Floræ Capensis medicæ prodromus, or, An enumeration of South African plants used as remedies by the colonists of the Cape of Good Hope / by L. Pappe.

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MMVII

FLORÆ CAPENSIS MEDICÆ

PRODROMUS;

OR,

AN ENUMERATION OF SOUTH AFRICAN PLANTS USED AS REMEDIES

BY

THE COLONISTS OF THE CAPE OF GOOD HOPE:

BY

L. PAPPE, M.D.

Second Edition:

WITH CORRECTIONS AND NUMEROUS ADDITIONS.

Multum adhuc restat operis, multumque restabit.—SENECA. Epist. 64.

CAPE TOWN:
W. BRITTAIN, 44, ST. GEORGE'S-STREET.

1857.

CAPE TOWN:
SAUL SOLOMON AND CO., STEAM PRINTING OFFICE,
LONGMARKET-STREET.

TO

CHRISTIAN FLECK, ESQ., M.D.,

OF CAPE TOWN,

THE ACCOMPLISHED PHYSICIAN,

THE SECOND EDITION OF THIS LITTLE WORK IS

INSCRIBED,

AS A SLIGHT MARK OF THE RESPECT, ESTEEM, AND GRATITUDE

OF HIS FRIEND,

THE AUTHOR.

PREFACE.

THE first edition of this little work appeared towards the close of 1850. It was intended as a commentary to a choice collection of Cape medical drugs, sent by Messrs. S H. SCHEUBLE & Co. to the great London Exhibition of 1851, and for which they obtained a well-merited prize.

In the meantime, my pamphlet met with a reception which surpassed my most sanguine expectations, and as it soon became scarce, on account of the very limited number of copies printed at the time, I was urged by different parties, to prepare and issue a second impression.

Thus emboldened by repeated applications, I yield with pleasure to the call, the more so, as I have since been enabled to correct, improve, and make numerous additions.

Having been left entirely to my own resources, I greatly regret the total want of co-operation on the part of the country practitioners, who have daily and ample opportunities of making themselves acquainted with the various domestic remedies commonly used.

The contents, therefore, of the present publication can be considered only as preliminary, or as mere contributions to a more complete Cape Pharmacopœia. There can, indeed, be no doubt amongst reasonable men that, judging from the vast extent of the South African Territory, and from the richness of its almost inexhaustible Flora, many highly useful officinal drugs will still be discovered. However, the greater part of our information on this point, we owe, not so much to scientific research, as to the experience of the colonial farmer, residing in the more remote parts of the interior, to occasional travellers, or to the wandering native.

In reviewing the first edition, I have found it advisable to deviate to some extent from the original plan, by inserting in the list several plants, which, though not strictly indigenous, have yet become fully naturalized, and are much used in the Colony.

There are, on the other hand, Cape plants of unquestionable worth, which I have not enumerated, because they are not actually employed by the inhabitants. The different kinds of *Sebæa* (Gentianeæ), for instance, possess a pleasant, bitter taste ; they could replace the *Summitates Centaurei minoris* of the Pharmacopœias, and even serve as a good substitute for Gentian. The large tuberous roots of many of our beautiful and common *Orchideæ*, such as *Satyrium* erectum, cucullatum, candidum, carneum, *Disa* barbata, lacera, etc., contain a great quantity of a sweet mucilaginous, nutritious juice, and might easily be transformed into *Salep*. The dried and powdered leaves of our wild *Olive* trees (Olea verrucosa and laurifolia) have the reputation of a styptic, when applied to fresh bleeding wounds, and the herb of *Chironia baccifera* to be of good service in syphilis. A decoction of the gamboge-yellow, crusty epidermis of the bark of *Elæodendron croceum* (Saffron-wood), is said by some to counteract the deadly effects of the bites from venomous snakes, when taken internally, and the bark of *Protea grandiflora*, to act as an astringent in diarrhœa and other complaints.

For the purpose of rendering this publication accessible to persons more familiar with the sexual than the natural system, I have added the *Linnean* classes and orders to which the plants belong, as well as a glossary of technical terms, which, in works on Natural History, are indispensable.

L. P.

Cape Town, 10th October, 1856.

AN ENUMERATION

OF

SOUTH AFRICAN MEDICAL PLANTS.

KNOWLTONIA. Salisb.

(*Ranunculaceæ.*)

XIII.—6. POLYANDRIA POLYGYNIA. LIN. SYST.

1. *Knowltonia vesicatoria. Sims.* Herbaceous. *Leaves* triternate, leathery, smooth; segments oval or subcordate, sawed; lateral ones obliquely truncate at base. *Flowers* umbellate; *umbel* nearly unbranched, few-flowered; *flowers* yellowish; *petals* linear.

Every part of this acrid plant is used as an Epispastic. The bruised herb, when applied to a painful part, raises a blister. It is therefore recommended in rheumatism, ischias, lumbago, and similar affections caused by sudden atmospheric changes. The root, when cut in slices, is a good substitute for Emplastrum Janini. The plant is found in almost every part of the Colony, and from its effects is well known by the name of *Brandblâren*.

RANUNCULUS. Lin.

(*Ranunculaceæ.*)

XIII.—6. POLYANDRIA POLYGYNIA. LIN. SYST.

2. *Ranunculus pubescens. Thbg. Root* fibrous. *Stem* herbaceous, erect, downy; all the *leaves* hairy; the radical ones petiolate, ternate, their leaflets incisodentate. *Leaves* of the *stem* either trifid or subpinnatifid, toothed; the uppermost sessile. *Flowers* stalked, single, terminal, yellow. *Calyx* reflexed; *carpels* smooth, slightly mucronate, tuberculated.

This herb grows in ditches and marshes, etc., and is peculiar to the Cape and Uitenhage districts. The expressed juice, when fresh, is recommended in carcinomatous ulcers, and therefore has received the Dutch name of *Kankerblâren*.

CISSAMPELOS. Lin.

(*Menispermaceæ.*)

XXII.—10. DIOECIA MONADELPHIA. LIN. SYST.

3. *Cissampelos capensis. Lin. Stem* shrubby, twining. *Leaves* ovate, petiolate, blunt, entire, glabrous; *leaf-stalks*, short, downy. *Flower bunches* branchy, hardly longer than the leaf-stalks. *Flowers* diœcious, axillary, minute, whitish, tomentose.

This shrub is found in almost every mountainous part of the Colony. The roots are used as an emetic and purgative by the Boers, and go by the name of *Davidjes.* Its foliage is poisonous to cattle.

POLYGALA. Tourn.

(*Polygaleæ.*)

XVII.—5. DIADELPHIA OCTO-DECANDRIA. LIN. SYST.

4. *Polygala Serpentaria. Eckl. and Z. Root* thick, woody. *Stem* almost herbaceous, branchy, procumbent. *Leaves* alternate, obovate, smooth, entire, glaucous beneath, mucronate. *Flowers* on short pedicels, axillary, subcristate.

A shrub found in Kaffraria. Though small, yet the root is comparatively thick and long, and is considered by the natives as a sure antidote against the bites of venomous snakes, whence its colonial name of *Kaffer Slangenwortel.* It belongs to the same section of the genus as the *Polygala Senega*, and may probably possess similar properties.

MUNDTIA. Kunth.

(*Polygaleæ.*)

XVII.—5. DIADELPHIA OCTANDRIA. LIN. SYST.

5. *Mundtia spinosa. D. C.* Shrubby, erect, smooth, divaricating. *Branches* spiny at their apices. *Leaves* on short stalks, oblong, glabrous, veiny, blunt, mucronate. *Flowers* crested, sessile, axillary. *Fruit* a red, juicy berry.

A decoction of the tops of the branches of this shrub, which is very common in the Downs, is used in atrophy, phthisis, &c., apparently with some effect, while the fruit, which is somewhat astringent in taste, is eaten by children and Hottentots, who call them *Skildpatbesjes.*

MALVA. Lin.

(*Malvaceæ.*)

XVI.—9. MONADELPHIA POLYANDRIA. LIN. SYST.

6. *Malva rotundifolia.* *Lin.* *Stem* prostrate; *leaves* stalked, cordate, nearly obicular, serrato-crenate, five-lobed, smooth. *Flowers* small, axillary. *Fruit-stalks* downy, bent downwards.

The whole of this plant is mucilaginous and emollient. Although a native of Europe, it has now become perfectly naturalized, and grows everywhere near towns and villages. The colonists know it by the name of *Keesjes-blâren* (mallow leaves), and frequently use its leaves in the forms of decoction, fomentation, or poultice in sore throat, opthalmia, or for the purpose of maturing abscesses.

PAPPEA. Eck. and Zeyh.

(*Sapindaceæ.*)

XXII—7. DIOECIA OCTO-DECANDRIA. LIN. SYST.

7. *Pappea capensis.* *E. and Z.* A small tree. *Leaves* alternate, ovate, oblong, unequal at base, glabrous, blunt, coriaceous, veiny, slightly rolled back at the margin. *Flowers* small, racemose, with separate sexes by abortion. *Fruit* tricapsular, drupaceous, fleshy, globose, downy.

This tree is pretty common in Kaffirland, and in the districts of Uitenhage and Albany, where its fruit is known as *wilde pruimen* or *t'Kaamsbesjes* (wild plums). It has some resemblance to the plum, is savoury, and furnishes a vinous beverage and excellent vinegar. Its kernel contains an oil, which, though edible, is somewhat purgative, and is recommended as an external remedy in tinea capitis, alopecia, or similar diseases, and may serve as a substitute for Macassar oil.

DODONÆA. Lin.

(*Sapindaceæ.*)

XXII.—8. DIOECIA OCTANDRIA. LIN. SYST.

8. *Dodonæa Thunbergiana.* *E. and Z.* *Stem* shrubby, with angular branches. *Leaves* at the top of the twigs, sessile, alternate, narrow, lanceolate, attenuate at both ends, acute, entire, smooth. *Flowers*

terminal, erect, stalked, small, greenish. *Fruit* a winged three-celled capsule.

A small tree or shrub, common about Piquetberg, Worcester and Clanwilliam, where it is called *Zand Olyf.* A decoction of the root is used as a slight purgative in fevers.

MONSONIA. Lin. Fil.

(*Geraniaceæ.*)

XVI.—7. MONADELPHIA DECANDRIA. LIN. SYST.

9. *Monsonia ovata Cav.* *Root* annual, spindle-shaped. *Stem* herbaceous, simple, erect, shaggy. *Leaves* stalked, alternate, oblongo-ovate, subcordate at base, veiny, crenate, wavy, pubescent, *Stipules* and *bractlets* awl-shaped, rigid. *Peduncles* one-flowered, bracteate in the middle, villose. *Flowers* white, with purplish veins.

The *Keita* of the Hottentots. The root and herb of this plant are very astringent, and used with great success in dysentery. It grows abundantly in the district of Uitenhage.

PELARGONIUM. L'Her.

(*Geraniaceæ.*)

XVI.—4. MONADELPHIA HEPTANDRIA. LIN. SYST.

10. *Pelargonium* (Polyactium) *triste. Ait.* *Root* tuberous. *Leaves* alternate, tripinnatifid, hispid; their *segments* bipinnatifid, and their *pinnules* wedge-shaped, incised. *Umbel* many-flowered. *Flowers* scented, yellow, with a dark purple spot at base.

The scarlet-coloured root of this Pelargonium is somewhat astringent. If dried and pulverised, it is useful in diarrhœa and certain forms of dysentery, where purgatives have been previously given. It has also been recommended as a vermifuge, and is commonly found on the sides of Table Mountain.

11. *Pelargonium* (Jenkinsonia) *antidysentericum. E. and Z.* *Stem* tuberous, fleshy. *Branches* lateral, erect, furrowed, angular. *Leaves* smooth, alternate, stalked, subcordate, lobed. *Lobes* incised. *Petioles* curved, longer than the leaves. *Stipules* prickly. *Flowers*

purplish, and the nectariferous tube twice as long as the calyx.

This plant, which is indigenous in Namaqualand, has tuberous roots, which often attain the size of a man's head, and are called *t'Namie* by the aborigines, who boil them with milk, and make use of them in dysentery.

12. *Pelargonium* (Peristera) *anceps. Ait.* Herbaceous, smooth. *Stems* decumbent, three-sided, two-edged. *Leaves* petiolate, roundish, cordate, lobed, toothed. *Stipules* oblong, two-parted. *Peduncles* axillary, elongated, umbellate. *Umbels* many-flowered. *Flowers* subcapitate, small, crimson.

This species, which grows plentifully along the water-courses in the Cape and Swellendam districts, is a great favourite with the Malays, who call it *roode Rabassam*, and pretend that a decoction of the herb cures suppression of the catamenia, and promotes parturition and *abortion.*

13. *Pelargonium cucullatum. Ait. Stem* shrubby, the whole plant viscid, hairy. *Leaves* alternate, kidney-shaped, hooded, waved, dentato-crenate. *Petioles* patent, channelled, longer than the leaves. *Flowers* terminal, umbellate, purple. *Umbels* many-flowered.

This fine species, which is very common along the side of Table Mountain, has been recommended in the form of decoction, or as an enema, in colic, nephritis, and suppression of urine, and is also an excellent emollient. It appears, that formerly this herb has been exported to Holland, under the name of *Herba Altheæ. Cf. N. L. Burmanni* Specimen Botanicum de Geraniis. Lugd. Bat. 1759, 4to pag. 35.

14. *Pelargonium.* (Dibrachya.) *scutatum Sweet. Stem* shrub-like. *Branches* angular, somewhat downy. *Leaves* fleshy, five-lobed, nearly peltate, glandularly notched. *Umbels* 7-8 flowered. *Petals* patent.

The *Kafir-sorrel* (Kaffir zuring.) of the colonists The *sap* of its leaves is astringent and antiseptic, and of good service in aphthæ, sore-throat, etc. The juice of its petals produces a blue colour of the tint of indigo, and may, according to *Burchell*, be advantageously used for painting. Very common in many parts of the Eastern districts.

OXALIS. Lin.

(*Oxalideæ.*)

X.—5. DECANDRIA PENTAGYNIA. LIN. SYST.

15. *Oxalis cernua. Lin.* *Root* bulbous. *Leaves* radical, stalked, ternate. *Leaflets* obcordate, two-lobed, often blotched, smooth. *Scape* erect, umbelliferous. *Flowers* peduncled, the open ones erect, the closed ones drooping.

A weed, common throughout a great portion of the colony, where it is known as the *wild sorrel* (wilde zuring). On account of their acidity, the leaves, mixed with other vegetables, are used for culinary purposes. They contain, indeed, a good deal of *oxalic acid*, and Thunberg relates that, at his time, this salt in its crystallized form was easily obtained from the juice of this plant. The *bulbs*, moreover, eaten raw, are said to be a good vermifuge.

MELIANTHUS. Lin.

(*Zygophylleæ.*)

XIV.—2. DIDYNAMIA ANGIOSPERMIA. LIN. SYST.

16. *Melianthus major. Lin.* Shrubby. *Leaves* alternate, smooth, unequally pinnate, glaucous beneath. *Leaflets* sharply-toothed. *Stipules* large, solitary, foliaceous, adnate with the leaf-stalk. *Flowers* racemose, reddish brown. *Peduncles* twisted, downy.

Every part of this plant has a nauseous smell, whence it has received the Dutch name of *Truytje roer my niet* (Gertrude, don't touch me). A decoction of the leaves is an excellent external remedy in tinea capitis, crusta serpiginosa,* necrosis, and foul ulcers. It is also useful as a gargle and lotion in sore throat and in diseases of the gums, and the bruised leaves, applied to ulcers, pro-

* A shoemaker, about 25 years of age, had laboured for some time under a most obstinate attack of *crusta serpiginosa*. All the usual remedies having failed, his medical attendant at last advised him to try a decoction of this plant, to be applied in a tepid state. With this treatment, and occasional aperients and spare diet, he was perfectly cured within a month.

mote granulation.* It is common in the Cape Flats, and other parts of the colony, and deserves a trial in cases of plica polonica.

DIOSMA. Lin.

(*Diosmeæ.*)

V.—1. PENTANDRIA MONOGYNIA. LIN. SYST.

17. *Diosma* (Barosma) *crenata. D. C.* A glabrous branchy shrub. *Branches* round, purplish, the upper and smaller ones angular. *Leaves* stalked, smooth, oblongo-ovate, blunt, dotted beneath, and notched with transparent, resinous glands on their margin. *Flowers* peduncled, solitary, axillary; *petals* white, oblong, subsessile.

The *Bucchu leaves* have, as is well known, become an article of export lately. Their principal medical effects are owing to their possessing a considerable quantity of an aromatic volatile oil, and to a particular very tenacious principle, called *Diosmin*, as also to a semi-resinous substance. They have a peculiar smell, and a slightly astringent, bitter, taste. When used in the form of infusion, they promote perspiration. Hence their utility in chronic rheumatism, gout, and other diseases, caused by the sudden suppression of cutaneous action. They have been prescribed also in cholera morbus, and are very beneficial in diseases of the bladder, especially in chronic inflammation of the mucous membrane of that organ (catarrh of the

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* I am indebted to my friend, Dr. A. Brown, for the following practical remarks on the medical properties of this plant:—"For many years past, I have found the *Melianthus major* very serviceable in necrosis and foul ulcers, and its effect in promoting granulation is very remarkable. After cleaning the sores with the decoction, some of the boiled leaves are applied to the parts, and found to answer well. I have not only used it with decided benefit, but in many cases where the *materia medica* has failed me, or the degree of healing was not satisfactory, it has almost invariably succeeded. In carcinoma I have seen it applied with effect in cleaning the ulcers, and rendering their otherwise highly disagreeable odour less offensive. In indolent leprous sores it can also vie with the other applications that we use in that intractable disease. I have tried it in tinea capitis with great effect, but in other affections of the skin it has as yet failed to satisfy me decidedly whether it did good or not. In cases where tinctura myrrhæ is recommended, I have found it a better remedy. In fact, I may say that in my practice it is almost daily used."

bladder); also in hæmaturia, calculus, and in suppuration of the vesica, urethra, and prostrate gland. By increasing the secretion of urine, they impart to it their peculiar smell. They have also been given in dropsy;—in fine, in all those cachectic and hydropical complaints, arising from suppression of the perspiration or urine. As a stimulant to the stomach, some practitioners have used the bucchu leaves in indigestion; a sensation of warmth has accordingly been produced in that organ, and the appetite increased.

A bath of the bucchu leaves is of service in rheumatism, and the *Bucchu vinegar*, as also the *Bucchu brandy*, are excellent embrocations in rheumatic pains, luxations, sugillations, sprains, and contusions.

In trade, this valuable drug is often adulterated by the substitution of less powerful sorts of the same family of plants, which, although of a similar smell, are by no means equal to it in their therapeutical effects. One of these plants is the *Diosma* (Barosma) *serratifolia. Lodd.*, a species common in the district of Swellendam, and another, the *Empleurum serrulatum. Sol.*, easily distinguished by its linear-lanceolate, serrated leaves.

The true *Diosma crenata* is a native of the mountains of Hottentot's Holland, Stellenbosch, Drakenstein, Tulbagh, and Worcester.

FAGARASTRUM. Don.

(*Xanthoxyleæ.*)

VIII.—1. OCTANDRIA MONOGYNIA. LIN. SYST.

18. *Fagarastrum capense. Don.* A shrub, about 6 feet high. *Branches* compressed, flexuous, wrinkled, prickly. *Prickles* flat, sharp-pointed. *Leaves* alternate, impari-pinnate; *pinnæ* ovate, blunt, erect, sessile, smooth, slightly crenate. *Flowers* small, paniculated. *Capsule* dotted; *seeds* black, shining.

Found in the bush near Mossel Bay, and in the forests of the district of George, as also in those of Uitenhage and Albany. The fruit is known to the colonists as the *wild Cardamom*, and, on account of its aromatic qualities, prescribed for flatulency and paralysis.

METHYSCOPHYLLUM. Eckl. and Zeyh.

(*Amyridaceæ.*)

v.—1. PENTANDRIA MONOGYNIA. LIN. SYST.

19. *Methyscophyllum glaucum. E. and Z.* A resinous shrub. *Branches* erect, alternate. *Leaves* opposite, lanceolate, pointed at both ends, veiny, glabrous, glaucous, repando-dentate, bent back at the margin. *Flowers* paniculated. *Panicles* axillary, opposite, forked, few-flowered.

An infusion of the leaves of this shrub is pleasant to the taste, and used in cough, asthma, and other diseases of the chest. It grows about the Zwarte Kei River, where it is a favourite beverage with the Bushmen and others, who also chew it, and call it *Boschjesmansthee.*

CYCLOPIA. Vent.

(*Leguminosæ.*)

x.—1. DECANDRIA MONOGYNIA. LIN. SYST.

20. *Cyclopia genistoides. Vent.* A glabrous shrub. *Stem* and *branches* erect, twiggy. *Leaves* alternate, sessile, trifoliate; *leaflets* linear, bluntly mucronate, revolute at the margin. *Flowers* axillary, bracteate, stalked, yellow. *Peduncles* one-flowered *Bracts* two, oblongo-ovate, pointed.

This plant is common in moist places on the Cape Flats, near Wynberg, Houtbay, and elsewhere. In the form of decoction or infusion, it is often made use of for the purpose of promoting expectoration in chronic catarrh, and even in consumption. It has a sweet, astringent taste, and is generally considered as a restorative. Its vernacular name is *Honigthee.*

BORBONIA. Lin.

(*Leguminosæ.*)

xvii.—6. DIADELPHIA DECANDRIA. LIN. SYST.

21. *Borbonia parviflora. Lamk.* A small, glabrous shrub. *Branches* compressed, angular, winged. *Leaves* alternate, amplexicaul, cordate, many-nerved, mucronate, ciliato-dentate. *Calyx* and *corolla* nearly smooth. *Flowers* yellow.

Common on the Lion's Head and on Table Mountain,

and used, under the significant name of *Stekelthee*, apparently with good effect in asthma and hydrothorax. It is commonly given as a diuretic, in the form of decoction.

VASCOA. D. C.

(*Leguminosæ.*)

XVII.—6. DIADELPHIA DECANDRIA. LIN. SYST.

22. *Vascoa amplexicaulis. D. C.* A glabrous undershrub. *Stem* erect, branchy. *Leaves* simple, amplexicaul, suborbicular, cordate at base, reticulated, quite entire, blunt; those of the stem alternate; the floral ones opposite, coloured. *Flowers* in the upper axils, glabrous, solitary, without bracts, shortly pedicellate, yellow.

The roots of this pretty bush taste like liquorice, whence its name of *Zoethout-boschje.* They are used in the form of decoction, as a demulcent in catarrh and phthisis, and are a good substitute for the liquorice itself. This useful plant inhabits the mountains of Worcester and Tulbagh.

23. *Vascoa perfoliata. D. C.* A small shrub. *Stem* glabrous, erect. *Leaves* amplexicaul, cordate, suborbicular, entire, bluntly mucronate, rigid, netted. *Flowers* yellow.

A strong decoction of the leaves of this species acts as a powerful diuretic, and is of great service in the various forms of dropsy. It grows on the mountains of Hottentot's Holland.

MELILOTUS. TOURN.

(*Leguminosæ.*)

XVII.—6. DIADELPHIA DECANDRIA. LIN. SYST.

24. *Melilotus parviflorus. Desf.* *Stem* erect, branchy. *Leaves* trifoliate, upper ones oblong, toothed; lower ones obovate, entire. *Flowers* laxely racemose, small, yellow; *stipules* linear; *legumes* ovate, wrinkled, one-seeded.

This herb (*Melilot, Steenklaver*), a native also of the north of Africa, diffuses the same sweet, fragrant scent which we observe in the *Melilotus officinalis* of Europe. In its medical effects it is discutient and emollient, and used externally in the form of fomentation, poultice, and plaster, in indurations, glandular tumours, etc. Its powder is one

of the ingredients in the manufacture of snuff. Abundant in sandy soil in many parts of the colony, where it flowers from September to November.

SUTHERLANDIA. R. Br.

(*Leguminosæ.*)

XVII.—6. DIADELPHIA DECANDRIA. LIN. SYST.

25. *Sutherlandia frutescens. R. Br.* Shrubby. *Stem* erect, twiggy. *Leaves* stalked, alternate, impari-pinnate, many-yoked; *pinnules* on short petioles, oblong, obtuse, emarginate, silky. *Flowers* racemose, peduncled, axillary, scarlet. *Legume* ovate, scarious, inflated.

A fine showy shrub, which, on account of its beautiful scarlet flowers, is a horticultural ornament, and cultivated as such in our gardens. It grows wild in hilly parts all over the colony. According to *Thunberg* (Travels, vol. I., pag. 160), the roots and leaves of this plant, when dried and pulverised, are of use in diseases of the eye.

ACACIA. Neck.

(*Leguminosæ.*)

XVI.—9. MONADELPHIA POLYANDRIA. LIN. SYST.

26. *Acacia horrida. Willd.* A large tree. *Stem* and *branches* glabrous, but armed with large white spinous stipules. *Leaves* bipinnate; *pinnæ* 2–3 yoked; *pinnules* many-yoked, oblong, blunt. *Leafstalks* glandulous at base and on the apex. *Flowers* stalked, axillary, globose, polygamous, yellow, scented.

The demulcent derived from the *Doornboom* is well known as an article of commerce. It exudes spontaneously from the bark of the trunk and branches, and hardens in the sun, without losing its transparency. Although the *Cape gum* is inferior in appearance, and in intrinsic value, to that of Northern Africa, it may yet be improved by care and attention. The bark of this useful tree is highly astringent, hence its effect, in the form of decoction, in inveterate *fluor albus*, in diarrhœa, dysentery, and as a substitute for the Peruvian bark in fevers. The *Acacia giraffæ. Willd.* (Kameeldoorn), growing beyond the limits of the Cape Colony, is said to yield a superior gum, and is eaten by the natives.

RUBUS. Lin.

(*Rosaceæ.*)

XII.—3. ICOSANDRIA POLYGYNIA. LIN. SYST.

27. *Rubus pinnatus. Willd.* Shrubby. *Branches, stalks,* and *nerves* of the leaves clothed with short down, and armed with hooked prickles. *Leaves* alternate, petioled, ovate, acuminate, double-sawed, veiny, smooth. *Stipules* narrow, taper-pointed. *Calyx* tomentose, its segments longer than the petals. *Flowers* racemose. *Fruit* black.

The roots are astringent, and used as decoction for chronic diarrhœa, etc. The fruit of this species of *Bramble* or *Blackberry-bush* (Braambosch) is equal in flavour and taste to that of Europe. Abundant in mountain ravines in the Cape and Stellenbosch districts. Flowers, October, November. Fruit, January.

CLIFFORTIA. Lin.

(*Sanguisorbeæ.*)

XIII.—2. POLYANDRIA DIGYNIA. LIN. SYST.

28. *Cliffortia ilicifolia. Lin.* Shrubby. *Stem* brown, scaly, branched. *Leaves* cordato-ovate, elliptical, 3–5 toothed, spiny, many-nerved, amplexicaul, rigid, imbricated, smooth. *Flowers* dioecious, small, axillary, subsessile.

A plant pretty common in the district of Uitenhage, where the Boers recommend it as an emollient and expectorant in coughs. This species, whose leaves are sharp-pointed and spiny, is called *Doornthee.*

PUNICA. Tourn.

(*Granateæ.*)

XII.—1. ICOSANDRIA MONOGYNIA. LIN. SYST.

29. *Punica granatum. Lin.* A shrubby tree. *Branches* often thorny. *Leaves* opposite, entire, lance-shaped, pointed at each end, smooth. *Flowers* at the top of the branches; *petals* scarlet, wrinkled. *Fruit* round, with a coriaceous rind; *pulp* acidulous; *seeds* oblong, angular.

The rind of the *Pomegranate* (Granaat-appel) and its roots are astringent, and contain tannin and gallic-acid. They are used in diarrhœa, accompanying general debility,

in the form of decoction, while infusions are known to be of service as injections in obstinate leucorrhœa. From the pulp surrounding the seeds, a refrigerating syrup is prepared. The efficacy of the fresh bark of the root was known to the Ancients, who praised it as a sure remedy for the expulsion of the tape-worm. This effect has been tested in our days with decided success. The best way of using the remedy is in the form of a decoction of two ounces of the bark in two pints of water, boiled down to *one* pint. A wine-glassful taken every hour early in the morning is the dose generally administered.

Though a native of the north of Africa, the Pomegranate tree is extensively cultivated within the colony, especially for the purpose of forming hedges.

EPILOBIUM. Lin.

(*Onagrariæ.*)

VIII.—1. OCTANDRIA MONOGYNIA. LIN. SYST.

30. *Epilobium villosum. Thbg.* *Stem* herbaceous, erect, round, branched, shaggy. *Leaves* sessile, alternate, lanceolate, sawed, acute, hairy. *Flowers* terminal, axillary, purple.

As a house-medicine, this herb, inhabiting the mountains of several districts, is renowned for its usefulness in cleansing foul ulcers.

PILOGYNE. Schrad.

(*Cucurbitaceæ.*)

XXII.—3. DIOECIA TRIANDRIA. LIN. SYST.

31. *Pilogyne Ecklonii. Schrad.* Dioecious. *Root* tuberous; *stem* climbing. *Branches* striped, nearly quadrangular. *Leaves* stalked, triangular, cordate, 3-lobed, sharp-pointed, toothed, green and rough above; white, downy beneath. *Flowers* stalked, axillary; male ones small, white, racemose; female ones solitary.

The porous resinous root of this old Hottentot remedy is nauseous in taste. In the form of decoction, it acts simultaneously as an emetic, cathartic, and diuretic. The natives call it *Davidjes-wortel*, and use it in cutaneous affections, dropsy, and syphilis. The tincture, or infusion of the root in wine or brandy, is, according to *Thunberg*

(Travels, I., pag. 128), a powerful emetic and purgative. This plant, the *Bryonia Africana* of former botanists, grows upon the slopes of Table Mountain, amongst bushes; also in the Eastern districts, near Port Elizabeth, etc., and flowers in the month of October.

CITRULLUS. Schr.

(*Cucurbitaceæ.*)

XVI.—10. MONOECIA MONADELPHIA. LIN. SYST.

32. *Citrullus amarus. Schrad.* *Stem* angular, furrowed, hispid, decumbent. *Leaves* alternate, stalked; the upper ones 3-parted; middle segment sinuated, pinnatifid; lateral ones 2 fid; lobes blunt, scabrid, pimpled; radical leaves 5-parted. *Tendrils* axillary. *Flowers* dioecious. *Fruit* glabrous, elliptico-globose.

This annual plant resembles a water-melon in foliage. Its fruit, a round pepo of the size of a child's head, is filled with a spongy pulp. By the farmer, this fruit, which is bitter and loathsome, is called *Bitter-appel* or *Wild Water-melon*,* and is common in the sands of the Cape Downs, near Tygerberg and Rietvalley, and in similar localities. The pulp of the pepo, like that of *Colocynth*, is a very strong, drastic purgative, and serves the same purpose, and is used as a cathartic in dropsy and other complaints. An extract can easily be prepared from it, equal in its effects to the extract of Colocynth.

PHARNACEUM. Lin.

(*Paronychiaceæ.*)

V.—3. PENTANDRIA TRIGYNIA. LIN. SYST.

33. *Pharnaceum lineare. Thbg.* Suffruticose. *Root* fibrous, stemless. *Branches* radical, diffused, smooth, repeatedly forked. *Leaves* sessile, whorled, linear, unequal, entire, patent, blunt. *Stipules* scarious, torn.

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* Thunberg (Trav. II., p. 171) relates, that at the Cape the Colocynth-fruit is eaten, when pickled, both by the natives and colonists, although it is very bitter.—This is a mistake: the fruit alluded to by that author, is that of *Citrullus caffer. Schrad.*, called by the colonists, *Kaffir-watermeloen.*

Peduncles axillary, elongated, terminal. *Flowers* paniculated or umbellate, white and purplish.

This little plant, which thrives best in a sandy soil, and abounds in the Cape Flats and Downs, is employed in pulmonary affections. It is generally used in the form of infusion, which is of a rather pleasant, aromatic, bitter taste, and is also somewhat mucilaginous and slightly diuretic. By the name of *Droedas kruiden*, it is known to many colonists, who make use of it in coughs, and especially in those that threaten consumption.

CRASSULA. Lin.

(*Crassulaceæ.*)

V.—5. PENTANDRIA PENTAGYNIA. LIN. SYST.

34. *Crassula tetragona. Lin. Stem* suffruticose, succulent, round, branchy, procumbent, smooth. *Branches* alternate, erect. *Leaves* connate, decussate, three-sided, incurved, acute, entire. *Flowers* terminal, corymbose, small, white.

A succulent plant, rather astringent, and a native of the district of Uitenhage. If boiled in milk, the leaves of this species are used as a tonic in diarrhœa. The *Crassula portulacacea Lam.*, which is called *t'Karkey* by the Hottentots, is said to be used in similar cases.

TETRAPHYLE. Eck. and Zeyh.

(*Crassulaceæ.*)

V.—5. PENTANDRIA PENTAGYNIA. LIN. SYST.

35. *Tetraphyle furcata. E. and Z. Root* fleshy, scaly, spreading. *Stem* erect. *Branches* quadrangular, fastigiate. *Leaves* standing in fours, small, ovato-lanceolate, imbricated, smooth. *Flowers* 5–10, terminal.

This plant becomes very brittle when dried. It is bitter and astringent, and used in the form of decoction for diarrhœa and dysentery. During one of the late Kafir wars, when the latter disease prevailed amongst the troops, this remedy appears to have been tried with marked success.

COTYLEDON. Lin.

(*Crassulaceæ.*)

X.—5. DECANDRIA PENTAGYNIA. LIN. SYST.

36. *Cotyledon orbiculata. Lin. Stem* fleshy, leafless, elongated, branchy. *Leaves* opposite, flat, obovate,

spatulate, blunt, acuminate, (often) farinaceously glaucous, with a red border. *Flowers* paniculate, nodding.

This succulent shrub is common in mountainous parts. The leaves are thick, and from their shape called *Varkens-ooren* (pig's ears). The fresh juice is of service in epilepsy, and has been prescribed by me in the case of a young man, subject to this frightful disease. Not only were the symptoms evidently diminished, but subsequent attacks were less violent. The leaves form an excellent application to hard corns. On removal of the epidermis of the upper side of the leaf, it is left on the part for 8 or 10 hours, when it will be found that the juicy portion of the leaf is gone, and the corn feels soft, and may be removed with ease. It should be remarked here, that *Crassula arborescens. Willd.*, has the same properties.

MESEMBRYANTHEMUM. Lin.

(*Ficoideæ.*)

XII.—2. ICOSANDRIA PENTAGYNIA. LIN. SYST.

37. *Mesembryanthemum edule. Lin.* Suffruticose; succulent. *Stem* erect. *Branches* two-edged, prostrate, spreading. *Leaves* opposite, connate, scimitar-shaped, three-edged, fleshy, serrulate at their edge, perfectly smooth. *Flowers* solitary, terminal, large, yellow or purple. *Fruit* eatable.

Few South-African plants are so much in domestic use than this species and *Mesembryanthemum acinaciforme. Lin.*, both of which are common in the sandy tracts of the colony. They are astringent and sourish in taste, on account of the acidulated alkaline salt with which they seem to be impregnated. The expressed juice of the succulent leaves, taken internally, checks dysentery, and acts as a mild diuretic; while it is also for its antiseptic property, used as an excellent gargle in malignant sore throat, violent salivation and aphthæ, or in the form of a lotion in burns and scalds. At the Cape these plants are called *Hottentots vygen* (Hottentot-figs).

38. *Mesembryanthemum crystallinum. Lin. Root* annual. *Stem* herbaceous, angular, procumbent, fleshy, covered all over with large pustules. *Leaves* broad, amplexicaul, waved at the margin, ovate, entire. *Flowers* axillary, nearly sessile, small white.

The *Iceplant* contains a good deal of malic acid and lime. The expressed juice of the herb, when fresh and

rendered limpid, has been recommended as a specific in incontinence of urine, proceeding from spasm (Enuresis spastica), and is given in doses of a tablespoonful at intervals. The Iceplant is common in the neighbourhood of Cape Town, especially in the sandy flat near Rietvalley, where it flowers in the midst of summer.

39. *Mesembryanthemum tortuosum. Lin. Stem* short. *Branches* procumbent, elongated, divaricating, twisted. *Leaves* connate, pointed, entire, oblongo-ovate, concave, somewhat pustular, keeled, crowded. Lobes of the *calyx* unequal.

This species, a native of the Karroo, appears to possess narcotic properties. The Hottentots, who know it by the name of *Kauw-goed*, are in the habit of chewing it, and become intoxicated, while the farmers use it in the form of decoction or tincture, as a good sedative.

HYDROCOTYLE. Lin.

(*Umbelliferæ.*)

V.—2. PENTANDRIA DIGYNIA. LIN. SYST.

40. *Hydrocotyle Centella. Cham.* Suffruticose. *Stems* filiform, decumbent, geniculate, flexuose. *Leaves* stalked, oblongo-lanceolate, 3-nerved, subfalcate, pubescent, acuminate, entire. *Flowers* 3-5 polygamous, umbellate, whorled, axillary. *Involucral bracts* 4-5, ovato-lanceolate, acute. *Petals* glabrous.

The roots and stalks of this plant are astringent, and a decoction of them is used with effect by many colonists in violent diarrhœa. They are also said to be of great service in cases of dysentery, after the necessary evacuations have been previously procured, and where the disease has assumed a chronic form. Among the farmers, the plant is known under the name of *Persgras*; it inhabits the Cape and Stellenbosch districts, and grows abundantly about Vlaggeberg.

41. *Hydrocotyle asiatica. Lin. Stems* slender, prostrate, creeping. *Leaves* stalked, reniform, crenato-dentate, ribbed, smooth. *Flowers* small, axillary. *Umbels* simple, few-flowered. *Leaf* and *flower*-stalks slightly tomentose.

Found in moist, shady localities, at watercourses, and in the beds of empty rivers, throughout a great portion of

the colony. This small plant has of late been recommended in India as a remedy for leprosy, and the Madras *United Service Gazette* states, that the local Government had authorised its use at the Leper Hospital. The use of this plant was discovered by Mr. Jules Lepine, of Pondicherry, and instantly communicated to the Madras authorities and the public. He was guided to his discovery by Dr. Boileau of the Mauritius, who himself suffering from this fearful disease, had devoted himself to experiments with it. Of 40 adult patients, to whom it had been administered, all were in a fair way for recovery in 1853. How far the real efficacy of this new remedy can be proved by experience, remains to be seen.

SIUM. LIN.

(*Umbelliferæ.*)

V.—2. PENTANDRIA DYGYNIA. LIN. SYST.

42. *Sium Thunbergii. D. C.* Herbaceous. *Root* fibrous, stoloniferous. *Stem* erect. *Branches* angular. *Leaves* pinnate ; *leaflets* ovate, pointed, regularly sawed. *Umbels* stalked, lateral or terminal ; segments of the *involucre* (3-5) linear, entire. *Flowers* white.

In marshy spots near Zeekoe-valley, in the bed of the Zwartkops-river, and in similar localities. Flowers February and March.

The root of this umbelliferous plant, called *Tandpynwortel* (Toothache-root) by the colonists, is renowned for its allaying toothache when held in the mouth or chewed.

BUBON. LIN.

(*Umbelliferæ.*)

V.—2. PENTANDRIA DIGYNIA. LIN. SYST.

43. *Bubon Galbanum. Lin.* A smooth, resinous shrub. *Stem* erect, round, geniculated, branchy. *Leaves* alternate, pinnate, triternate, rigid, glaucous ; *segments* rhomboidal, toothed, or pinnatifid ; terminal ones 3-lobed. *Petioles* sheating. *Umbels* compound, many-rayed. *Involucres* many-leaved. *Leaflets* linear. *Flowers* yellowish-green.

This umbelliferous plant, which attains a height of from six to eight feet, and is found all over the colony in moist places, or in the ravines of mountains, is reputed amongst the inhabitants as an excellent diuretic, under the name

of *Wild Celery*. A decoction of its leaves proves salutary in cases of dropsy, and has been even administered successfully in gravel. At times some resinous matter exudes from the stem, which however, in its appearance, smell, and in every respect, greatly differs from the *Gummi galbanum*, the well-known drug of our dispensaries. Linnæus, in giving the name to this species, seems to have been led astray by mistake, the real drug being derived from a different plant, a native of the north of Africa, and probably from a kind of Ferula.

ARCTOPUS. Lin.

(*Umbelliferæ.*)

V.—2. PENTANDRIA DIGYNIA. LIN. SYST.

44. *Arctopus echinatus. Lin. Root* spindle-shaped, resinous, stemless. *Radical leaves*, pressed to the ground, stellate, hispid; their expanded lobes nearly round, incisid, 3 fid; single lobes dentate, ciliated, spiny. *Flowers* dioecious, umbellate; male umbel stalked, female sessile. *Petals* white.

This plant, the *Platdoorn* or *Ziekte-troost* of the Boers, is one of those few indigenous remedies, which, from the very establishment of the colony, have been constantly used by its inhabitants. At that early period, the European settlers, being often without their necessary stock of medicines, had to learn from their Hottentot neighbours, who held this plant in great esteem. It is demulcent and diuretic, and somewhat approaches the *Sarsaparilla*. The decoction of the root is the general form under which it is prescribed in lues, lepra, or cutaneous chronic eruptions of all kinds. It also furnishes a sort of resin, which is easily procurable by making incisions into the root while it is fresh. It has been shown from chemical experiments, that the root of this plant contains an alcaloid, which, combined with acids, assumes the form of neutral salts. Thus the *Arctopium sulphuricum* consists of small scaly white crystals, which are astringent in taste, and which in half grain doses, produce coagulation of the saliva within the mouth.

VISCUM. Lin.

(*Loranthaceæ.*)

XXII.—4. DIOECIA TETRANDRIA. LIN. SYST.

45. *Viscum capense. Lin. f.* A parasitical leafless shrub. *Stem* blunt, square, erect, articulated, smooth.

Branches decussate. *Flowers* dioecious, whorled, sessile. *Fruit* a globose white berry.

A parasitical shrub (called *Vogeleend*), growing on the stems of several species of *Rhus* and *Euclea*, in most parts of the colony. In its appearance and properties it is nearly allied to the European *Mistletoe*. Its stems are mucilaginous, and a little astringent. These are employed as an antispasmodic in cases of epilepsy in children and young females, where the bowels are loose, and where the disease is just commencing. It has also been recommended in St. Vitus' dance, asthma, and similar complaints, and is prescribed in the form of powder or decoction.

VALERIANA. Lin.

(*Valerianeæ.*)

III.—1. TRIANDRIA MONOGYNIA. LIN. SYST.

46. *Valeriana capensis. Thbg. Root* tuberous. *Stem* herbaceous, erect, smooth. *Leaves* opposite, petiolate, 3-yoked, pinnatifid; lobes alternate, ovato-dentate, pointed; the uppermost largest. *Petioles* amplexicaul. *Flowers* corymbose, red. *Bracts* 2 opposite, setaceous.

This species is very closely allied to the European *Valeriana officinalis*. Although it may not be quite so powerful in its effects, yet it resembles the same, not only in its appearance, but also in its medical virtues. Its roots are a favourite remedy in morbid susceptibility of the nervous system, and in the form of infusion are successfully given in typhoid fevers, epilepsy, hysteria, and similar maladies. They are at the same time sudoriferous, and have a salutary effect on intestinal worms. This plant grows in moist places in many parts of the colony, and is particularly common in the George district.

MATRICARIA. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

47. *Matricaria glabrata. D. C. Root* annual, fibrous. *Stem* herbaceous, erect, branchy, angular. *Leaves* alternate, pinnatifid; lobes linear, entire, pointed; the upper ones toothed. *Flower-heads* terminal, solitary. Scales of the *involucre* blunt, with

a broad scarious border. *Ray* white, reflexed. *Receptacle* ovate, conical.

The *Wild Chamomile*, which, in the months of November and December, so plentifully covers the Cape Downs, is one of those plants which deserve the peculiar attention of our apothecaries. It is a *true Matricaria*, and in many respects not only equals, but even surpasses, the European species. Large sums of money are yearly expended in importing this useful and popular drug, while we can gather a plant of the same order, the same genus, and the same properties at our doors. In the more remote parts of the country, where dispensaries are not so abundantly found as in the vicinity of our metropolis, the farmers and the coloured people employ the Wild Chamomile as often, and with the same good effect, as we do the *Matricaria Chamomilla*, or the *Anthemis nobilis*. In short, this herb, which contains a superfluity of volatile oil, is an excellent antispasmodic, and most useful in colic and other spasmodic complaints, while, on account of its aromatic bitter taste, it is recommended as a stomachic in dyspepsia and in derangements of the digestive organs generally. Its local application as a resolvent is sufficiently known.

GARULEUM. Cass.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

48. *Garuleum bipinnatum. Less.* Suffruticose. *Roots* long, woody. *Stem* erect, striated, branchy. *Leaves* alternate, bipinnatifid; pinnæ nearly opposite, linear-lanceolatè, acute. *Flower-heads* terminal, solitary; *ray* blue, *disk* yellow.

Amongst the medical indigenous plants of the Cape, the present deserves particular notice. It is well known to almost every resident as the *Snake-root*, having acquired its vernacular name from its effects as an antidote against the bites of venomous snakes,* with which the country abounds. The root of this plant, which is a native of the Eastern districts, where it grows in the deserts of the Karroo, has a great similarity to the *Radix Senegæ* of the

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* The most formidable of these reptiles are the *Naja Haje Merrem.* (Cobra Capella) and the *Vipera Brachyura. Cuv.* (Poffadder).

Pharmacopœa. It is bitter and acrid, and contains a good deal of a resinous substance, almost homogeneous to that which we observe in the root of the *Polygala Senega*. In the form of decoction or tincture, this root is a great favourite with the colonial farmer, in various diseases of the chest, asthma, and such affections where a free secretion of the mucous membrane of the lungs and bronchiæ is desirable. It also promotes perspiration, and acts as a diuretic in gout and dropsy. This valuable root ought to have a place in the Materia medica.

TARCHONANTHUS. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

49. *Tarchonanthus camphoratus. Lin.* A shrub 4-5 feet high. *Stem* erect, striated ; branches angular, shaggy. *Leaves* stalked, oblong, entire, rugose, blunt, coriaceous, smooth above and tomentose beneath. *Flowers* paniculate, terminal, many-headed ; *flower-stalks* short, downy.

The whole of this shrub has a camphorated odour. Its leaves, when dried, are smoked by the Hottentots and Bushmen instead of tobacco, and, like the *Dagga*, exhibit slight narcotic symptoms. In the form of infusion, they promote perspiration, and are said to be useful in spasmodic asthma.

COTULA. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

50. *Cotula multifida. D. C.* Herbaceous, ascending, smooth, branchy. *Leaves* semi-amplexicaul at base, pinnatifid ; lobes trifid, acute. *Flower-heads* discoid, terminal, yellow Scales of the *involucre* blunt, with a membranaceous margin.

This plant grows in the district of Uitenhage, and is used by the Hottentots (who call it *t'Kamso*) in rheumatism, scalds, and in cutaneous affections.

ARTEMISIA. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

51. *Artemisia afra. Jacq.* Suffrutescent. *Stem* erect, branchy. *Branches* angular, furrowed, her-

baceous, leafy. *Leaves* interruptedly bipinnatifid, stalked, smooth above and tomentose beneath; lobes linear-lanceolate, falcate. *Petioles* bearing stipules at base. *Flower-heads* peduncled, racemoso-paniculate, one-sided, hemisphærical, drooping. Scales of the *involucre* ovate, lanceolate, scarious. *Recepticle* naked.

The whole of the *Wormwood* (Alsem.) has a strong, balmy smell, and a bitter, aromatic, but nauseous taste, owing to a green essential oil which it contains. The herb is tonic, antispasmodic, and anthelmintic, and very useful in debility of the stomach, visceral obstructions, jaundice, hypochondriasis, or similar evils, while its efficacy as a vermifuge is generally admitted. The best forms for using it are the infusion, the decoction, and tincture, the latter being preferred by the colonists. A strong infusion is used externally as a collyrium in weakness of the eyes, and the pounded leaves and stalks are employed as a discutient in œdema and sugillations.

TANACETUM. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

52. *Tanacetum multiflorum. Thbg. Root* woody. *Stem* herbaceous, angular, erect. *Branches* fastigiate, pubescent. *Leaves* alternate, rough, pinnatifid; pinnæ linear, inciso-dentate. *Capitula* terminal, corymbose, many-flowered, small, yellow.

This species, like all other plants of the same genus, contains a great deal of resin, and a specific, ethereal oil, of a very strong and peculiar odour. It has a bitter, aromatic, acrid taste, and is used as a tonic, antispasmodic, and anthelmintic, in flatulency, gout, amenorrhœa, and dropsy; but particularly for expelling lumbrici and other intestinal worms. It is administered in the form of powder or infusion, which latter promotes perspiration and acts as a mild diuretic. Applied as a fomentation, it is resolvent and anodyne, and is used also for making injections. This plant, called *Worm-kruid,* grows very abundantly in sandy soil, close to the sea-shore.

ERIOCEPHALUS. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

53. *Eriocephalus umbellulatus. D. C.* Shrubby.

Branches erect, one-sided, divaricating, smooth. *Leaves* fasciculate, linear, axillary, entire, silky. *Flower-heads* subterminal, stalked, corymbose. *Pedicels* somewhat longer than the capitula. *Ray-flowers* white.

This shrub (*Wild Rosemary*) inhabits the mountainous parts of the colony, and has received its colonial name on account of its smell, which somewhat resembles that of the Rosemary. According to Thunberg, it is diuretic, and used by the farmers and Hottentots in various forms of dropsy.

HELICHRYSUM. D. C.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

54. *Helichrysum nudifolium. Less. Root* perannual, fibrous. *Stem* single, tomentose. *Radical leaves* stalked, amplexicaul, unequal at base, ovato-lanceolate, reticulated, 5-nerved, smooth, but scabrous at the margin and on the upper surface. *Cauline* leaves narrow, lanceolate, sharp-pointed. *Capitula* terminal, corymbose, yellow. Scales of the *involucre* blunt.

A plant pretty common in the colony, and to be met with even in the vicinity of Cape Town, on Devil's Mountain. The whole of this plant, here called *Caffer-tea*, is demulcent, and, in the form of infusion, recommended in catarrh, phthisis, and other pulmonary affections.

55. *Helichrysum serpyllifolium. Less. Stem* suffrutescent. *Branches* filiform, spreading, tomentose. *Leaves* alternate, sessile, obovate, entire, blunt, somewhat curled, glabrous above and tomentose beneath. *Capitula* corymbose, conglomerated, many-flowered, white.

This species also appears to possess demulcent and emollient properties, and to be of service in the various diseases of the chest. It goes by the name of *Hottentot's tea*, and grows near the watercourses on the Cape mountains, has a pleasant smell, and is much liked by the coloured people, who infuse it as tea. Sometimes the *Helichrysum auriculatum. Less.*, is used for the same purpose, and under similar circumstances.

56. *Helichrysum imbricatum. Less. Root* fibrous. *Stem* suffrutescent, erect. *Leaves* semi-amplexical,

ovato-oblong, apiculate and clothed, as well as the spreading branches, with white short down. *Capitula* terminal, corymbose, many-flowered, stalked ; scales of the *involucre* membranaceous, imbricated, obtuse ; the outer ones of a brownish hue, the inner ones snow-white at top.

Like the two former species, this likewise is recommended as a demulcent in coughs and other pulmonary affections. It is used in the form of tea, and called *Duinen-thee* (tea from the Downs). Common in the Cape Downs.

LEONTONYX. Cass.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

57. *Leontonyx augustifolius. D. C.* Covered all over with a snow-white woolly down. *Stems* suffruticose at base, branching, leafy, erect. *Leaves* sessile, linear-oblong, blunt. *Capitula* solitary. Scales of the *involucre* purple, linear, straight, pointed. D. C.

The whole of this little plant, called *Beetbosjes* by the Boers, has an aromatic smell, and when pounded and mixed with lard or fat, is applied to ulcers. Frequent in sandy soil, chiefly near St. Helena Bay and vicinity.

ELYTROPAPPUS. Cass.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

58. *Elytropappus Rhinocerotis. Less.* Shrubby. *Stem* erect, tomentose. *Branches* many, drooping. *Leaves* very small, imbricated, appressed, erect, sessile, filiform, smooth. *Capitula* racemose, 3-flowered.

A bush, called *Rhinosterboschjes*, which covers immense tracts of waste land in the Western districts. The whole of this shrub is bitter and resinous The tops of the branches, when infused in wine or brandy, furnish a superior kind of stomachic bitters, which have a green colour, and are frequently used as a tonic in dyspepsia and other complaints, arising from impaired digestion. The tops are also given in powder to children affected with diarrhœa.

59. *Elytropappus glandulosus. Less. Stem* shrubby, downy, erect, branched. *Branches* aggregate, patent, very leafy. *Leaves* linear, acuminate, spirally twisted, bearing stalked glands on the lower surface. *Capitula* terminal, clustered, 2–4 flowered.

This small shrub is the *Slangenbosch* (Snake-shrub) spoken of by Thunberg (Trav. I., p. 268) as a good remedy for the expulsion of intestinal worms, when used in the shape of decoction.

LEYSSERA. Lin.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

60. *Leyssera gnaphaloides. Lin. Root* fibrous. *Stem* suffruticose, downy. *Branches* silky, nearly umbellate. *Leaves* aggregate, imbricato-erect, sessile, linear-subulate, furrowed, more or less tomentose, glandularly scabrous. *Capitula* solitary, terminal, peduncled. *Involucre* turbinate; its scales scarious, blunt, shining. *Rays* yellow.

Very few of our indigenous plants are so much in domestic use as this one, known as *Geele-bloemetjes-thee.* When pounded, or rubbed between the fingers, it gives an agreeable scent, and the infusion has a pleasant, sweetish taste. It is emollient, and for that reason is highly recommended in catarrh, cough, and even consumption. Some of our apothecaries have added this plant to the *species pectorales.*

OSMITOPSIS. Cass.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

61. *Osmitopsis asteriscoides. Cass. Stem* fruticose, erect, tomentose, little branched. *Branches* leafy to the apex. *Leaves* crowded, sessile, imbricated, lanceolate, pointed, entire, dotted, shaggy. *Capitula* on short pedicels, solitary, terminal, aggregate. *Involucre* unequal; scales ovate. *Rays* white, *disk* yellow.

A native of Table Mountain, where it grows abundantly. The whole plant, called *Bellis,* is impregnated with a great deal of an aromatic volatile oil, which, from its

odour and taste, seems to contain camphor.* Hence its virtues as an antispasmodic, tonic, and resolvent. In the form of infusion, it is frequently and advantageously employed in cough, hoarseness, and in diseases of the chest generally, and is said to be also very serviceable in flatulent colic. Infused in spirit, it acts as a powerful external remedy, and Thunberg relates, that he has successfully cured paralysis with embrocations of the *Spiritus Bellidis*. It would be worth while to distil the essential oil, with which this plant abounds, and which, from its peculiarity, shows an affinity to cajeput-oil

The *Osmites hirsuta. Less.*, a plant common on the mountains of Fransche Hoek and Drakenstein, having a similar smell, is known in the colony as *Van der Merwe's Kruiden.*

EURYOPS. Cass.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

62. *Euryops multifidus. D. C.* Shrubby. *Stem* smooth, very branchy. *Branches* alternate, divaricating. *Leaves* glabrous, linear, entire at base, bifid or multifid above. *Peduncles* alternate, axillary, much longer than the leaves, one-headed. *Ligulæ* oblong, yellow. *Achænia* villose.

From the stem and branches of this little shrub, which grows plentifully near the Olifant's River, in the district of Clanwilliam, exudes a yellowish, semi-transparent, resinous substance, which in every respect resembles the *mastic* of the Pharmacopœia, and seems to possess almost the same properties.

The existence of this gummiferous shrub has been known for many years, and was noticed by Mr. Burchell, who in his Travels, I., p. 259, mentions it in these words :—

"The inhabitants of the Roggeveld, when in want of resin, use as a substitute a gum, which exudes from different shrubs, which they call *Harpuis-bosch* (Resin-bush). Of this gum a considerable quantity may be collected."

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* A chemical analysis of this oil has since been made.[1] It is liquid, of a yellowish-green tint, and easily soluble in ether and alcohol. In its qualities, it resembles cajeput-oil and Borneo camphor.[2]

[1] Ueber das ætherische Oel von *Osmitopsis asteriscoides* von E. v Gorup-Bezanez. (Annals of Chemistry and Pharmacy, vol. 89, p. 214—218.)

[2] Prepared from a Malayan tree (Dryobalanops Camphora. Coleb.)

STOBÆA. Thunb.

(*Compositæ.*)

XIX.—SYNGENESIA. LIN. SYST.

63. *Stobæa rubricaulis. D.C. Root* woody. *Stem* erect, purple. *Leaves* amplexicaul, eared, rigid, smooth above, tomentose beneath, pinnatifid; lobes lanceolate, acuminate, spiny, with prickly fringes on their margin. *Pedicels* short, bracteate, subracemose. Scales of the *involucre* spreading, ovato-lanceolate, having two spines at base, which outreach the *disk*. *Achænia* downy.

The colonial name of *Graveel-wortel*, given to this plant, fully implies the nature of its effects. It is a native of the district of Swellendam, where it grows on hills and uncultivated fields. A tincture prepared from the bruised roots is diuretic, and of great service in gravel.

LOBELLA. Lin.

(*Campanulaceæ.*)

V.—1. PENTANDRIA MONOGYNIA. LIN. SYST.

64. *Lobelia pinifolia. Lin. Stem* frutescent, erect, smooth. *Leaves* crowded, alternate, sessile, linear-lanceolate, acute, entire, keeled. *Peduncles* with short bracts, silky, few-flowered. Tube of the *calyx* half-round. *Flowers* blue, subterminal, hairy outside.

The resinous root of this little shrub is stimulant and diaphoretic. A decoction of it is sometimes used as a domestic remedy in cutaneous affections, chronic rheumatism, and gout. This plant is common in the mountainous parts of the Western division of the colony, where it flowers during the greater part of the year.

WAHLENBERGIA. Schrad.

(*Campanulaceæ.*)

V.—1. PENTANDRIA MONOGYNIA. LIN. SYST.

65. *Wahlenbergia procumbens. D. C. fil.* Herbaceous; procumbent, diffused, entirely smooth. *Leaves* opposite, ovate, subsessile, blunt, entire or obsoletely crenate. *Pedicels* axillary, longer than the leaves.

Tube of the *calyx* egg-shaped, its lobes acute. *Flowers* erect, solitary, white.

Common about watercourses, ditches, &c., in the summer. It is an emollient, and used accordingly as an ingredient in poultices. Its smell, when dried, resembles that of *Trigonella foenum graecum*.

STAPELIA. Lin.

(*Asclepiadeæ.*)

V.—2. PENTANDRIA DIGYNIA. LIN. SYST.

66. *Stapelia pilifera. Lin. Root* fibrous. *Stem* simple or branchy, leafless, succulent, round, furrowed, tubercled; *tubercules* hair-pointed. *Flowers* stalked, solitary. *Calyx* 5 cleft; *corolla* 5 fid, its segments ovate, acuminate, patent.

The stem of this plant, which grows in the dreary wastes of the Karroo, is fleshy and of the size and form of a cucumber. It has an insipid, yet cool and watery taste, and is eaten by the natives, who call it *Guaap*, for the purpose of quenching their thirst. Infused with brandy, this plant is said to be a useful remedy for *piles*.

GOMPHOCARPUS. R. Br.

(*Asclepiadeæ.*)

V.—2. PENTANDRIA DYGYNIA. LIN. SYST.

67. *Gomphocarpus crispus. R. Br. Stem* erect, hispid. *Branches* alternate. *Leaves* on short petioles, subsessile, opposite, linear-lanceolate, round or subcordate at base, crisp and wavy at the margin, rigid, acuminate. *Flowers* stalked, axillary, or terminal, umbellate. *Pedicels* bracteolate, hairy. *Corolla* reflexed; *leaves* of the *corona* pointed upwards, oblong, toothed at base. *Follicles* compressed, beaked, downy. *Ribs* naked.

This plant, the *Bitter-wortel* of the farmers, is found among hilly places in the western part of the colony. The root, formerly known to the Dutch apothecaries as the *Radix Asclepiadis crispæ*, is extremely bitter and acrid, and on account of its diuretic virtues, a decoction or infusion of it has been recommended in various kinds of dropsy, and a tincture prepared of it, is said to be a valuable remedy in colic.

DATURA. Lin

(*Solanaceæ.*)

V.—1. PENTANDRIA MONOGYNIA. LIN. SYST.

68. *Datura Stramonium. Lin.* Herbaceous. *Stem* round, branchy. *Leaves* ovate, unequally sinuato-dentate, smooth. *Flowers* large, white, funnel-shaped, plaited, axillary, solitary; *peduncles* short. *Calyx* tubular, 5-toothed, deciduous. *Stamens* 5; *style* filiform. *Capsule* fleshy, ovate, erect, prickly, 4-celled at base, 2-celled at the apex. *Seeds* numerous, kidney-shaped.

This common weed, originally a native of America, but now naturalized in most parts of the civilized world, is well known to Englishmen as the *Thorn-apple*, so named on account of its spiny fruit. Having a foetid, nauseous smell, it is called *Stinkblaren* by the Cape colonists. Every part of this plant is highly narcotic, and pharmaceutical preparations made from it require, in their administration, the greatest care and circumspection. In South Africa, the fresh warmed leaves of the plant, or the vapour of an infusion, are successfully used as a sedative in violent pains, caused by rheumatism (zinkens) or rheumatic gout. In the shape of poultices also they are applied to carcinomatous ulcers, and it is said that the smoking of the dried leaves affords great relief in spasmodic athma.

SOLANUM. Lin.

(*Solanaceæ.*)

V.—1. PENTANDRIA MONOGYNIA. LIN. SYST.

69. *Solanum niveum. Thbg. Root* perannual. *Stem* fruticose, 6 feet high, erect, snow-white, tomentose, thorny. *Branches* prickly. *Leaves* alternate, stalked, ovate, attenuate at both ends, entire, nerved. *Flowers* blue, in a lateral, decompound, panicle. *Pedicels* dichotomous, drooping. *Fruit* a red glabrous berry.

The leaves of this Solanum are smooth on the upper, and woolly on the lower surface. The application of the latter to foul ulcers cleanses them, and a cure is afterwards effected by applying the upper surface. Hence their Dutch name of *Geenesblâren*. The fresh juice of the berries and leaves, when formed into an ointment with lard or fat, are also in use amongst the farmers for the same purpose.

70. *Solanum nigrum. Lin. Stem* and *branches* herbaceous, erect, angular. *Leaves* ovate, bluntly-toothed and waved, attenuate at base. *Flowers* umbellate, lateral, drooping, white. *Berries* globose, black.

The common *Nightshade* (Nacht-schaduwen) grows wild in almost all parts of the globe. It has a nauseous smell, and is slightly narcotic. In South Africa the expressed juice of the herb, and its decoction, made with fat and wax into an ointment, are often successfully employed in cleaning and healing foul ulcers.—Frequent amongst garden weeds, under walls, on dunghills, etc.

LYPERIA. Benth.

(*Scrophulariaceæ.*)

XIV.—2. DIDYNAMIA ANGIOSPERMIA. LIN. SYST.

71. *Lyperia crocea. Eckl.* A little branchy shrub. *Leaves* very small, wedge-shaped, fasciculate, obtuse, entire, smooth. *Peduncles* elongated, axillary. *Flowers* sub-racemose, yellow. Tube of the *corolla* much longer than the calyx.

This bush deserves notice as a drug, and in all probability will, ere long, become an article of colonial export. It grows abundantly in some parts of the Eastern districts, whence it has found its way into the dispensary. The flowers, which are called *Geele bloemetjes*, closely resemble *Saffron* in smell and taste; they possess similar medical properties, and as an antispasmodic, anodyne, and stimulant, ought to rank with the *Crocus sativus*. Here, they have as yet been only used with success in the convulsions of children, but they deserve a more general trial. On account of the fine orange colour which they impart, they are in daily request among the Mohamedans, who use them for the purpose of dying their handkerchiefs. This drug has been observed to be sometimes adulterated by the admixture of other plants of the same genus, which are less efficacious.

MENTHA. Lin.

(*Labiatæ.*)

XIV.—1. DIDYNAMIA GYMNOSPERMIA. LIN. SYST.

72. *Mentha capensis. Thbg. Stem* erect, 4-edged, covered all over with a white shag. *Branches* alternate, divaricating. *Leaves* opposite, sessile, subcordate

at base, linear-lanceolate, pointed, entire or often unequally toothed, hoary beneath, penninerved. *Floral leaves* awl-shaped. *Flowers* whorled, spiked. *Spikes* cylindrical, subsolitary. *Calyx* tomentose. *Corolla* white. *Stamens* longer than the corolla.

Like other *Mints*, this one contains an ethereal oil, which is sharp and bitter to the taste. It grows plentifully in moist mountainous regions, and is valued as a most excellent antispasmodic and carminative. It is used in the form of infusion in flatulent colic, meteorism, cardialgia, hysteria, and amenorrhœa, and externally to sugillations, glandular swellings, indurations, or similar complaints.

SALVIA. Lin.

(*Labiatæ.*)

II.—1. DIANDRIA MONOGYNIA. LIN. SYST.

73. *Salvia africana. Lin.* *Stem* shrubby, erect, 2 feet high, scabrid, very branchy. *Branches* divaricating, four-edged, shaggy. *Leaves* decussate, stalked, opposite, obovate, mucronate, serrate, wrinkled with veins, truncate at base, green above, whitish beneath. *Leaf-stalks* short, amplexicaul. *Flowers* in whorls, terminal, bracteate, peduncled. *Peduncles* opposite, short, hairy. *Bracts* 3-leaved, unequal. *Whorls* 4-6 flowered. *Calyx* campanulate villose. *Corolla* blue, hairy, double as long as the calyx. Upper lip 3-lobed, nearly entire, round ; lower 2-lobed ; lobes ovate, acute.

Like those of the common Sage, the leaves of this species (known as the *Wild Sage*) are fragrant, astringent, and bitter. They possess nearly the same medical properties as the *Salvia officinalis*, and are used in the same way, and under similar circumstances.

BALLOTA. Lin.

(*Labiatæ.*)

XIV.—1. DIDYNAMIA GYMNOSPERMIA. LIN. SYST.

74. *Ballota africana. Benth.* Shaggy. *Stem* erect, one to a foot and a half high. *Leaves* stalked, orbicular, cordate, irregularly notched. *Flowers* small,

crowded in distant axillary whorls. *Corolla* almost smooth; *bracts* awl-shaped. *Calyx* ribbed, with 10 setaceous, pointed teeth.

This plant, the whole of which is covered with soft hairs, bears an affinity to, and possesses the medical properties of the European Horehound (Marrubium vulgare. Lin.). It has an aromatic, bitter taste, and as a tonic, discutient, and expectorant, decoctions and infusions of its leaves are often successfully employed in chronic pulmonary diseases, obstinate coughs, and particularly in asthmatic affections. The colonists know this plant as *Katte-kruiden** (Cat-herbs).

LEONOTIS. R. Br.

(*Labiatæ.*)

XIV.—1. DIDYNAMIA GYMNOSPERMIA. LIN. SYST.

75. *Leonotis Leonurus. R. Br. Stem* shrubby, 5 feet high. *Branches* tomentose. *Leaves* oblongo-lanceolate, whorled, obtuse, serrate from the middle to the apex, narrowed at base, slightly shaggy beneath. *Flowers* in crowded axillary whorls. *Calyx* dentate, pubescent. *Bracts* linear-lanceolate, acute, shorter than the calyx. *Corolla* tube-shaped, curved, densely hairy, bright orange, or rarely buff.

This plant, the *Wild Dagga*, is, on account of its beautiful flowers, a fine garden ornament. It grows wild in the sandy Cape Flats, and often at the roadside. It has a peculiar scent and a nauseous taste, and seems to produce narcotic effects if incautiously used. It is employed in the form of decoction in chronic cutaneous eruptions, and may be tried even in cases of leprosy. The usual dose is a wineglass-full three or four times a-day. The Hottentots are particularly fond of this plant, and smoke it instead of tobacco, and take a decoction of its leaves as a strong purgative; they likewise give it as an emmenagogue in amenorrhœa. In the Eastern districts, the *Leonotis ovata* is used for the same purpose.

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* In the famous trial of C. A. van der Merwe for the murder of his wife (1838), this herb has been represented (but erroneously) by a medical witness as narcotic.

CHENOPODIUM. Lin.

(*Salsolaceæ.*)

V.—2. PENTANDRIA DIGYNIA. LIN. SYST.

76. *Chenopodium ambrosioides. Lin.* Herbaceous. *Stem* erect, rough, branchy. *Leaves* stalked, oblong, narrowed at both ends, unequally sinuato-dentate, glandular beneath, upper ones linear-lanceolate, entire. *Racemes* leafy, glomerate, subspicate, terminal and axillary.

The whole of this plant has a strong aromatic smell, caused by an ethereal oil which it contains, and a pungent, bitter taste. Its properties are antispasmodic, diaphoretic, and anthelmintic, and the best form for its administration is that of tea or infusion.—Grows chiefly on waste ground, under walls, by way-sides, or upon rubbish near towns and villages.

CASSYTA. Lin.

(*Laurineæ.*)

IX.—1. ENNEANDRIA MONOGYNIA. LIN. SYST.

77. *Cassyta filiformis. Lin.* Parasitical. *Branches* filiform, leafless, twining, having papillæ instead of roots. Perianth 6-cleft. *Flowers* bisexual, clustered, greenish. *Fruit* a red berry.

A small, twining leafless parasite, known as *Vrouwenhaar*, and common all over the colony. It is employed, but not often, as a wash in scald head, and for the destruction of vermin. Some people pretend, that it makes the hair grow.

PROTEA. Lin.

(*Proteaceæ.*)

IV.—1. TETRANDRIA MONOGYNIA. LIN. SYST.

78. *Protea mellifera. Lin.* A shrub 7—8 feet high, perfectly smooth. *Stem* bushy, erect. *Branches* purplish. *Leaves* lanceolate, attenuate at base, blunt, quite entire, glossy. *Involucre* in the axils of the branches, obovate, oblong, pink or white, scaly, imbricated. Inferior scales small, ovate, appressed; upper ones lanceolate, erect, concave, bituminous.

During the time of the inflorescence of this common, but beautiful shrub (*Suikerbosch*), the involucra or its

showy flowers are filled with a sweet, watery liquor, which is an allurement to the laborious bee, and to a host of various insects. This liquid contains a great deal of honey. It is therefore collected by many farmers, who prepare from it by inspissation, a delicious syrup, which is known as the *Syrupus Proteæ* (*Boschjes-stroop*), and which is of great use in cough and pulmonary affections. The *Protea Lepidocarpon*, *R. Br.* and some other Proteæ also supply the same savoury juice.

RICINUS. Lin.

(*Euphorbiaceæ.*)

XXI.—10. MONOECIA MONADELPHIA. LIN. SYST.

79. *Ricinus lividus. Jacq. Stem* arborescent, branchy *Leaves* peltate, palmated, coloured; their lobes oblong, serrato-dentate.

It is scarcely necessary to say much of a remedy so universally known as the one derived from this plant. As a mild purgative, the *Castor-oil* excels all other preparations, and is daily prescribed in all parts of the globe. It is desirable, however, that instead of importing this medicine, the colonists should prepare it themselves for exportation to those countries, where this useful plant does not grow spontaneously.

HYÆNANCHE. Lamb.

(*Euphorbiaceæ.*)

XXI.—9. MONOECIA POLYANDRIA. LIN. SYST.

80. *Hyænanche globosa. Lamb.* An arborescent shrub 8—10 feet high. *Branches* wrinkled, rifted, knotty. *Leaves* standing by fours on short stalks, whorled, oblong, reticulated, obtuse, leathery, quite entire, glabrous. *Peduncles* corymbose, axillary. *Flowers* monoecious.

Though the fruit of this shrub (*Wolveboon*) has not been introduced into the Materia medica of the Cape, yet it deserves particular attention. It is highly poisonous, and its four-celled nuts, when pounded, are used to destroy hyænas, or other beasts of prey, and seem to contain *Strychnium*. This fatal bush is an inhabitant of the Maskamma mountain, in the neighbourhood of the Olifants River.

GUNNERA. Lin.

(*Urticaceæ.*)

II.—2. DIANDRIA DIGYNIA. LIN. SYST.

81. *Gunnera perpensa. Lin.* Herbaceous. *Radical leaves* large, stalked, kidney-shaped, unequal, veined, obsoletely lobed, cordate at base, serro-dentate. *Petioles* elongated, compressed, streaked, hairy, as the leaves are. *Scape* tall, bearing a compound panicle of very small crowded flowers. *Fruit* a glabrous juicy berry.

This plant (*Wilde Ramanas*) grows in moist and watery parts of the colony. A decoction of the root is used by the farmers in the interior as a tonic in dyspepsia, and a tincture from it as an efficient remedy in gravel. The leaves infused as tea are said to act as a demulcent in pulmonary affections, and to cure ulcerations and wounds when applied fresh.

PIPER. Lin.

(*Piperaceæ.*)

II.—1. DIANDRIA MONOGYNIA. LIN. SYST.

82. *Piper capense. Lin.* Herbaceous, smooth. *Stem* erect, articulated, branchy, climbing. *Branches* geniculate, forked, one-sided, spreading. *Leaves* alternate, stalked, cordate, acute, entire, 3-nerved above, 7-nerved beneath, netted. Nerves downy. *Flowers* in spikes, opposed. *Spikes* peduncled, cylindrical. *Fruit* a berry.

The dense forests of Swellendam and George produce a kind of pepper (*Boschpeper*), which partakes of the properties peculiar to the genus. The berries have a hot pungent taste, and an aromatic smell, and, infused in spirits, yield a tincture which is prescribed as a stomachic, stimulant, and carminative in indigestion, flatulency and colic. In appearance and taste they greatly resemble the *Cubebs*, and very likely possess similar virtues.

WIDDRINGTONIA. Endl.

(*Coniferæ.*)

XXI.—10. MONOECIA MONADELPHIA. LIN. SYST.

83. *Widdringtonia juniperoides. Endl.* *Branches* purplish, squarrose, twiggy. *Leaves* opposite, minute,

decussate, densely imbricate, appressed, ovate, connate, bluntly pointed, glabrous, glanduliferous. *Flowers* dioecious. *Male cathins* terminal, solitary ; female ones, lateral. *Cones* globose, 4-valved ; *valves* woody, erect, mucronate.

From the branches and cones of this fine tree, *Cederboom* (Cedar-tree), which grows plentifully in the mountainous regions of Clanwilliam, exudes a gum, which soon hardens in the air, becomes solid, yellowish, and transparent, and scarcely differs from the *Gummi Olibanum*, an article well known in commerce. This gum is successfully used in the form of fumigations, in gout, rheumatism, or œdematous swellings, and is also employed for the purpose of compounding plasters or preparing varnish. —*Widdringtonia cupressoides. Endl.* (Thuia cupressoides Thbg.), a shrub pretty common in the neighbourhood of Cape Town, exudes the same substance.

HOMERIA. Vent.

(*Irideæ.*)

XVI.—1. MONADELPHIA TRIANDRIA. LIN. SYST.

84. *Homeria collina. Sweet. Root a corm* or tuberous bulb, covered with a fibrous, reticulated, hardened coat. *Shaft* erect, smooth, paniculately branched. *Branches* 2–3 flowered. *Spathe* 2-valved, awned. *Radical-leaf*, strap-shaped, narrow, caudate, concave, abruptly-pointed, outreaching the shaft. *Cauline leaves* 2-3 much smaller. *Corolla* ephemerous, of a yellow or vermilion colour.

I introduce this plant, the *Moraea collina. Thbg.*, (which is known to almost every child in the colony as the *Cape Tulip*,) not for its therapeutical use, but for its obnoxiousness. The poisonous qualities of its bulbs appear to have been known to some extent years ago, but judging from the rapidity with which death ensued in a recent case, when they had been eaten by mistake, it must be of a very poisonous kind. To Dr. Laing, Police Surgeon of Cape Town, I am indebted for the particulars of a most melancholy case of poisoning caused by this bulb.

A malay woman, somewhat advanced in years, with her three grand-children, respectively of the ages of 12, 8, and 6, partook, on the 18th September last (1850), of a supper, consisting of coffee, fish, and rice, and ate along with this,

a small basinful of the bulbs of the Homeria collina. The exact quantity which each ate, is not well known. They appear to have supped between 7 and 8, and retired to bed at 9 o'clock, apparently in good health.

About one in the morning the old woman awoke with severe nausea, followed by vomiting, and found the children similarly affected. She endeavoured to call for assistance, but found herself too weak to leave her bed, and when, at 5 o'clock, assistance arrived, the eldest girl was found *moribund*, and expired almost immediately. The little boy of 8 years died an hour afterwards, and the youngest child was found in a state of collapse, almost insensible, with cold extremities, pulse scarcely 50 and irregular, pupils much dilated. The symptoms of the grandmother were nearly similar, but in a lesser degree, accompanied by constant efforts at vomiting By using diffusible stimulants, she and this child eventually recovered.

The body of the eldest child was examined twelve hours after death. Marks of intense gastritis were found, particularly about the cardiac and pyloric orifices. The inflammation extended throughout the whole course of the small intestines, and there was great venous congestion of the brain.*

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* About a year after the publication of the first edition of this little work, the author received the following communication from the late RICHARD FRYER, Esq., then Justice of the Peace for Clanwilliam :—

Clanwilliam, 9th February, 1852.

Dear Sir,—On perusing your "Flora Capensis Medica" the other day, the circumstance stated at page 26, of the poisonous effects of the bulb of the "Cape Tulip," brought to my recollection a dreadful accident which occurred in Hantam, in this district, many years ago, and, as I was called upon at the time, in a judicial way, to examine some of the bodies and take evidence upon the causes of death, I can vouch for the accuracy of what I shall here relate. It appears that one of the shepherds of a farmer residing there, brought home in the evening, a bundle of bulbs, which the Dutch call "Uyntjes;" that towards dusk these were put under the ashes to roast, and when the other servants assembled in the kitchen, they were taken out and eaten amongst them,—the party consisting of three Hottentots, two women, and one male slave. About half an hour after they had partaken of them, they were all seized with dreadful nausea, followed shortly afterwards by severe vomiting, and a speedy prostration of strength. The farmer being called, ascertained immediately from some of the bulbs still unconsumed, that they had been eating of the "Homeria collina," of the yellow sort. Wilde Dagga, sweet oil, milk, and everything thought good, were immediately administered, but before midnight, the three Hottentots and one woman had died, in excruciating agonies. The male slave was got through, although, for a year afterwards, he looked like a skeleton, and the surviving woman ascribed her safety to only having ate one bulb.—&c.,

R. F.

It is remarkable that in cases of poisoning from *Fungi*, violent diarrhœa is present along with vomiting, whereas in the present case obstinate constipation prevailed.

Most probably, all plants belonging to this genus partake of this poisonous property, which, in the case mentioned above, was not dissipated by boiling.

HÆMANTHUS. Lin.

(*Amaryllideæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

85. *Hæmanthus coccineus. Lin. Root* a large tunicated bulb. *Radical leaves* 2, lying flat on the ground, broad, thick, coriaceous, tongue-shaped or ovate, entire, smooth. *Scape* flat, erect, coloured, bearing a densely-flowered *umbel. Involucre* 4-leaved, blood-red; its segments ovate. *Fruit* a red berry.

The bulb of this beautiful plant is used on account of its diuretic effects. It is cut into slices, digested in vinegar, and with the addition of honey, boiled down to the consistence of an oxymel, which is given as an expectorant and as a diuretic in asthma and dropsy. The fresh leaves are used externally as an antiseptic in foul flabby ulcers and in anthrax, and are known by the name of *Veldschoenblâren.*

GETHYLLIS. Lin.

(*Amaryllideæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

86. *Gethyllis spiralis. Lin. Bulb* ovate, scaly, *Leaves* fascicled, upright, linear, channelled, glabrous, spirally twisted, appearing after the flower has decayed. *Flower* solitary, salver-shaped, white, spotted beneath with confluent purple dots; its *tube* very long, stalk-like, partly under ground. *Fruit* cylindrical, scented.

The elongated, club-shaped, orange-coloured fruit of this plant has a peculiar fragrance, and still preserves its old Hottentot name of *Kukumakranka.* Infused in spirits, the liquor partakes of its pleasing scent, and is employed in colic and flatulency.

ASPARAGUS. Lin.

(*Asparagineæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

87. *Asparagus laricinus. Burch.* Perannual. *Stem* twining, waving, smooth. *Branches* alternate, bent backward, armed at base and in the axils of the leaves with solitary, short, reflexed prickles. *Leaves* subverticillate, clustered, awl-shaped, sharp-pointed, stipulate, longer than the *internodes*. *Peduncles* 2, very slender, one-flowered, pendulous, nodulose above base. *Flowers* bell-shaped, patent, white, small.

The young succulent shoots of this kind of *Asparagus* furnish a most excellent dish. Its roots are *diuretic*, impart a peculiar smell to the urine, and are of service in dropsy, and in all cases where the secretion of the kidneys is scanty or anomalous

SANSEVIERA. Thbg.

(*Asparagineæ.*

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

88. *Sanseviera thyrsiflora. Thbg.** *Root* horizontally creeping, jointed. *Leaves* radical, broad, ensiform, smooth, coriaceous, marginate with a callous point at the apex. *Scape* 2 feet high, sheated at intervals by membranaceous bracts of an ovate-lanceolate form. *Flowers* racemoso-spicate, stalked, white, standing in pairs ; *anthers* yellow ; *style* lengthened, capitate.

Not uncommon in forests and on Karroo-like hills between the Zwartkops and Bosjesman Rivers (Uitenhage) Fl. Dec. Jan. In the Eastern districts, the fleshy root of this plant, when boiled, is made use of internally in piles, and is called *t'Kay* by the natives.

ALOE. Lin.

(*Asphodeleæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

89. *Aloe ferox. Lam. Stem* very lofty. *Leaves* perfoliate, thick, juicy, sword-shaped, deflexed, glau-

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* This species has been referred by most authors to *Sanseviera guineensis. Willd.* as a mere variety. Whether this be truly correct I cannot decide, not having had an opportunity of examining both in a fresh state.

cous, prickly throughout, but bearing larger and sharper spines along the margins. *Flowers* racemose, crowded. *Stamens* double as long as the corolla.

The Cape Aloes are procured from several species of this extensive genus, so peculiar to South Africa. The *Aloe ferox. Lam.*, a native of Swellendam, is generally acknowledged to yield the best extract. That obtained from the *Aloe africana. Mill.* is almost equally good, but not so bitter, nor so powerful as a drastic. It is the produce of the eastern districts, whence large quantities are annually exported. The Aloe commonly used by the Colonists, is prepared from the *Aloe plicatilis. Mill.*, whose extract is a much milder purgative, and much resembles the Barbadoes Aloes. It inhabits the mountainous range near the Paarl, Drakenstein, and Fransche Hoek. It is much to be regretted, that the farmers do not take more trouble in purifying this valuable drug.

ORNITHOGALUM. Lin.

(*Asphodeleæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

90. *Ornithogalum altissimum. Lin. Bulb* very large, round, tunicated. *Leaves* (appearing after the scape has withered) strap-shaped and lanceolate, convolutely-mucronate. *Scape* solitary, glaucous, racemose, elongated. *Raceme* cylindrical, lengthened, crowded with white scentless flowers.

The fleshy bulb of this plant often grows as large as a child's head. It is diuretic, and a kind of oxymel, like that obtained from the *Hæmanthus coccineus,* is prepared from it, and employed as a demulcent in catarrh, asthma, consumption, and hydrothorax. It resembles the *Scilla maritima* in its effects, is common in Zwartland, where it is called *Magerman,* and may be prescribed as a substitute for Scilla.

TULBAGHIA. Thbg.

(*Asphodeleæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

91. *Tulbaghia alliacea. Thbg. Root* fasciculated, imperfectly bulbous, fibrous. *Leaves* sheating at base, two-rowed, strap-shaped, linear, obtuse, streaked, smooth. *Scape* simple, longer than the leaves, ending

in a loose, few-flowered umbel, surrounded by a dry 2-valved involucre. *Flowers* 6-7, on long peduncles, drooping, dark purplish. *Perianth* double, outer-one funnel-shaped, limb 6 partite, interior 3-leaved, fleshy.

This bulbous plant has a very pungent, offensive odour, very like that of garlic, and a somewhat acrimonious taste, and has received the name of *wilde Knoflook* (wild garlic). Its bulbs, boiled in milk, are recommended in phthisis, and for expelling intestinal worms. In the eastern districts, *Tulbaghia cepacea* and *T. violacea* serve the same purpose.

IDOTHEA. KUNTH.

(*Asphodeleæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

92. *Idothea ciliaris. Kth. Root* a scaly bulb. *Radical leaves* (appearing after the flowers have faded) strap-shaped, pointed, and fringed with short marginal hairs. *Scape* straight, spotted, smooth, much longer than the leaves. *Flowers* racemose, greenish-white; *flower-stalks* spreading.

The bulb of this plant greatly resembles that of the *Scilla maritima;* it is of a dingy, purplish colour, and its juice is so very acrid as to cause inflammation and even blisters, when applied to the skin. It is called *Jeukbol* (itching bulb) by the Colonists, and used by them when dried, like the common Squill is in Europe, as an emetic, expectorant, and diuretic.

Found in the district of Swellendam, where it flowers in the month of September.

Idothea elata, Kth., closely allied to this species, has the same properties, and was already known to *Breynius** as the "Bulbus liliaceus vomitorius Capitis bonæ Spei."

ERIOSPERMUM. JACQ.

(*Asphodeleæ.*)

VI.—1. HEXANDRIA MONOGYNIA. LIN. SYST.

93. *Eriospermum latifolium. Jacq. Root* tuberous, roundish, knobbed, blood-red inside. *Radical-leaf*

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* *J. Breynius* Exoticarum, aliarumque minus cognitarum plantarum Centuria. Gedani 1678. Fol. (Tab. 40.)

broad, ovate, pointed, entire, coriaceous, nervy, transversely veined, smooth, involute at base, dotted beneath, stalked. *Scape* simple, erect. streaked, racemose, many-flowered. *Flowers* pedicellate, bracteate, white.

The scarlet coloured tuber of this species, which grows on the sides of the Lion's Rump, near Cape Town and elsewhere, is very muculent, and used externally, in abrasions of the skin and in superficial ulcers. It is also employed by the Mohamedans, in the form of decoction, in amenorrhœa. Its Cape name is *Baviaans-oren*.

RICHARDIA. Kth.

(*Aroideæ.*)

XXI.—1. MONOECIA ANDROGYNIA. LIN. SYST.

94. *Richardia africana. Kth.* *Root* thick, fleshy. *Leaves* radical, glossy, arrow-shaped, cordate at base, stalked; *leaf-stalks* sheating, clasping the scape; *scape* nearly three-cornered, erect; *spathe* petal-like, hooded, covering the flower-bearing *spadix*. *Fruit* a berry.

More than a century ago, this hardy plant, the *Ethiopian Calla*, has, on account of its large, ornamental, white, cap-like spathe, been cultivated in all the gardens of Europe. In this Colony, where it is indigenous, the fresh leaves, when applied warm to parts affected with gout or rheumatism, allay the pain by producing local perspiration. The roots afford good nourishment for the porcupine (Hystrix cristata) *Yster-vark*, and therefore probably, this conspicuous plant has received the Cape vernacular, but ugly name of *Varkens-blaren* (pig's-leaves.)

MOHRIA. Sw.

Filices.

XXIV.—CRYPTOGAMIA. LIN. SYST.

95. *Mohria thurifraga. Sw.* *Caudex* creeping, fibrous. *Stipe* filiform, hispid, erect. *Fronds* bipinnate, covered beneath with chaffy scales. *Pinnæ* alternate, stalked; *pinnules* ovate, the upper fruit-bearing-ones, crenate; the barren-ones deeply incised.

This fern grows abundantly on the Cape Mountains. The plant, when bruised, is fragrant and smells of *Oli-*

banum. In some parts of the Colony, the dry leaves are pulverised, and with fat made into an ointment, which is cooling, and very serviceable in burns and scalds. The vernacular name of this plant is *Brand-boschjes.*

LASTREA. PRESL.

(*Filices.*)

XXIV.—CRYPTOGAMIA. LIN. SYST.

96. *Lastrea athamantica. Moore. Stipe* erect, flexuose, covered at base with long linear deciduous scales. *Fronds* leathery, smooth, lanceolate, three-pinnate. *Pinnæ* stalked, oblong, acuminate. *Primary pinnules* sessile, ovato-oblong, wedge-shaped at base, decurrent ; *secondary*, sickle-shaped, oblong, blunt, veiny. *Sori* round, solitary *Involucre* kidney-shaped.

A fern, growing on grassy hills and in moist places, near Port Natal. The Zoolu Kafirs, who know it by the name of *Uncomocomo*, use it as a vermifuge, and its *caudex*, given in the form of powder, infusion, or electuary, has been proved to be excellent in helminthiasis, and especially in the cure of the tape-worm.

ADIANTHUM. LIN.

(*Filices.*)

XXIV.—CRYPTOGAMIA. LIN. SYST.

97. *Adianthum æthiopicum. Lin. Caudex* fibrous. *Stipe* compressed, waving, purplish. *Fronds* very delicate, transparent, decompound, smooth. *Pinnæ* alternate on capillary stalks. *Pinnules* rhomboidal, crenate at apex, traversed by forked nerves.

An infusion of this herb is sometimes used as an emollient in coughs, and in diseases of the chest. A syrup is also prepared from it, and it forms part of the *species pectorales* of the pharmacopœia. The Basuto Kafirs, who call this fern *Ma-o-ru-metsoo*, employ its caudex in the shape of decoction for promoting parturition.

FUCOIDEÆ.

XXIV.—CRYPTOGAMIA (ALGÆ). LIN. SYST.

98. The peculiar substance called *Iodine*, and now so universally appreciated as a powerful remedy, is

derived from the ashes or kelp of the *Fucoideæ*. With these our shores are well strewed; and amongst them are found *Algæ*, distinguished both for extraordinary frequency and gigantic size. It is certain that the *Ecklonia buccinalis. Hornm.* (Zee-bamboes), *our Sargassa, Laminariæ*, and *Iridaeæ*, the *Macrocystis planicaulis. Ag.*, the *Desmarestia herbacea. Lamour*, and many more of our large marine plants, would easily yield a vast quantity of *Iodine*, if the experiment of preparing it, were thought worth a due trial.

SUHRIA. J. Ag.

(*Florideæ.*)

XXIV.—CRYPTOGAMIA (ALGÆ). LIN. SYST.

99. *Suhria vittata. I. Ag.* Base callous, fixed parasitically on the stems of larger *Algæ*. *Frond* leaf-like, linear-lanceolate, branchy, mid-ribbed at base, prolificating. *Prolifications* issuing chiefly from the margin of the frond as fringes, or in the form of small obovate leaves, which contain the fructification. *Substance* cartilaginous; colour deep purple.

Like the Carrageen, or Irish moss, the whole of this handsome sea-weed is soluble in boiling water, and transformed into a gelatinous mass. In the shape of *jelly* or *blanc mange*, it is advantageously employed in pulmonary complaints, scrofula, rickets, irritation of the bladder, &c., as a demulcent and nutritive.

Common in Table Bay, particularly on the gigantic stems of the Sea-trumpet (Ecklonia buccinalis. Horn.)

PODAXON. Desv.

(*Fungi.*)

XXIV.—CRYPTOGAMIA. LIN. SYST.

100. *Podaxon carcinomatis. Fr.* Club-shaped; *peridium* dehiscent at base. *Stipe* erect, cylindrical, white. *Cap* ovate, tapering upwards, nearly as long as the stipe.

A mushroom of an oblong club-shaped form, which grows gregariously on ant-hills. It contains a blackish powder (seeds), which is used occasionally for curing carcinomatous ulcers.

APPENDIX.

I subjoin to the above enumeration of medical plants, a remedy derived from the *animal Kingdom*, one, which, if tried properly, will in all probability become an article of commerce. I allude to the

HYRACEUM,*

much valued by many farmers, and well known amongst them, by the rather harsh name of *Dasjespis*. Thunberg, and other travellers, mistook it for a kind of bitumen; but it is in fact the secretion of a quadruped, which is common throughout the Colony, and that lives gregariously on the rocky summits of mountains, viz., the *Klipdas* or *Hyrax capensis*. It is worthy of note that this production has baffled the researches of eminent Zoologists, who have failed from even minute dissection, in discovering any specific secretory organ, from which this matter could be derived. It may be asserted, however, that the *Hyraceum* is produced by the uropoetical system of the animal just named, and in order to explain this seeming anomaly, it must be observed that the Hyrax drinks very seldom, if ever. Its urine, like that of the *Hare*, is not thin and limpid, as in other quadrupeds, but thick and of a glutinous nature. From a peculiar instinct, these animals are in the habit of secreting the urine always at *one* spot, where its watery parts evaporate in the sun, while its more tenacious portions stick to the rock, and harden in the air. The fresh urine of the Hyrax is of a reddish tint, and this has given rise to the opinion of those, who took this production for a kind of menstrual secretion.

This substance is common on our mountains, and

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* Cf. *Dr L. Fikentscher*, Das Hyraceum in historischer, chemischer, pharmaceutischer, and therapeutischer Beziehung. Erlangen, 1851. Octvo.

is to be found, mixed with earth and dirt, near the caves or crevices, where these animals have their haunts.

In smell, and in its therapeutical effects, the *Hyraceum* resembles most the *Castoreum*, a remedy which is decreasing in quantity every year, and may therefore be replaced by the former. A new article of export would thus be gained. Amongst the farmers, a solution of this substance is highly spoken of as an antispasmodic in hysterics, epilepsy, convulsions of children, St. Vitus's dance ; in short, in spasmodic affections of every kind.

Dr. A. Brown, who has employed the *Hyraceum* in a great number of cases, has communicated to me the following remarks of its effects, as the result of his experience :—

Hyraceum is a mild stimulant and antispasmodic. The tincture, when well and properly prepared, appears to be a remedy of considerable power. It is regarded as an emmenagogue among the country people. In hysterical, nervous, and spasmodic affections, *Hyraceum*, in the form of tincture, is a very valuable remedy, and one highly deserving of trial. It is daily prescribed by myself. It is advantageously combined with the Tr. Valerianæ. I can speak highly of its efficacy in this class of cases. My common formula for its use is

Tinct. Hyracei.
„ „ Valerianæ.
Spir. æther sulph., two drams of each.
Aq cinnamon, two ounces.

M. D. S.—A tea-spoonful thrice a-day, or 30 drops every two or three hours.

In Epilepsy, I have also tried, and can recommend it. In spasmodic asthma, I have often derived decided advantage from a combination of equal parts of Tinctura Hyracei and Tinct. Lobeliæ inflatæ.

In a long-standing case of Hypochondria, accompanied by strong hysterical symptoms, and which had baffled myself and several other practitioners, a teaspoonful of the tincture produced a rapid and

decided cure. As an emmenagogue in amenorrhœa and chlorosis, its effects have been beyond all conception. In one case of chlorosis, where the catamenia had been absent eleven months, in another of amenorrhœa of eighteen months, and where the patient had been confined to bed for months, expectorating pus and blood, had hectic fever, cold clammy perspiration at night, complete loss of appetite, and was given up as altogether hopeless, Hyraceum effected a complete cure, for she has now for years continued fat and plump, and menstruates regularly.

In all cases where Castoreum is recommended, I have found Hyraceum far preferable as an antispasmodic; in hysteria itself, it is invaluable.

A. B.

GLOSSARY.

Abortive and *abortion*, terms used where the symmetry of the flower is not complete, or imperfectly developed.

Achænium, the fruit of the family of the *Compositæ*, which is one-seeded, and does not open, but the *pericarp* of which is separable.

Acuminate, tapering at top ; sharp-pointed.

Acute, pointed, not tapering.

Alternate, placed one above another.

Amplexicaul, embracing the stem.

Angular, having angles on the margin.

Anther, a membranaceous body, borne by the filament, containing a dust-like powder.

Apiculate, having a soft terminal point.

Articulated, jointed.

Attenuate, gradually diminishing in breadth.

Axillary, growing in the axil.

Baccate, berried, covered with a soft flesh.

Bipinnate, if a compound leaf is divided twice in a pinnate manner.

Bract, a floral leaf ; a leaf from which flowers proceed.

Bractlet, a small bract at the base of a separate flower.

Callous, hardened, indurated.

Calyx, flower-cup, the exterior covering of a flower.

Campanulate, bell-shaped.

Cap, the uppermost part of a fungus.

Capitate, formed into a head.

Capitulum, a head of flowers in *Compositæ*.

Capsule, a membranaceous seed-vessel opening by valves.

Cartilaginous, hard and tough.

Catkin, a deciduous unisexual spike, whose flowers are destitute of calyx and corolla, but supplied with bracts.

Caudate, having a tail or appendage.

Caudex, the stem of ferns.

Channelled, concave, so as to resemble a gutter.

Ciliated, fringed with short, stiff, marginal hairs.

Compound, composed of several parts.

Compressed, flattened.

Cone, a dry fruit formed by scales, covering naked seeds.

Connate, united at base.

Cordate, heart-shaped.

Coriaceous, leathery.

Corolla, the inner envelope of the flower, constituting what is commonly called *the flower*.

Corona, scaly or petal-like bodies, intervening between the petals and the stamens.

Corymb, a raceme, in which the lower stalks are longest, and the upper ones so shortened, that the flowers are placed in one horizontal plane.

Crenate, having rounded marginal teeth.

Crested, having an elevated appendage, a crest.

Cylindrical, having a cylindrical shape.

Deciduous, falling off after having performed its functions.

Decompound, having compound branchings.

Decussate, crossing at right angles.
Dehiscent, opening, bursting.
Dentate, toothed.
Dichotomous, divided by twos, forked.
Dioecious, a plant is so called when male and female organs appear separate upon different individuals.
Discoid, having the form of a flattened sphere.
Divaricating, straggling, spreading.
Drupe, a fleshy fruit, enclosing a nut.

Elliptical, pointed at both ends.
Emarginate, having a notch at the point.
Ensiform, sword-shaped.
Entire, without marginal teeth or incisions.
Ephemerous, short-lived.

Falcate, bent like a sickle.
Farinaceous, mealy.
Fascicled, standing in bundles.
Fastigiate, having a pyramidal shape, from *the branches* being parallel and erect.
Filiform, thread-like, slender.
Flexuous, waving, bent in a zig-zag manner.
Follicle, a fruit, formed by a single carpel, and opening by one suture.
Frond, the leaflike development of ferns bearing the fructification.

Geniculate, bent like a knee; knee-jointed.
Glabrous, smooth, bald.
Glandulous, bearing glands at the tip.
Glaucous, covered with a pale-green bloom.
Globose, round, spherical.

Hispid, covered with long rigid hairs.

Imbricated, sessile parts covering or overlapping each other like tiles.
Impari-pinnate, unequally yoked; pinnate-leaves ending in an odd leaflet.
Incised, deeply cut down.
Internode, the portion of a stem between two nodes or leaf-buds.
Involucre, bracts, surrounding a head of flowers in a whorl.

Leaflet, the division in a compound leaf.
Legume, a seed-pod with two valves, the seeds of which are fixed on one and the same suture, but alternately upon the two valves.
Ligula, the ray-flowers of a capitulum in *compositæ*.
Linear, very narrow; when the length much exceeds the breadth.
Limb, the broad part of a petal, or a leaflet, forming part of the calyx.
Lobed, divided into segments.

Membranaceous, having the appearance and structure of a membrane.
Monoecious, when male and female flowers are separated from each other, but grow upon the same individual plant.
Mucronate, abruptly terminating in a hard sharp point.

Nodulose, with a thickened knot.

Oblong (oval), elliptical, obtuse at each end.
Obovate, reversely ovate.
Obtuse, blunt, not pointed.
Opposite, placed on opposite sides.
Orbicular, rounded, with the stalk attached to the centre.
Ovate, egg-shaped, broadest at base, narrowed upwards.

Palmated, 5-lobed, resembling a hand.
Perfoliate, surrounding the stem at base.

Panicle, an inflorescence, where subordinate stalks are again divided.
Patent, spreading horizontally.
Peltate, shield-like, flattened and expanded at top.
Pedicel, the stalk supporting a single flower.
Peduncle, the general flower-stalk.
Pendulous, hanging down.
Penni-nerved (leaf), whose ribs are disposed like the parts of a feather.
Perianth, a term used where the calyx and corolla are combined, partaking of the nature of both.
Pericarp, the covering of the fruit.
Peridium, the cover of the fructification in *fungi*.
Petals, flower-leaves; leaves forming the corrolline whorl.
Petiole, the leaf-stalk.
Pinna, a leaflet.
Pinnate (leaf), a compound leaf, having leaflets arranged on each side of the central rib.
Pinnatifid (leaf), a simple leaf, cut into lateral segments to about the midrib.
Pinnulæ, the small pinnæ of a bipinnate or tripinnate leaf.
Polygamous (plants), bearing hermaphroditical, as well as distinct male and female flowers.
Procumbent, lying on the ground.
Pubescent, covered with short and soft hair.

Quadrangular, four-sided, four-angled.

Raceme, a cluster of flowers, where from one common stalk undivided flower-stalks arise.
Receptacle, the expanded part of the fruit-stalks, which bears the parts of fructification.
Reflexed, bent backwards.
Reniform, kidney-shaped.
Repand, slightly waved at margin.
Reticulated, netted.
Rigid, stiff, inflexible, not easily bent.
Rugose, wrinkled.
Rhomboid, oval, somewhat angular in the middle.

Scabrid, rough, covered with short stiff hairs.
Scape, a leafless flower-stalk.
Scarious, dry, shrivelled.
Serrate, toothed, like the indentations of a saw.
Sessile, stalkless.
Setaceous, bristle like.
Simple, not divided.
Sinuated, the margin having obtuse or blunt indentations.
Sorus, a cluster of sporangia, organs of propagation in *ferns*.
Spadix, a fleshy spike, bearing male and female flowers.
Spathe, a membranaceous bract, surrounding the flowers.
Spatulate, shaped like a spattle.
Spike, an inflorescence, where stalkless flowers are arranged on a common axis.
Stamen, the male organ of a flower, formed by the *filament*, or stalk, and the *anther*.
Stellate, arranged like a star.
Stipe, the stalk of cryptogamic plants.
Stipule, a leaf-like appendage, situated at the base of real leaves, or of leaf-stalks.
Striated, marked by streaks.
Stoloniferous, having creeping runners, which root at the joints.
Style, the columnar or filiform elongation of the pistil, which supports the stigma, and proceeds upwards from the ovary.
Subulate, awl-shaped.
Succulent, fleshy.
Suffruticose, having the character of an undershrub.

Ternate, composed of three leaflets.

Terminal, on the summit.

Tomentose, covered with dense, entangled, rigid, short hairs.

Trifid, divided into three segments.

Trifoliate, consisting of three leaflets.

Truncate, lopped off; terminating abruptly.

Tubular, cylindrical, fistular.

Tunicated, covered by thin scales.

Turbinate, formed like a top.

Umbel, an inflorescence in which numerous stalked flowers arise from one point.

Valves, the portions which separate self-opening capsules.

Verticillate, ranged in whorls.

Villose, shaggy, covered with long, weak hairs,

Viscid, clammy.

Whorl, a kind of inflorescence, in which the flowers are placed around the stem or branch on a common axis.

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