angles, and the leaves are oblong lanceolate, not cordate as in the Kew plant; the roots correspond in appearance with the orange-coloured Jamaica sarsaparilla of commerce.]

c. Leaves only.

d. Flowering twig and detached flower.

Sarsaparilla from Patia, New Granada; R. B. White; 1869.

In an extract from a letter by Mr. White to Dr. J. D. Hooker, Mr. White says: "My Patia *Smilax* has a quadrangular stem with thorns on the angles, and all the common sorts have round stems."

e. Flowering twig and detached flower.

Aspinwall; along the sea beach, climbing over bushes; 15 Sept., 1862; No. 638; S. Hayes. [Leaves small, lanceolate, coriaceous; stem round, not prickly.]

f. Leafy twig, with fruit.

River Sogamozo, New Granada; Jno. Weir; 1864.

To this specimen is attached an extract from the "Proc. Roy. Hort. Soc.," May, 1864, relating to this plant.

g. Seedling plants (two specimens).

(1) Grown from seeds brought from the river Sogamozo, New Granada, by J. Weir, 1864.

(2) Seedling plant found in commercial Sarsaparilla; E. A. Webb; 1871.

h. Flowering twig with detached section of stem.

River Sogamozo, New Granada; J. Weir; 1864. Received with flowers and fruit in alcohol and dried root and stem. [The stem is rounded with horizontal woody prickles].

With these specimens are tracings of "3789," *Smilax papyracea*, H. B.; "*Caudex tenuis teres, flores pallide virides Fl. Nigro ad fluvii Xibarii ostia*, Dec., 1854;" and "160," leaves and fruit of Salsaparilha do Rio Negro (R. Spruce).

Traced from specimens in Herb. Hooker; 6 April, 1871. [The stem is in the Museum].

571. Smilax Schomburgkiana, Kth.

a. Leafy stem with detached fruits.

Common about Panama; June, 1862; Sutton Hayes; No. 630.

b. Leafy stem of female plant with flowers and detached flowers.

Common in the woods about Panama; 25 Sept., 1862; S. Hayes. [Stem round, furrowed with horizontal laterally compressed prickles, and a few prickles on lower side of midrib.]

572. Smilax Vitiensis, Seem. "Wa-rusi or Kadragi."

a. Flowering twig.

Viti or Fiji Islands.

Collected by Dr. B. Seemann; 1860. [See Seemann Fl. Vit., p. 310.]

TRIBE II. ASPARAGEÆ.

573. Asparagus sp. "Kareh."

a. Flowering branch.

[India? No locality given.]

TRIBE IV. POLYGONATEÆ.

574. Polygonatum officinale, Allem; (*Convallaria Polygonatum*, L.)

a. Entire plant in flower with the rhizome attached.

Tanlay, near Tounerie; 28 April, 1866.

b. Flowering stem and detached flower (two specimens.)

(1) Bois de Boulogne, Paris; 23 April, 1854. (2) Vienne (Isère); 27 April, 1854.

575. Polygonatum verticillatum, Allem.

a. Stem with flowers and fruit (two specimens).

(1) Gerardmer, Vosges; 12 Aug., 1855. (2) Grande Chartreuse; 15 June, 1857.

b. Stem with flowers.

Grande Chartreuse; 12 Aug., 1857.

TRIBE XIII. SCILLEÆ.

576. Urginea Scilla, Steinh.

a. Flowering and fruiting spikes.

Beyrout, Syria; Sept.—Oct., 1860; Dr. J. D. Hooker and D. Hanbury. "Extremely common throughout the country."—D. H.

TRIBE XV. COLCHICEÆ.

577. Colchicum autumnale, L.

a. Flowering plant with corm (two specimens).

(1) Near Clermont Ferrand, Auvergne; Sept., 1858. (2) Hallstadt (Austria); Sept., 1862.

TRIBE XX. VERATREÆ.

578. Veratrum album, L.; var. Lobelianum.

a. Leaf, inflorescence, and detached flowers.

St. Maurice, Vosges; 16 Aug., 1855.

SERIES IV. CALYCINEÆ.

PALMÆ.

579. Phœnix dactylifera, L.

a. Leaf and spadix (without flowers).

Lake of Tiberias; 30 Oct., 1860; Dr. J. D. Hooker and D. H. Stunted plants forming tufts 6—8 ft. high, growing near the shore of the Lake of Tiberias at Mejdal and Tell Hûm. Fruit stalk seen on one plant only.—D. H.

SERIES V. MIDIFLORÆ.

AROIDEÆ.

TRIBE I. ARINEÆ.

580. Arum maculatum, L.

a. Plant in flower, with detached spadix.

Hitchin, Herefordshire; May, 1856.

581. Arum triphyllum, L.

a. Entire plant in flower, with corm attached and detached spadix.

From a root received from Prof. W. Proctor, Jr., of Philadelphia; 1867.

TRIBE XI. ORONTIEÆ.

582. Acorus Calamus, L.

a. Leaf and spadix.

Angers, France; 10 June, 1862; T. W. Beddome.

SERIES VII. GLUMACEÆ.

CYPERACEÆ.

583. Cyperus longus, L.

a. Entire plant in flower, with rhizome attached.

Near Petit Bo Bay, Guernsey; 3 Sept., 1859; H. Groves.

584. Cyperus rotundus, L.

a. Plant in flower, without rhizome.

Smyrna; 20 Sept., 1860; Dr. J. H. Hooker and D. H.

585. Papyrus antiquorum, L.

a. Culm.

E. C. Hulah, 'Plants of Southern Syria;' B. T. Lowne; 1863–4.

GRAMINEÆ.

586. Andropogon citratus, D. C. (A. Schœnanthus, Wall., non L.; A. Schœnanthus, Roxb., non L.)

a. Leafy stem.

Kew Gardens; 17 Aug., 1858.

b. Leafy stem.

Received from Major Heber Drury, Travancore; 10 Feb., 1860. "From this species, and this only, Lemon Grass oil is distilled in Travancore."—Major Drury's letter; 19 Aug., 1859.

c. Leafy stem.

Bandong, Java, Dr. J. E. de Vrij ; 27 June, 1860.

"Called Sereh in Java, where it does not grow wild, but is frequently cultivated and 'seems not to bear flowers.' The essential oil obtained by Dr. de Vrij from this plant was found by him to be inactive to the polarized ray."

d. Leafy stem.

"Cultivated, as well as the Citronelle grass, by J. A. Hume, at Watwalla, about four miles from Galle, Ceylon, at which place, however, according to Mr. Hume, it never produces its flowers. It is the plant from which 'Lemon grass oil' is distilled."—D. H.

Collected by Thos. Hanbury ; Nov., 1858.

e. Leaves and inflorescence.

"The plant which yields the Lemon grass of Travancore. Abundant on the plains; it is not cultivated. From E. J. Waring, Travancore, 1863."

f. Leafy stem.

Raised from seed obtained from pressed specimens of the grass given me by E. J. Waring, 1863.—D.H.

587. Andropogon citriodorus, D. C. (A. Schœnanthus, Wall., non L.; fide Munro.)

a. Inflorescence.

Nepal ; Dr. Wallich, from Dr. J. D. Hooker; 18 Jan., 1859. [It has a Lemon grass flavour.]

588. Andropogon Khasianus, Munro.

a. Plant in flower.

Nunklow, Khasya, 3,000 to 5,000 feet ; 10 July, 1850. Dr. J. D. Hooker ; 18 Jan., 1859 (No. 1594, Herb. Hooker. [Taste bitter and camphorescent, aromatic, not like either citronelle, verbena, or ginger grass.]

b. Ditto. A diseased specimen ?

Khasya ; Dr. J. D. Hooker ; 18 Jan., 1859.

589. Andropogon laniger, Desf.; fide Munro.

a. Tufts of root leaves, and portions of detached inflorescence (two specimens).

On this sheet are specimens marked : (1) Bought at Milan, with a pencil sketch of the original bundle purchased there. (2) Found in an old collection of Materia Medica, formerly belonging to Sir J. E. Smith, 1863 ; "*Juncus odoratus, Fœnum Camelorum, Schœnanthus vel Squinanthum officinarum,* Σχοῖνος Dioscoridis et Galeni ; *Adcher* Arabum." Detached flowers, received from Professor Guibourt, are attached to this sheet.

b. Leafy stems.
Bought in a drug shop in bazaar at Damascus; Oct., 1860.

c. Plant in flower (two specimens).
(1) Metlili, (Mzab) Algeria; E. Cosson, 12 May, 1858; received 16 Nov., 1860. (2) E. Bourgeau, *Plantes d'Algérie*, 1856, No. 56. *Coteaux de gris près de Cyout sudouest de la province d'Oran.* Coll. Kralik, 9 Mai.

d. Plant in flower.
Lieux rocailleux à Metlili (Mzab.); E. Cosson; 12 May, 1858.
A description of the plant, from "*Exploration Scientifique de l'Algérie, Botanique, Phanerogamique,*" par Messrs, M. Cosson and Durieu de Maissoneuve, tom. 17. p. 48, is attached to this sheet.

e. Ditto.
From the same locality and collectors; received 16 Nov., 1866.

Andropogon laniger, var. longe-aristata (fide Munro). (A. circinatus, Hochst).

a. Plant in flower (two specimens).
Scinde; Dr. J. E. Stocks, from J. D. Hooker; 18 Jan., 1859. "Aromatic, like *A. laniger*, Desf."—D. H.

Andropogon laniger, var. pumilus (fide Munro).

a. Plant in flower.
Lahore, Aug., 1846; Dr. J. D. Hooker; 18 Jan., 1857.

b. Plant in flower.
North-west India; Dr. Royle, from Dr. J. D. Hooker; 18 Jan., 1859.

c. Plant in flower (two specimens).
(1) Iskardo, 8,000 feet, Western Thibet; Dr. Thomson; (2) Ladale, 11,000 feet, Western Thibet; Dr. Thomson; from Dr. J. D. Hooker; 18 Jan., 1859.

d. Plant in flower (three specimens).
(1) North-west India (*A. pumilus*, Roxb.); *fide* Royle).
(2) Hawalbagh, Kumaon, June, 1845; Dr. T. Thomson.
(3) Paoree, Gurwhal June, 1845; from Dr. J. D. Hooker; 18 June, 1859.

e. Plant in flower.
Lahore, Aug., 1846; from Dr. J. D. Hooker; 18 Jan., 1859.

f. Plant in flower.
Punjab, Dr. Thomson; from Dr. J. D. Hooker, 18 Jan., 1859.

Andropogon laniger, var. Iwarancusa.

a. Plant in flower, and detached flowers.
A. Iwarancusa, Blanc in Herb. Roxb., *fide* Wallich, Catal, No. 8793; Dr. Wallich. ("Very aromatic."—D. Hanbury.) From Dr. J. D. Hooker; 18 Jan., 1859.
"Col. Munro admits this to be the true *A. Iwarancusa* of Roxburgh, but adds that it is the *A. Schœnanthus* of Nees von Esenbeck, Blanc and of Sir J. E. Smith; 30 Nov., 1860."—D. H.

b. Leaves and detached spikelet. "Andropogon,"
Called Khavi-ka-tel. Ludiana; T. W. H. Tolbort; 1869. [It has a rose-geranium flavour.]

590. Andropogon muricatus, Retz.

a. Inflorescence.
Cultivated; Campinas, Prov. Sao Paulo, Brazil; J. Correa de Mello.

591. Andropogon Nardus, L. (*A. citratum*, D. C.).

a. Detached leaves and flowers.
Received from G. H. K. Thwaites, 21 Oct., 1859, who sent it under the name of *A. Schœnanthus.* stating it be the source of citronelle oil. (In a letter, dated Ceylon, 23 Dec., 1853.) Very abundant in Ceylon up to an elevation of 3,000 feet. *A. Nardus* (*fide* Munro). [The leaves have a citronelle flavour.]

b, c, d. Three portions of one plant.
Pangiri-maana grass. (*Andropogon Schœnanthus*, var. *fide* Thwaites.)
Ceylon; from G. H. K. Thwaites, May, 1859. Length to summit of flower spike nearly seven feet.

e. Plant in flower.
Watwalla, about four miles from Galle, Ceylon. Cultivated by Mr. J. A. Hume and gathered by Thomas Hanbury; Nov., 1858. The oil of citronelle is distilled by Mr. Hume from this grass. [Specimen *e* has a rose-geranium, not a citronelle flavour.]

f, g, h. Plants in flower. (*A. Nardus*, L. ?)

Cultivated in the Island of Mauritius; received from L. Bouton, Mauritius; 30 May, 1859. No essential oil distilled from it there. This grass is of Wright's Catalogue and Herbarium, No. 1692, *Andropogon (Anatherum) Roxburghii*, N.E.; *Andropogon (Anatherum) Schœnanthus*, Roxb.; *non* L. *nec* Wall. Pl. As. rar., vol. 3, t. 280. It is also No. 303, Mergui, Griffith, in Herb. Wight's: D. H.; 24 June, 1859. [The taste of the Mauritius plant is fainter than the citronelle grass, and between it and ginger grass.]

i. Leaves. "Lemon grass."

Bath, Jamaica; N. Wilson; April, 1860.

j. Leaves and flowers.

Bath, Jamaica; Nov., 1859.

The culm measured 10 feet, and from 9 to 12 inches between the nodes. Colonel Munro marked this *A. Nardus*, L. ?

k. Flowering stem.

l. Plant, with flowers and root.

Courtallum, Madras; G. Thomson, from Dr. J. D. Hooker; 18 Jan., 1859. *A. Martini*, Roxb. (*fide* Munro), but after further examination referred by him to *A. Nardus*, L. "This grass appears to be the 1700 *c. Andropogon (Cymb.) cæsius*, N. E.; γ. *elatior, culmo erecto firmo* of Dr. Wight's Catalogue, and of his own herbarium;" D. H.; 24 June, 1859. [It does not taste of citronelle, but has an aromatic taste recalling that of patchouli.]

Andropogon Nardus, var. flexuosus, Nees (fide Munro); (A. confertiflorus, Steud.; A nardoides, f. major, Hochst.)

a. Plant in flower.

Madras, Presidency; G. Thomson, from Dr. J. D. Hooker; 18 Jan., 1859. Munro first referred it to *A. Schœnanthus*, L. [This grass has a bitter camphoraceous taste like that of *A. Khasianus*, but not at all resembling citronelle.]

b. Plant in flower. (*A. flexuosus*, var. *muticus*, *fide* Munro.)

Received from G. H. K. Thwaites under the name of *Andropogon Schœnanthus*; 30 May, 1859.

c. Flowering top. (*A. flexuosus*, var. *muticus*, *fide* Munro.)

"Maana" grass. Said to afford but little oil, and not of good quality. Ceylon; G. H. K. Thwaites; 30 May, 1859. Munro says it is only a variety of *A. Nardus*, L.

[The taste of *b* and *c* differ from that of *A. Nardus*, var. *flexuosus*, being slightly pungent with hardly any flavour.]

592. Andropogon Schœnanthus, L. (*A. Martini*, Roxb.; *A. pachnodes*, Trinius, *A. Calamus-aromaticus*, Royle.)

a. Leafy stems.

Ceylon; May, 1859.

"Saira grass." "*Andropogon Nardus.*" "Lemon grass oil is extracted from this by ordinary distillation."—G. H. K. Thwaites. [This is certainly a ginger grass, and has the rose flavour of that oil and not of verbena.]

b. Flowering stem. (*A. pachnodes*, Trin.; *A. nardoides*, Nees.)

Nepal; Dr. Wallich, from Dr. J. D. Hooker; 18 Jan., 1859. [This has a mixed flavour of rose and caraway.]

c. Ditto.

Srinuggur, Gurwhal; June, 1845; T. Thomson; from Dr. J. D. Hooker, 18 Jan., 1859.

d. Plant in flower.

Ex Herb. Wight; 22 June, 1859.

In Wight's catalogue thus: "1702, *Andropogon* (*Cymb.*) *Martini*, Roxb.; *A. nardoides*, N. E. Mst.; *A. pachnodes*, Trin." [This specimen has the same taste as lemon grass, *i.e.*, like verbena.]

e. Stem and inflorescence.

Ex Herb. H. Deane; 1859 (5 feet 9 inches high).

f, g, h. Plants in flower.

Ex Herb. H. Deane; 28 Jan., 1859. [These specimens have densely tufted, short, and narrow leaves, a bitterish taste, and a caraway flavour, quite unlike *a*, *c*, and *k*, which have the characteristic taste of ginger grass oil.]

i. Stem and inflorescence.

Raised in Brazil, at Campinas, Prov. Sao Paulo, Brazil, by J. Correa de Méllo, from seeds sent to me from India by D. S. Kemp, of Bombay.—D. H.

j. Flowering stem.

Raised in hothouse from seeds received from Mr. Kemp, "Bombay; as seeds of grass yielding Indian grass oil, from Indore; and sowed 13 May, 1867. Some sent to Correa de Méllo, 7 Nov., 1868; and some to Thwaites, 1 Oct., 1868."

k. Flowering stem.

Coromandel? G. Thomson. From Dr. J. D. Hooker; 18 Jan., 1859. [This specimen has a ginger grass flavour.]

l. Flowering top.

Dr. Royle. From Dr. J. D. Hooker; 18 Jan., 1859.

e, f, g, h and *l* have a caraway almost turpentine flavour.

m. Leafy stem and inflorescence (1 and 2).

(1) Nunklow, Khasya; Dr. Hooker; 10 July, 1850, at 3,000 ft. to 4,000 ft.; No. 1,594 Herb. Hooker; from Dr. J. D. Hooker; 15 Jan,, 1859. "Compared with Linnæus' specimens of *A. Schœnanthus* by Dr. Hooker and myself, 20 Jan., 1859." A label, apparently in Munro's writing, states: "I am sorry I cannot coincide with this identification. No. 1 is not *A. Schœnanthus*, L., it is *A. citriodorus*, D. C; *A. Schœnanthus*, Wall. *non* Linn." No. 2 is *Andropogon Khasianus*, Munro; distinguished by the numerous nerves to the lower glumes. [The taste of No. 2 certainly more nearly resembles that of *Khasianus* than that of the ginger grass oil plant].

n. Leafy stem and flowers (two specimens).

(1) Deyra Dhoon, Kumaon; T. Thomson. (2) Sikkim; from Dr. J. D. Hooker; 18 Jan., 1859.

Col. Munro's label on this sheet states that No. 1 is *Andropogan Nardus*, var. *Silhetensis*, Munro, and that No. 2 is *Andropogon citriodorus*, D. C.; *A. Schœnanthus*, Wall. *non* Lin. [No. 2 tastes like coriander].

o. Stem, leaves, and flowers (two specimens).

On summits of arid mountains in Mauritius; L. Bouton; 30 May, 1859. *Andropogon pachnodes*, Trin.—D. H.

Col. Munro's label states: "*A Schœnanthus*, L. var. *pruinosus* Nees; also *foliatus*, Steud. It is not *Cymbopogan elegans*, Sprengel, which is a very different plant." Another label, in a different, probably that of L. Bouton's handwriting, states: "*Cymbopogon elegans*, Sprengel; *Andropogon cymbarius*, L. *Vulgo* "Citronelle Sauvage." [This has the peculiar rose geranium flavour of true ginger grass oil.]

p. Plant in flower.

A. Schœnanthus L. (*fide* Munro after second examination.) At first named by him *A. Martini*, Roxb.

From Dr. Wight, 22 June, 1859, who considers it to be the *A. Schœnanthus* of Willdenow. Marked in Wight's Catalogue thus: "1806, *Andropogon (Cymbopogon) Schœnanthus*, Linn.; *A. Iwarancusa* Roxb."; and in Dr. Wight's Herbarium his specimen is marked in Dr. Rottler's handwriting thus: "*Andropogon Schœnanthus*, Manda p. pilloo. T." [This specimen has a caraway and turpentine flavour.]

q. Stem, leaves and flowers.

Sydapet, Madras; G. Thomson, No. 298; April, 1845. From D. J. Hooker; 18 Jan., 1859. *A. Schœnanthus*, L. (fide Munro); *A. Martini*, Roxb. (fide Munro); *A. cæsius*, Nees. G. Thomson.

r. Plant, with leaves, inflorescence and root.

From the same locality. [The flavour resembles that of a mixture of rose and caraway.]

593. Andropogon sp. (Cymbopogon No. 5, Herb. Hooker.)

a. Flowering stem.

Sutlej, Rampur; Dr. J. D. Hooker and D. Hanbury 18 Jan., 1859. [This grass has a pungent taste, with a slight flavour of peppermint.]

594. Arundo Donax, L.

a. Leaves and flowering top.

Tarascon; 17 Oct., 1859.

595. Avena sativa, L.

a. Plant in fruit.

Addiscombe, near Croydon; 1873.

596. Hordeum hexastichon, L.

a. Plant in fruit.

Reggio, Calabria; 15 May, 1872.

597. Lolium temulentum, L.

a. Plant in fruit.

Hérival, Vosges; 10 Aug., 1855.

598. Saccharum spontaneum, L. "Khair."

a. Stem and inflorescence.

Stewart, 'Punjab Plants,' p. 261.

599. Secale cereale, L.

a. Plant in fruit.

Little Baddow, Essex; 31 July, 1872.

b. Plant in fruit.

Reggio, Calabria; 15 May, 1872

600. Triticum repens, L.

a. Plant in flower.

Kew; 25 July, 1858.

601. Triticum vulgare, Kth.

a. Plant in fruit.

Witham, Essex; 31 July, 1872.

602. Triticum sp. (Bearded wheat.)

a. Plant in fruit.

Near Witham, Essex; 31 July, 1872. [The glumes are densely clothed with oppressed silkly hairs.]

b. Ditto.

Instituto Agrario, Castelnuovo, Palermo; 21 May, 1872; Filices. [The glumes are glabrous.]

FILICES.

603. Adiantum Capillus-Veneris, L.

a. Fronds, with rhizome.

Grasse (Var); 6 July, 1857.

604. Aspidium athamanticum, Kunze. (Lastrea athamantica, Moore.)

a. Upper portion of frond.

Natal; Rev. Dr. Callaway; 1857. "Inkomankomo" of the Kaffirs. See 'Pharm. Journ.,' (1) vol. xvi., p. 447; Hooker 'Journ. Bot.,' v. (1853), p. 311.

b. An entire frond and detached fertile pinnæ.

605. Ceterach officinarum, Willd.

a. Fertile fronds, with rhizome.

Monaco; May, 1866.

606. Polypodium angustifolium, Sw., var. γ ensifolium, Willd. (P. Calaguala, Ruiz et Pav.) fide J. G. Baker.

a. Fertile fronds.

See Lambert "Illust. Gen. Cinchon." 1821, p. 120, with fig. This specimen bears a descriptive label in French, signed Dombey, stating that the plant is not collected in Lima, but is brought by the natives to the market there, where it is sold as a vulnerary. [Different fern rhizomes appear to be sold under the name of "Calaguala" in different parts of S. America.]

LYCOPODIACEÆ.

607. Lycopodium clavatum, L.

a. Fertile plant.

b. Ditto.

Saxony, at the foot of Mount Rothenberg, near Hohenstein; Dr. Reichel. Of specimen *b* Dr. Reichel remarks, "Forma speciosa, similis *Lycopodio clavato*, Amer. bor." [It has much longer spikes of fructification than specimen *a*.]

608. Lycopodium Selago, L.

a. Fertile plant.

Woods, Gerardmer, Vosges; 12 Aug., 1855.

LICHENES.

609. Cetraria islandica, Ach.

a. Thallus.

No locality; 1870. (On this sheet there are specimens of the typical form, and of *f. platyna*, Ach., the latter having apothecia.)

ALGÆ.

610. Gigartina pistillata, Stackh.

a. Fertile thallus.

Picked out of a sample of Carrageen from Hamburg, 1871. (Hanbury remarks, in pencil, that this specimen more nearly resembles some forms of *G. acicularis*, Lamx. It is, however, taller than that plant, and more robust, although more sparingly branched than Devonshire and Cornish specimens of *G. pistillata*, Stackh. It probably was of Mediterranean growth, this sparingly branched form being not uncommon in that sea.)

APPENDIX I.

List of Books quoted in the Hanbury Herbarium.

Aublet ([Jean Baptiste Christophore] Fusée). Histoire des Plantes de la Guiane Françoise, et une notice des plantes de l'Isle de France. Londres et Paris, 1775. 4 tomes, 393 pl.

Bennett (J. J.), and R. **Brown.** Plantæ Javanicæ Rariores, legit et investigavit T. Horsefield, London, 1838-1852. 4to.
[The type specimens described in this work are in the possession of the Botanical Department of the British Museum at South Kensington.]

Bentley (Robert) and H. **Trimen.** Medicinal Plants: being descriptions with original figures of the principal plants employed in medicine, and an account of their properties and uses; plates by D. Blair. London, 18[75-]80. 4 vol., 306 col. pl.

Berg (O[tto] C[arl]) and C. F. **Schmidt.** Darstellung und Beschreibung sämmtlicher in der Pharmacopœa Borussica aufgeführten offizinellen Gewächse, oder der Stoffe, welche von ihnen in Anwendung kommen. Leipzig, [1858-63]. 4 Bd., 196 col. pl., 8 uncol. pl.

Boissier ([Pierre] Edmund). Flora Orientalis, sive Enumeratio Plantarum in Oriente, a Græcia et Ægypto ad Indiæ fines hucusque observatarum (vol. v.). Basileæ, Georg, 1867. 8vo.

Bojer (Wenzel). Hortus Mauritianus, ou Énumeration des Plantes Exotiques et Indigènes qui croissent à l'Ile Maurice, disposées d'après la méthode naturelle, Maurice. Type, Mamarot & Co., 1837. 8 max., vii., 456 pp.

Candolle (Aug[ustin] Pyram[us] de). Prodromus Systematis Naturalis Regni Vegetabilis, sive enumeratio contracta ordinum, generum, specierumque plantarum, huc usque cognitarum, juxta methodi naturalis normas digesta. Parisiis, 1824-38. Pts. 1-7.

—*Same.* Editore et pro parte auctore Alph. de Candolle. Parisiis, 1844-73. Pts. 8-17, in 13 vols.

Cauvet (D.). Nouveaux Éléments d'Histoire Naturelle Médicale. Paris, 1869. 2 tomes.

Fischer (F. B.). Synopsis Astragalorum Tragacantharum. Mosquæ, 1853. 174 p. + pl. 1-12.

Flückiger (Friedrich A[ugust]), and D. **Hanbury.** Pharmacographia: a history of the principal drugs of vegetable origin, met with in Great Britain and British India. London, 1874. 20 + 704 pp.

Godman (F. D.), and O. **Salvin.** Biologia Centrali-Americana, 1879-88, Botany, by W. B. Hemsley.

Guibourt (N[icolas] J[ean] B[aptiste] G[aston]). Histoire Naturelle des Drogues Simples ; cours d'histoire naturelle professé à l'École de Pharmacie de Paris. Quatrième édition [de l'Histoire abrégée]. Paris, 1849-51. 4 tomes.

Hanbury (Daniel). Science Papers, chiefly pharmacological and botanical ; edited, with memoir, by J. Ince. London, 1876. 10 + 544 p. + por.

— Hooker's Journal of Botany, and Kew Garden Miscellany ; edited by W. J. H. London, 1849-57. 9 vol., pl.

Jacquin (Nicolaus Joseph). Hortus Botanicus Vindebonensis seu plantarum rariorum, quæ in horto botanico Vindobonensi etc. coluntur, icones coloratæ et succinctæ descriptiones. Vindobonæ, typ. L. J. Kaliwoda. 1770-1776. 3 vol. folio.

[**Lambert** (Aylmer Bourke).] Description of the Genus Cinchona ; [with M.] Vahl's Dissertation ; also a description of a new genus named Hyænanche, or hyæna poison. London, 1797. 12 + 56 p. + 13 pl.

Linnæus (Carolus). Hortus Cliffortianus, Amsterdam, 1737, fol. (Privately printed.) [The types of the plants described in this work are preserved in the Botanical Department of the British Museum, South Kensington.]

Lœfling (Peter). Iter Hispanicum eller Resa till Spanska Länderna uti Europa och America, förrattäd ifrån år 1751 till år 1756, utgifvenefter dess frånfälle af Carl Linnæus. Stockholm, Salvius, 1758. 8vo.

Martius (Karl Friedrich Philipp von). Flora Brasiliensis sive Enumeratio Plantarum in Brasiliam hactenus detectarum, quas suis aliorumque botanicorum studiis descriptas, et methodo naturali digestas ediderunt. C. Fr. Philippus de Martius, eoque defuncto successor, Augustus Gulielmus Eichler. Opus cura musei C. R. Pal. Vindobonensis auctore Stephano Endlicher, successore Eduardo Fenzl conditum. Fasc I.—40. Lipsiæ, Fr. Fleischer in Comm., 1840-1870 ; Folio. Tab. 1324.

Miller (Philip). Abridgement of the Gardener's Dictionary : containing methods of cultivating and improving the kitchen, fruit, flower garden, and nursery ; as also for performing the practical parts of husbandry : with the management of vineyards, methods of making wine in England, [and] directions for propagating and improving pasture lands and timber trees. Eighth edition. London, 1768. [928] p. + 13 pl.

Oliver (D[aniel]). Flora of Tropical Africa, by D. Oliver, assisted by other botanists ; [with Bentham's Outlines of botany]. London, 1868-77. Vol. 1-3.

Radlkofer (Dr. Louis). Ueber die Gliederung der Familie der Sapindaceen in Sitz.-Ber. d. Münch. Akad. d. Wiss., 1890.

Rosenthal (David August). Synopsis Plantarum Diaphoricarum ; systematische Übersicht der Heil-, Nutz- und Giftpflanzen aller Länder. Erlangen, 1862. 26 + 1362 pp.

Roxburgh (William). Flora Indica; or, Descriptions of Indian Plants; reprinted *literatim* from Carey's edition of 1832 [under the direction of C. B. Clarke]. Calcutta, 1874. 4 + 8 + 764 + 64 pp.

Royle (J[ohn] Forbes). Manual of Materia Medica and Therapeutics. Second edition, by J. F. R., aided by F. W. Headland. London, 1852. 6 + 802 p.

Seemann (Berthold). Flora Vitiensis: a description of the plants of the Viti or Fiji islands, with an account of their history, uses, and properties; [also, Biographical sketch of B. S.] London, 1865-73. 34 + 454 pp. + por. + 100 col. pl.

Stewart (J. L.) Punjab Plants. Lahore, 1869. 8vo.

Triana (José) et J. E. **Planchon.** Prodromus Floræ Novagranatensis, Paris. V. Masson et fils, 1862-67, 2 vols., gr 8. I. Phanerogamie, 1862, 382 p. ii. Cryptogamie, 1863-67, 589 pp.

[The plants obtained during the voyage of M. Triana in 1856-57, are described in these volumes. The herbarium of M. Triana was acquired by the trustees of the British Museum in 1890.]

APPENDIX II.

Herbaria quoted in the Hanbury Herbarium.

Herb. Burchell.—The plants collected by Burchell at the Cape of Good and Brazil are in the Kew Herbarium; but duplicates exist in several European herbaria (see De Candolle Phytographie, p. 401).

Herb. Cosson.—This herbarium is in the hands of the Executors of M. Cosson, in Paris. The Kew Herbarium, however, contains authentic specimens of many species presented by M. Cosson. Further details concerning this herbarium may be found in De Candolle, Phytographie, p. 405.

Herb. Griffith.—The herbarium of W. Griffith is now at the Royal Herbarium at Kew.

Herb. Linnean Society.—The herbarium in the possession of the Linnean Society now contains: Linnæus' own Herbarium; Acharius' Collection of Lichens; the Herbarium of Wallich, and that of Mr. Winch.

Herb. Lindley.—Dr. John Lindley's Herbarium is in the Museum of the University of Cambridge, with the exception of the orchids, which are in the Kew Herbarium.

Herb. Miller.—The herbarium of Philip Miller is in the Botanical Department of the British Museum at South Kensington.

Herb. Pavon (more correctly Ruiz et Pavon).—The largest herbarium of the author's is at the Botanical Gardens at Madrid, but a very valuable one exists in the Botanical Department at the British Museum, South Kensington.

Herb. Roxburgh.—Authentic specimens of Roxburgh's plants exist in the herbarium of the Linnean Society and of Kew (see De Candolle Phytographie, p. 644).

Herb. Wight.—The herbarium of Robert Wight is at Kew (Kew Gardens Report, 1863, p. 6), but authentic specimens are contained in those of the Linnean Society, and of the Royal Botanic Gardens at Edinburgh, as well as in several foreign herbaria (De Candolle Phytographie, p. 459).

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