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The
Gardens' Bulletin

STRAITS SETTLEMENTS

A JOURNAL REFLECTING THE
ACTIVITIES OF THE BOTANIC
GARDENS OF THE STRAITS
SETTLEMENTS, PUBLISHED AS
MATERIAL IS AVAILABLE

VOLUME VI

1929-1930

ARNOLD
ARBORETUM
HARVARD
UNIVERSITY

39825
August 6, 1931

Decacidified

8/93

Part 1, nos. 1-5, issued December, 1929.

Part 2, nos. 6-10, issued April, 1930.

Part 3, nos. 11-15, issued October, 1930.

ERRATUM

In part 2, p. 270, line 24, for **viridis**
read **irioides**.

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Issued December 1929

Part I

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DRUGS OF CHINESE PHARMACIES
IN MALAYA

BY

DAVID HOOPER, LL.D., F.C.S.

To be purchased at the Botanic Gardens, Singapore

Price \$2.50

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ON CHINESE MEDICINE: DRUGS OF CHINESE PHARMACIES IN MALAYA

By David Hooper, L.L.D., F.C.S.

INTRODUCTION

THE crude medicinal substances described in the following pages were collected by Mr. I. H. Burkill M.A., when Director of Gardens, Straits Settlements. The specimens were obtained from Chinese druggists in Malaya—men of considerable experience of drugs. It is well known that Chinese divide vegetable drugs into two classes: the first is called Kuan yao, or official remedies, chiefly contained in the great herbal, Pen ts'ao kang mu, and Ts'ao yao, consisting of herbs and roots generally used as domestic remedies.

The identification of most of these samples was made at the Royal Botanic Gardens, Kew, and I have to thank the Director and the staffs of the Herbarium, the Museums, and the Jodrell Laboratory for their ever ready assistance. An examination of the original collection of Chinese drugs made by Daniel Hanbury and Porter Smith and others, stored in the Museum of the Pharmaceutical Society has been a fruitful source of information.

The co-operation in this inquiry of Dr. Augustine Henry is gratefully acknowledged. Stationed in China for some years, Dr. Henry succeeded in collecting a considerable number of plants yielding drugs the origin of which was before unknown. His knowledge of botany in addition to that of Chinese has enabled him to make valued corrections and additions to the list.

No work on Chinese commercial products would be complete without reference to the publications of Sir Alexander Hosie, Chief of the Imperial Customs, whose lamented death occurred in 1925. His notes on the trade in Manchuria, Mongolia, and Szechwan have been of great use, and I am greatly indebted to Lady Hosie for placing at my disposal some sheets of his contemplated but unfortunately unfinished Dictionary of Economic Products of China.

Dr. Bernard Read, of Peking, and the distinguished pharmacognosist, Mr. E. M. Holmes, have also contributed many helpful suggestions.

It has been considered desirable that the names of the drugs should appear in Chinese characters followed by the Romanized Mandarin transliterations. For this purpose the kind help has been obtained of Rev. T. W. Pearce, LL.D., O.B.E., of the London Mission; Rev. H. S. Cliff, of the China Inland Mission; and Rev. S. B. Drake, of the Baptist Mission. In several cases the Cantonese pronunciation has been supplied, and as the Chinese pharmacists in the Malay Peninsula are Cantonese, it agrees closely with the names written in Malaya upon the labels of the samples. These are enclosed in inverted commas.

Owing to the fragmentary specimens of some of the drugs consisting of fine slices of stems, roots, and barks, it has not been possible to trace the origin with any degree of certainty. A wide field of research lies open to the student of pharmacognosy in identifying these specimens with plants of authentic origin. The small list of mineral and animal substances are not scientifically classified: many of the specimens of the latter class recall the unpalatable drugs found in European pharmacy 200 years ago.

Mr. Burkill has done excellent service in bringing together for the first time a collection of drugs used by the Chinese in the Malay Peninsula. From it we are able to learn that while the Chinese on the whole adhere to the use of drugs of their own country, probably on account of the geographical position of Singapore and neighbourhood, the materia medica has been decidedly influenced by the introduction of local and Indian products.

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1. **Abutilon indicum**, G. Don. Malvaceae.

關沙苑 : Kuan sha yüan, local name 'Kwan sa yin'. Tung k'uei tzü is the usual Hong-Kong name for these seeds of the Country Mallow. In other parts of China this name seems to refer to species of *Malva*. (Br. iii. 105; Henry, Chin. P.C. 156.)

The seeds of an unknown plant passing through the Customs as 'Sha yüan' (Alpha. 1081) are probably the same, and may be an introduced drug. *A. indicum* is distributed in Tropical Asia, Africa, and Australia. It is common in waste ground and appears to flourish in poor soil and requires but little water. The leaves, bark, and seeds are used in medicine. The seeds are small, 2-3 mm. long, irregularly kidney-shaped; the surface is brown or greenish-brown and polished. They are used in India for their mucilaginous and diuretic properties.

2. **Acanthopanax spinosum**, Miq.: (*Aralia pentaphylla*, Thunb.) Araliaceae.

川加皮 Ch'uan (Szechwan) chia p'i: Ch'uen ka p'i (Cant.): local name 'Choon kew phee'.

This is a form of the drug Wu chia from Szechwan. It occurs in thin branches or stems with a light-coloured bark covered

with spiny hairs, corresponding with herbarium specimens of the above plant. The usual drug supplied under this name is the root-bark of another plant which is bitter and astringent. This is described in the article on *Eleutherococcus Henryi*—No. 155.

Stuart and Read refer Wu chia to *A. spinosum* a plant which Dr. Henry found at Ichang. The same plant also occurs in Japan and is known by the same Chinese name. In Malaya this drug is used for flatulence.

3. *Achyranthes bidentata*, Blume. Amaranthaceae.

牛七: Niu (ox) ch'i (seven): Ngau ts'at (Cant.): local name 'Ngow chat'. Niu hsi (ox knee) Br. ii. 194, iii. 101; Tatar.; P.S. under *Pupalia*; J.R.; T. & M.; C.R. Alpha. 903; a coarser kind from Szechwan, Ch'uan niu hsi. C.R. Alpha 452; T'ien Ch'uan hsi, Hosie; St., B.E.R.; Kew and Ph. Soc. Mus. specimens from China, Japan, and Perak.

The plant is cultivated in various parts of China where the young shoots are eaten. The root is exported as a medicine from Tientsin and Hankow; the Malayan sample came from Waichow. The drug occurs in short, brown pieces of the thickness of a quill, wrinkled longitudinally, breaking with a short fracture. Soaked in water the root swells to four or five times its size, having a plump appearance, light brown cuticle, and a section showing a woody centre and a ring of woody vessels between that and the circumference. Samples of the drug in the Museums vary considerably. Some of the roots are attached to the stems, the joints of the latter having some resemblance to the knee of the ox or crane. The roots of the Japanese drug are tough and fibrous. The Szechwan drug consists of transverseslices of a larger root, apparently sections of the root stock, with rootlets attached. The taste in each case is bitterish.

The drug is a remedy for rheumatism, fever, and cutaneous diseases. In Perak it is given for extreme anaemia. In India and Ceylon the root of *A. aspera* is taken as a diuretic and astringent.

4. *Acorus Calamus*, Linn. Araceae.

菖蒲: Ch'ang p'u (acorus rush): local name 'Cheong fu', Br. iii. 194, Henry; T. & M.; P.S.; Pai ch'ang, B.E.R.; Shui ch'ang p'u, C.R. Alpha. 29; St. P'u; generic name for rushes suitable for making mats.

The Sweet Flag or Calamus occurs all over Eastern Asia, and is cultivated in some parts for its acrid and aromatic roots. Bretschneider says there are five kinds of Calamus, but that grown in water among stones, Shui ch'ang p'u, is the best for food and medicinal purposes. Hosie calls this root Hsiang kan ts'au 香甘草 'Fragrant sweet herb'. It is valued at T 8a picul.

The drug is made up of thin longitudinal sections of the rhizome 3 in. long and 1 in. across, with a fragrant odour and pungent taste, due to an essential oil.

On account of its pleasant aroma the root is placed among clothes to keep away insects. In Constantinople the root is eaten as a preventive against pestilence. It is supposed to affect the heart and lungs and to be beneficial for cancer. In general it is taken as a restorative for the body and spirits.

5. *Acorus gramineus*, Ait.

外菖蒲: Wai (foreign) Ch'ang p'u (Calamus): local name 'Soi cheong phoo'. Shih ch'ang p'u, P.S.; Shui (water) Ch'ang p'u, Br. ii. 376; iii. 194, 378; Hosie; T. & M.; C.R. Alpha. 1139; St.; B.E.R. Specimen from Singapore in Ph. Soc. Mus.

A plant growing in marshes in China, Japan, and Cochin China. It is smaller than the last species and is much cultivated by the Chinese and Japanese. There is a great demand for its sword-like leaves on the occasion of the annual dragon-boat festival. The Singapore drug is said to have come from Szechwan, Shensi, and Kweichow.

The drug consists of small cylindrical pieces of a rhizome about 4-5 mm. in diameter, light brown colour externally, and knotted with scars of fallen leaves; internally it is white and starchy with an acidulous taste and slightly agreeable odour. The root is not inaptly compared by the Chinese to whip cord.

The root has stimulant, tonic, and antispasmodic properties, and like the larger calamus is used as an insectifuge and insecticide.

6. *Adenophora polymorpha*, Ledeb., and *A. verticillata*, Fisch. Campanulaceae.

沙参: Sha shên (sand ginseng): called locally 'Sa sam'. Sha shên, pai shên, Br. iii. 4; Pen ts'ao; Tatar; C.R. Alpha. 853; P.S.; S. & T.; T. & M.; Henry, Chinese Plants, 405; St.; B.E.R.; Ph. Soc. Mus., specimen from Singapore.

These plants grow in Hupeh, Anhwei, Shantung, and Fukien; Sha hien in the latter province is said to give the name sha to the drug. The Pen ts'ao also quotes Chihli, Kiangsu, and Kiangsi as localities where it is found. The milk-white root is a drug classed with and substituted for true ginseng. It is exported from Chefoo. The Malayan sample is said to have been grown in sand. The root is long, dense, and light coloured. In the shops it occurs in cylindrical pieces, about an inch in length, and as thick or somewhat thicker than a pencil, without bark. It has little odour and a slightly acrid taste due to the presence of a saponin. The drug, like ginseng, is tonic, pectoral, and emollient.

7. *Adenophora* sp.

Campanulaceae.

明冉 : Ming tang, an abbreviation of Ming tang shen. Tatar; P.S. under *Convolvulus*; J.R.; Henry; Hosie; St.; Ph. Soc. Mus.

Ming tang, or clear ginseng from Shang tang, is a drug brought from Hupeh and the provinces in Central China. Hosie notices it as a Szechwan drug. Dr. Henry reports that it is collected in Anhwei (exported from Wu ku 60 tons yearly) and in Kiangsu (exported from Chinkiang 16 tons yearly). It is probably the root of an *Adenophora* as it resembles in microscopic structure the drug Sha shen, the root of *A. polymorpha*. The Singapore drug came from Anhwei. It is in short pieces of a light-coloured root, horny in consistence, showing an inner and outer portion. The outer portion is yellowish brown in colour with reddish spots. The root breaks with a tough fracture, and is devoid of odour and taste.

8. *Adenosma caerulea*, R. Br.

Scrophulariaceae.

茅射香 : Mao Shê hsiang: local name 'Mow say hong'. This small plant is found in China and Malaya. The flowering and fruiting tops are used in medicine. Mr. Ridley refers to species of *Adenosma* as domestic remedies in the Straits Settlements.

9. *Ailanthus glandulosa*, Desf.

Simarubaceae.

鳳眼草 : Feng (Phoenix) yen (eye) ts'ao (plant): Fung ngaan ts'o (Cant.) local name 'Foong ngan chow'. Fung yen ts'ao, 'fruits of *Fraxinus* sp.' in Ph. Soc. Mus. Ts'ao is an unsuitable name for a tree.

This species of *Ailanthus* is well distributed in North China and Manchuria, where it is known as the Ch'ow ch'un shu. In Europe it is called the 'Tree of Heaven'. The leaves are sometimes used for feeding the wild silkworm, *Antheraea Pernyi*, G. Mén., whose usual food is, however, the leaves of several kinds of oak (Hosie).

In Malaya the fruits are sold as a medicine. The fruit is a samara, oblong in shape, 4 cm. long, the light green membranaceous wings, netted with veins and rounded at the ends; the darker lens-shaped seed in the centre measures 5 mm. across.

The appearance of these fruits suggests the eyes of a bird. According to the law of signatures the drug is used for ophthalmic diseases. In India, similar fruits of *A. malabarica*, DC., are used for the same purpose.

10 and 11. *Akebia quinata*, Dec.

Berberidaceae.

(a) 廣木通 : Kuang (Kuangtung)mu (mood)t'ung (through). Kwong muk t'ung (Cant.): local name 'Kuan mook thoong'.

(b) 牆木通: Ch'iang (place) mu t'ung. Ts'eung muk t'ung (Cant.): local name 'Wai mook thoong'. Lour.; Mu t'ung, T'ung ts'ao, Br. iii. 184; Pen ts'ao; Tatar; P.S.; C.R. Alpha. 878; T. & M.; St.; B.E.R.; Henry.

The two drugs are labelled (a) 'Grown in water Bangkok way', (b) 'Canton and the East'. They are both thin circular transverse slices of a woody stem (a) an inch or more in diameter and (b) $\frac{1}{2}$ to $\frac{3}{4}$ of an inch in diameter. The wood is yellowish arranged in vascular plates broken up by regular medullary rays and having holes like a sieve, large enough to allow air to be blown through; hence the name t'ung, 'permeable'. The specimens agree with those labelled *Akebia* in the Ph. Soc. Museum. Earlier writers identified the drug with species of *Clematis*, which may be the source of some of the supplies that pass through Newchang and Hankow. Dr. Henry tells us that Mu t'ung in Hupeh is *C. grata*, Wall., and in Shenking it is afforded by *C. heracleifolia*, DC. Hosie refers Hua t'ung and Mu t'ung to *Clematis grata* and other species. It is a favourite bitter drug in China. It is pronounced to be stimulating, diaphoretic, and stomachic and to quicken the senses and faculties.

12. *Alisma Plantago*, Linn.

Alismaceae.

澤濁: Tsê (enrich) choh (turbid): local name 'Chak sia'. 'A plant that flourishes in muddy water': Tsê hsieh, Br. ii. 95; iii. 192; Pen ts'ao; Tatar; P.S.; C.R. Alpha. 1354; T. & M.; J.R.; Hosie; A.H.; St.; B.E.R.; Ph. Soc. Mus.

The Water Plantain grows throughout Central and Northern China. The tuberous roots are gathered in the autumn and are exported from Hankow; those derived from Kansu, Shensi, and Szechwan are considered the best. They are round, ovoid, fleshy, and somewhat acid. The drug consists of dry, thin, circular slices about an inch and a quarter in diameter, pale yellow, starchy, slightly bitter, and fragrant. Its action is tonic, refreshing, diuretic, and galactagogue.

The drug under this name is sometimes yielded by another water plant, *Sagittaria sagittifolia*, Linn. (B.E.R.)

13. *Allium Bakeri*, Regel, and other species.

Liliaceae.

舊菲白: Chiu chiu pai: Chiu (leek) pai (white): Kau kau pak. (Cant.): local name 'Kew pak'. Hsieh pai, Br. iii. 242.

The small bulbs of an onion have been used in medicine by the Chinese from very early times. In the Pen ts'ao, followed by Tatarinov, Debeaux, and others, a drug, Kau or Chiu pai is mentioned. Bretschneider speaks of the small bulbs of an onion growing in the swamps of Honan; the lower white part is dried and exported from Amoy. The drug in Annam is attributed to *A. porrum*, Linn., others place it under *A. ascalonicum*, Linn.

and *A. odorum*. No doubt the Chinese use several species of *Allium* with small bulbs, for both names Hsieh pai and Chiu pai are used in different parts of the country. The Malayan drug consists of small bulbs of an onion, about $\frac{1}{3}$ inch in diameter, with the white remains of the leaves attached to the upper portion. They have a strong alliaceous odour and taste. They resemble in appearance and internal structure the bulbs of botanical specimens of *A. Bakeri*, the garden shallot cultivated in Northern and Central China. The drug is a tonic and stimulant. In India the Shallot is called the 'one clove garlic' and is used for ear-ache.

14. *Allium odorum*, Linn., and other species. Liliaceae.

韭菜子 : Chiu hsin tzü (onion seeds): locally called 'Kow chow chu'. Br. iii. 240; P.S.; T. & M.; C.R. Alpha. 203; Henry; Hosie; St.; B.E.R.

Chiu or Kiu is the usual name given to the Chinese leek or Scallion. The plant, which resembles the European leek, but is smaller in habit, is a native of Siberia and Mongolia, and in China and Japan it is widely cultivated in market gardens. The seeds are largely used in medicine, and are exported from Hankow. They are small, 3 by 4 mm., black, depressed on one side, with wrinkled and reticulated surfaces. They have a slight alliaceous taste. The seeds are said to purify the blood and to act as a cordial and tonic.

15. *Aloe spp.* Liliaceae.

Jadam is the Malay name for bitter aloes. The dried extract of the leaves is found in most Chinese drug shops and bears the name Lu hui, probably the transliteration of some foreign name, it is also called Siang tan (Elephant's gall) to express the bitterness of the drug. The drug occurs in black shining brittle pieces. There is evidence from the Customs Reports that the dried juice found in the local shops has been imported from abroad.

16. *Amomum amarum*, F. P. Smith. Zingiberaceae.

蓋智 : Kai (build) chih (wisdom): local name 'Yik chee' The name is given on the supposition that the seeds impart knowledge. **益盃子** : Yih che tsze, Hanb. Sci. pa. 104, 252, Fig. 8; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 543; T. & M.; St.; B.E.R.; Ph. Soc. Mus.

Bitter seeded or Black cardamoms. The plant yielding this drug is said to grow in the provinces of Kwangtung, Kweichow, and Yunnan. The Hankow market is supplied from Canton. The correct botanical origin of these seeds is not yet established.

The capsules are ovoid, pointed at the extremities, 1.5 to 2 cm.

long. The pericarp is of a deep dusky-brown colour, coriaceous, beset longitudinally with interrupted ridges usually about 18 in number. The seeds are black, obtusely angular, and are distinguished by an aromatic, bitter, myrrh-like taste.

The drug has tonic, stomachic, and cordial properties. In Malaya it is administered for heart failure.

17. **Amomum aromaticum**, Roxb.: (*A. medium*, Lour.:
A. Tsaoko, Gagnepain). Zingiberaceae.

草菓: Ts'ao (herbaceous) kuo (fruit): Ts'ao kuo (Cant.): local name 'Chow koh'. Hanb. Sci. pa. 105, 106, 250, Fig. 9; Pen ts'ao; Lour.; Tatar.; P.S.; T. & M.; Henry; C.R. Alpha. 1347; Thao qua (Annam).

The Ovoid China cardamom is a product of Southern China and is abundant in the drug shops of Singapore as well as in those of China. Hosie states that the centres of production are Western and South-western Kwangsi, Tonquin, and South Eastern Yunnan with the West River as the main outlet. Dr. Henry collected the plant yielding this drug in Yunnan. The specimen resembles *A. aromaticum*, a plant of Bengal and Assam the origin of the Hill cardamom of N. E. India. This is more probably the parent plant of the Ovoid cardamom rather than Loureiro's imperfectly described *A. medium*.

The fruit is oval or oblong, 3-celled, 3-valved, and obscurely 3-sided, or from 2.5 to 3.5 in length. The pericarp is dusky greyish brown, deeply striated longitudinally, thick and coriaceous, frequently covered on the surface with a whitish efflorescence. The seeds are large, sharply angular, hard and striated, having a peculiar aromatic smell and taste. The seeds distinguish the drug from the seeds of Round cardamom, or *Languas globosum*, with which they are sometimes confused. The seeds are used as a condiment and for a variety of disorders including dyspepsia and catarrh.

18. **Amomum echinosphaera**, K. Schum.: (*A. villosum*,
Lour.). Zingiberaceae.

春砂: Ch'un sha: called locally 'Choon sa'. Yang ch'un sha, Hanb. Sci. pa. 97-9, 251. Figs. 4 and 5; Lour.; P.S.; Ch'un sha hua; C.R. Alpha. 276; J.R.; St.; Ph. Soc. Mus. Yang ch'un Annam.; Sa nh'an, Coch. Chin. Not in the Pen ts'ao.

The Hairy Chinese cardamom. Loureiro states that *A. villosum*, a vaguely described species grows wild in Cochin China and the fruits are exported to China where they are largely employed in medicine. Hanbury records its occurrence in Kwangtung. The Yang ch'un hsien district of that province, where it is chiefly cultivated, gives the name to the plant. *A. echinosphaera*

(described in Fl. Gen. l'Indo-Chine, vol. vi. 1908, 106) occurs in Tonkin, Annam, and the mountains of Cambodia.)

The capsules are about 15 mm. in length, oval, more or less three-sided, bluntly pointed with a scar at the summit, rounded at the base and attached to a short pedicel. The pericarp is externally dark brown, marked with obscure, longitudinal striae, more or less covered with asperities short, thick, and fleshy. The seeds are brown, angular, pitted, and on removal of the pericarp remain in a three-lobed mass. They have a camphoraceous taste blended with the aroma of Malabar cardamoms.

They are employed as a stomachic and cordial.

The sources of the Hairy and Xanthioid fruits are somewhat confused, for their composition and properties are similar. Another species, *A. ovoideum*, Pierre, of Cambodia and Laos, has a capsule ovoid, spiny and pedicelled, 20 mm. by 15 mm. broad, with spines fine, flexuose, compressed at the base. This, perhaps, is one of the sources of the Hairy cardamom.

19. *Amomum Krervanh*, Pierre.

Zingiberaceae.

白豆蔻 : Pai (white) tou kou (nutmeg): called locally 'Pak tow khow'. Lour.; Tatar.; Hanb. Sci. pa. 109, 253; Br. iii. 58; T. & M.; C.R. Alpha 964; P.S.; St.; B.E.R.

Figured in Crevost and Lemarié, p. 299. Suk mil (Thibet).

This is the Round or Cluster, White or Siam cardamom. The plant yielding the fruit is a native of Cambodia and Siam. The specific name means cardamom as in the *Krervanh* or Cardamom Mountains in Cambodia.

In size and shape the cardamom of *A. Krervanh* is similar to that of *A. Kepulaga*, Sprague and Burkill (*A. Cardamomum*, *auctt.* but not *Linn.* in 1753), the Round cardamom of Java; but its taste differs somewhat.

These cardamoms have been known in Eastern commerce since the sixteenth century. They are exported in large quantities to China and Singapore from Bangkok and Cholon, the market of Cochin China. They are considered superior to other kinds. Their value is 300 piastres a picul of 60 kilos when ordinary cardamoms sell at 200 to 250 piastres (Pierre). Hanbury records the price of the best quality of Siam cardamom at about 5s. a pound.

The capsules are globular, about 15 mm. in diameter, sometimes distinctly three-lobed on the upper surface. The pericarp is glabrous, thin, fragile, of a buff colour, enclosing a three-lobed mass of seeds, brown-coloured, compressed, with a strong aromatic camphoraceous odour and taste.

The seeds are used as a spice and sometimes, mixed with betel-nut, as a masticatory, commonly served with betel-nut (un-

mixed) after Chinese feasts in North China. In medicine they are employed for ailments of the stomach, and for asthma and pulmonary affections and general debility.

20. **Amomum xanthioides**, Wall. Zingiberaceae.

砂仁: Sha (sand) jen (kernel): called locally 'Sai yin'. Sha jen k'ó (husks only) Hanb. Sci. pa. 100-103, 250, Fig. 6 and 7; Lour.; Hsi sha jin (western sand kernels); P.S.; Shuh sha jin, T. & M.; J.R. (*A. villosum*); Husks, C.R. Alpha. 1076; So sha mi, St.; B.E.R.; Pen ts'ao. 縮砂密.

This amomum, affording the Xanthioid or Bastard cardamom, is a native of Burma, where it was discovered by Wallich in 1827. It also occurs in the Laos country and Cambodia, where the fruits are collected for the market. They are exported from Bangkok in Siam to Singapore and Chinese ports. The husks appear as an export through Canton as the main centre of trade. These fruits are considered inferior to other kinds of cardamoms and their market value is lower. The peculiarity of this drug is that sometimes the husks (k'ó) are sold without the seeds, and sometimes the compact masses of seeds (shuh sha jin) without the husks. The empty capsules are devoid of aroma and it is not known what use they could have in medicine.

The capsules of the Xanthioid cardamom resemble those of the hairy variety except that the pericarp of the latter is more spiny in character. They are shrunken and compressed but after soaking in water they become nearly spherical, showing long acute recurved processes, longest near the base. The seeds of this cardamom are either detached or united with the partitions into three-lobed masses, held together by a white membrane. Their plump, bloomy-white appearance distinguishes them.

The seeds are used as a condiment, and for their tonic, stomachic, and carminative properties.

21. **Anemarrhena asphodeloides**, Bunge. Liliaceae.

知母: Chih mu (mother of ants' eggs because of the resemblance of the seeds, when they begin to germinate, to ants' eggs): locally called 'Chee moo'. Br. ii. 94; iii. 9; Hanb. Sci. pa. 259, Fig. 15; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 136; J.R.; Franchet; T. & M. under *Aletris japonica*, Lam.; St.; B.E.R.

This plant is common in the Northern Provinces. The leaves and flowers are said to resemble a leek. The rhizomes are collected in Shansi, Honan, and Chihli and exported from Tientsin; they are also used as a medicine in Japan. Value T. 3 a picul. The Singapore drug came from Anhwei.

The rhizome is about the size of the little finger. The upper side is flattened, and beset with coarse, appressed, ascending

rufous or yellowish hairs. The underside is convex and covered with thick radicle fibres or more usually with their scars. The interior is yellowish, spongy, and starchy. There are smaller pieces present, wrinkled and scarred. The drug has but little taste or smell.

The roots have lenitive, cooling and expectorant properties. They are recommended for employment in place of squills in colds and sore throats.

22. *Angelica anomala*, Pall.

Umbelliferae.

白芷: Pai (white) chi (medicinal herb): Pak chi. (Cant.): local name 'Pak chee'. Pai chi hiang. Br. ii. 410; iii. 51; P.S. under *Iris florentina*; C.R. Alpha. 940; Parker; T. & M.; J.R.; St.; B.E.R.; Hosie; Ph. Soc. Mus.

The plant which grows in China as well as in Mukden, Amur, Korea and Japan, affords a fragrant root. The Malayan specimen came from Szechwan where Hosie reports a large trade in the root obtained from cultivated plants. That district, Hupeh, and Chekiang are sources of supply. It is exported from Hankow and Shanghai. *Angelica sylvestris*, Linn., and *A. inaequalis*, Max. are also said to yield the drug.

The root is like that of a parsnip. The drug consists of bundles of thin longitudinal slices of the root about 4 in. long, 1 in. at the thicker end tapering down to $\frac{1}{4}$ in. The sections are white and starchy with a fragrant odour of Celery or Fenugreek.

The root is often worn in the girdle on account of its fragrance. It is a favourite cosmetic and enters into several toilet preparations. It is specially considered a woman's drug and is therefore prescribed in a number of female complaints.

23. *Angelica polymorpha*, Max. var. *sinensis*, Oliver.

Umbelliferae.

西歸鼓頭: Hsi kwei ch'ih teo: Sai kwai ku tau (Cant.): Tang kuei, Br. iii. 46; Pen ts'ao; Tatar.; Kaempfer; Hanb. Sci. pa. 260, under *Aralia edulis*, S. & Z.; P.S.; T. & M. under *Ligusticum*; C.R. Alpha. 1250; Stuart under *Cryptotaenia canadensis*, the Honeywort of N. America, Faber's identification; Hosie; B.E.R. The name in Singapore is Sai kwai tow (Hsi, 'west', kuei, 'revert', t'ou 'head'), meaning a product from the west, i.e. Szechwan. The root represents a drug held in high esteem among the Chinese. It comes principally from the three Western Provinces, but is also prepared in Shansi, Shantung, and Chihli. Dr. Henry collected the plant in Hupeh and identified it as the source of the drug exported from Ichang and Hankow (Ic. Pl. 1999). It is cultivated in gardens at 7,000 ft. elevation, and the root is dug up in the second year of growth. According to Hosie the roots are divided into two qualities.

For export to other provinces the superior pieces are packed in wooden cases and bear the name Hsiang kuei, while those of inferior qualities are made into bundles and called Pao kuei. The ordinary drug is met with in brown, fleshy rootstocks, branching into a mass of large, close, pliant rootlets, something like Gentian root. The interior is soft and mealy of a whitish or yellowish colour or darker. The odour is very persistent, resembling that of Celery or Angelica, the taste is warm, sweetish, and aromatic. The drug is used for menstrual, chlorotic, and puerperal diseases of women. The vernacular name is derived from the supposed assertive power of the root to cause the wife to 'revert' to her husband.

The firm of Merck markets an extract of this drug under the name Eumenol. In Japan a *Levisticum* is substituted which has been amply described by Japanese writers.

24. *Anisomeles ovata*, Benth.

Labiatae.

千草 : Ch'ien (1,000) ts'ao (herb): Ts'in ts'o (Cant.): local name 'Hee chin choo'.

The plant occurs in Hupeh, Kwangtung, Hupeh, and Formosa, and is distributed in tropical and sub-tropical India and in Malaya. The drug consists of fragments of square, dark-coloured stems with hoary, fragrant leaves. Regnault calls it 'Black Horehound' and includes it among the medicinal plants of Annam, but it does not seem to be known in Chinese medicine. *A. malabarica*, R. Br. is a well-known drug in South India. It would appear that these plants have the same properties as Horehound (*Marrubium vulgare*, Linn.).

25. *Aquilaria Agallocha*, Roxb.

Thymelaeaceae.

正沉節 : Cheng (genuine) ch'en (to sink) chi: local name 'Sam chit'. Ch'en hsiang = fragrant (wood) that sinks (in water) Br. iii. 307; Pen ts'ao; Hanb. Sci. pa. 263.; Lour.; Kaempfer; Cleyer; Tatar.; Debeaux; P.S.; St.; B.E.R.

Lign Aloes, Eagle Wood, Aloes Wood, Calambac, Agallochum are names of a drug yielded by *Aquilaria Agallocha*, a tree of vast size growing in the mountainous parts of Cochin China and Laos, and extending westward into Sylhet and Assam. The prepared wood is a drug of great antiquity and is valued as a medicine and perfume. It is referred to in the Scriptures and in all works dealing with Eastern Materia Medica.

The drug consists of the hardened reddish-brown portions of the wood which contain oleo-resinous matter. These pieces are trimmed with great care so as to remove the lighter and less resinous portions. The wood is used largely in incense and in some parts for preparing an oil or attar by distillation. Tonic, stimulant, carminative, and aphrodisiac properties are ascribed to it.

26. *Aquilaria* sp.

Thymelaeaceae.

沉香 : Ch'en hsiang (sinking, fragrant): local name 'Chien heong'. This sample is labelled 'Garros Wood' which is a Malayan name. Although the Chinese name applies to the genuine wood referred to in the last article, the drug is quite different. It consists of light-coloured fibrous pieces with parallel veins, devoid of aroma and taste. It may be the wood of another species of *Aquilaria*, or the lighter portions of the wood rejected in the preparation of the genuine Aloes Wood. Hanbury (Sci. pa. 265), with some doubt, refers to Ya heang, a light spongy wood derived from *A. chinensis* Spreng. It has coarse parallel fibres and is devoid of aroma, but has a bitterish taste.

(27) **鷄骨香** : Chi (hen) ku (bone) hsiang (fragrance): local name 'Kai gut heong'.

This is a Chinese medicine (C.R. Alpha. 48) produced locally in Canton province. Stuart gives it as a name for eagle or laca wood among those that refer to the form or part of the tree from which it is taken. It occurs as slices of a woody root or stem, 3-4 mm. in diameter, cut obliquely, with a brownish-yellow cuticle. It is bitterish to the taste.

28. *Arctium Lappa*, Linn. (*Lappa major*, Gaertn.).

Compositae.

牛子 : Niu (ox) tzü (seed): called locally 'Ngow chee'. Niu p'ang, wu shi, 'evil fruit', Br. iii. 91. Niu pang tzü; C.R. Alpha. 906; Pen ts'ao; Tatar.; J.R.; St.; B.E.R.; Hosie; Ta li tsz, C.R. Alpha. 1226, in Szechwan and Hupeh, A.H.; Ph. Soc. Mus.

The Burdock or Burweed is common in North and Central China and Manchuria. The fruits or burs are covered with hooked spines and receive the name 'evil fruit'. The seeds or achenes resemble the seeds of a grape, grey coloured, striated, angled, and 6 mm. long. The taste is pungent. They are exported from Hankow and Newchwang. The Malayan sample came from a Chinese port.

The drug is alterative, depurative, diaphoretic, and diuretic.

29. *Ardisia* sp.?

Myrsinaceae.

金牛 : Chin (gold) niu (cow): Kam ngau (Cant.): local name 'Kam gow'. Tzü chin niu, Faber, St.; B.E.R.

Ardisia japonica, Blume, a plant with the habit of a tea-shrub, bearing red berries, grows in Fukien, Chekiang, Hupeh, Szechwan, and Japan. The root of this shrub is referred to as medicinal and is probably the source of this drug. Debeaux describes a drug, Kin niu, as small circular fragments of a root, pale yellow and very bitter, and refers it to a *Cocculus*. The

above drug is not from a menispermaceous stem. It is in oval transverse sections about an inch across. There is a thin brown bark and a soft yellowish wood, showing porous vessels and stone cells, and having a bitter taste.

Stuart says the root is used in influenza and as a carminative.

30. *Areca Catechu*, Linn.

Palmaceae.

檳榔 : Ping (Areca) lang: Pan long (Cant.): local name 'Chini ping'. Br. iii. 287; P.S.; T. & M.; St.; B.E.R. Ping lang tsze (the nuts), Ping lang pien (the sliced nut): C.R. Alpha. 1025; Henry; Hosie.

The Betel or Areca Nut Palm. This graceful palm occurs in Cochin China, Malay Peninsula and Islands, and is cultivated throughout India and China. The nuts are produced in Kwangtung and the island of Hainan, whence they are carried to Hong-Kong and appear in the Customs Returns as a foreign import along with nuts from Macao, Singapore, and British India. The Malay name Pinang means 'honoured guest' in allusion to the custom of presenting the nuts to guests on ceremonial occasions. Betel nuts are well known and are used as a masticatory throughout the East. The nuts are ovoid about $\frac{3}{4}$ in. in length, and are sold in circular slices showing the ruminated albumen. They contain tannin and active alkaloids arecoline and arecaidine. They have tonic, astringent and anthelmintic properties. The powdered nut is an efficacious remedy for tape worm. In veterinary practice its reputation as a vermifuge is well established.

31. *Areca* sp.

Palmaceae.

大腹皮 : Ta (great) fu (inner) p'i (rind): locally called 'Tai fook phee'. Br. iii. 287; Tatar.; P.S.; St.; B.E.R.

Betel-nut husk is exported from Canton and Kiangchow. It is the fibrous, outer portion of the fruit of a species of areca, called Chü pin lang, although the ordinary species furnishes a similar rough coir-like substance. Read suggests *A. Dicksonii*, Roxb., as the source. It passes the customs as Tai fu p'i (Alpha. 1222) and Ping lang p'i (Alpha. 1228) (Ta fu tze is the name of the nut in the husk). It is used in medicine, not only in China, but also in Japan and Annam. It is in much request in flatulent, dropsical, or obstructive diseases of the stomach. It is said to have the same properties as the areca nut, and is given in choleraic affections.

(32) **檳榔花** : Ping (Areca) lang hua (flower): Ping tsik fa (Cant.): local name 'Phun long fah'.

This is the fibrous rachis of the betel palm after the nuts have been removed. It is probably used like the husk, but it seems to be quite inert as a medicinal agent.

33. *Arisaema Tatarinovii*, Schott, and other species.

Araceae.

周胆星 : Chou tan hsing : Chau taam sing (Cant.) : local name 'Chow tam sing'.

This drug is a preparation made from the roots of a plant. It is a white, gummy substance of a horny consistence, in small broken fragments. It disintegrates in water, leaving a white powder with no special odour or taste. Under the microscope it is seen to consist of starch grains, rounded, oblong, and shell-shaped. Dr. Henry (Econ. Bot. China, 34) says 'Tan hsing, of the Customs, exported from Tientsin, is made by pounding the tubers of T'ien nan hsing to a paste with ox-gall.'

Nan sing (Hanb. Sci. pa. 263), T'ien (Southern Cross or heavenly) nan hsing (C.R. Alpha. 1297) are names of drugs furnished by species of *Arisaema*, the compound tubers of which are thought to bear some resemblance to the constellation of Canopus. Loureiro, Hanbury, Tatarinov, and Smith refer the drug to *Arum pentaphyllum*, Linn., Kaempfer to *A. triphyllum*, Thunb., Hosie, Regnault, and Stuart to *Arisaema japonica*, Blume, and Dr. Read to *A. Thunbergii*, Blume. Dr. Henry found *A. Tatarinovii* (Br. iii. 148) a plant in the Peking mountains, to be the origin of the root exported from Chihli, and used with gall in the above preparation.

34. *Arisaema* sp.

Araceae.

白付片 : Pai (white) fu p'ien (slices) : Pak fu p'in, Cantonese and local name. Called 'white' fu tsz to distinguish it from the root of Aconite which is called 'fu tsz'. Tatar.; P.S.; C.R. Alpha. 944; St.; B.E.R.

The aroid yielding this drug is said to grow in Szechwan, Korea, and Manchuria; the root is exported from Newchwang, Amoy, and Hankow.

Stuart and Read follow Loureiro in referring the origin to *Jatropha Janipha*, Linn. (*Manihot Loureiri*, Pohl), but the drug corresponds more with the root of an aroid than that of a Euphorbiad. In the Pharmaceutical Society's Museum it is correctly labelled '*Arisaema* sp.'

The tuber is sold in slices. These are from a tuberous root one to one and a half inches across, with a brown epidermis. Internally they are mottled, black and white, withered and reticulated, firm and horny in consistence.

The drug is given in apoplexy, aphonia, chorea, and heat-stroke. The powder is used to remove pock marks and pigmentary deposits in the skin.

35. *Aristolochia debilis*, Sieb. and Zucc.: (*A. recurvilabra*, Hance). Aristolochiaceae.

[兒]鈴: Tou ling, a contraction of Ma tou ling: local name 'Loo to lui'. Ma tou, 'horse bell' (referring to the shape of the fruit). Br. iii. 54; Hanb. Sci. pa. 239; Pen ts'ao; Tatar.; Faber; P.S.; J.R.; T. & M.; Henry; Hosie; St.; B.E.R.; C.R. Alpha. 813; Ph. Soc. Mus.

The Aristolochias supplying these fruits grow in various parts of Central and Northern China. *A. contorta*, Bunge, of Peking and the Amur country probably yields the drug exported from Teintsin. *A. Kaempferi*, Willd., of Shantung and Japan afforded the drug described by Hanbury. The fruits of *A. debilis* are oval, from 1 to $1\frac{3}{4}$ in. in length, formed of six papery valves, enclosing large, flat, obtusely triangular winged seeds. The Singapore specimen which came from Canton is much broken and has no marked odour or taste. The fruits of *Aristolochia* are considered to resemble the human lung and are recommended for inflammation of the lungs and all kinds of pulmonary affections.

36. *Aristolochia* sp.

Aristolochiaceae.

青木香: Ch'ing (green) mu (wood) hsiang (fragrant): Ts'ing muk heung (Cant.): local name 'Ching hok heong'. C.R. Alpha. 192. This is a drug mentioned by Tatarinov and Hanbury (Sci. pa. 253, 259) as a grey brittle root of the thickness of a goose-quill, with a slightly aromatic taste, but little smell. Dr. Henry (Chin. pl. 294) identifies the drug in Hupeh as a species of *Aristolochia*. Dr. Hance says the root of *A. recurvilabra* is called Green or Native putchuk and is exported from Ningpo as a substitute for the fragrant putchuk. The drug sent from Singapore under this name is the sliced stem 1 in. across, with radiating medullary rays. It appears to be a poor substitute for Mu hsiang or Bengal putchuk. For Mu hsiang see *Saussurea Lappa*.

37. *Aristolochia* sp.

Aristolochiaceae.

石南行: Shih (rock) nan (south) hsing (creeper): called locally 'Siak nam hing'. Shih nan t'eng, South rock creeper, a plant that grows on the sunny side of rocks, Br. iii. 347; Twigs and leaves of a climber, C.R. Alpha. 889; Stuart and Read refer the drug Shih nan to *Rhododendron Metternichii*, Sieb. and Zucc., a plant of the Yangtze Valley and Japan. Shih nan t'eng is a name also given to *Piper aurantiacum*, Wall. Bretschneider in his article on this drug, concludes that probably several plants are known by this name in different parts of China. The Malayan drug imported from Canton, consists of the leaves and small stems of an *Aristolochia*, and has no resemblance to a *Rhododendron*.

38. *Artemisia annua*, Linn.

Compositae.

蒿蒿: Ch'ing (green) hao (artemisia): local name 'Ching hoh'. Br. ii. 13; iii. 74; Pen ts'ao; Tatar.; P.S.; Ch'ing ho, C.R. Alpha. 186; St.; St.; Hosie, B.E.R.

Bretschneider describes under this vernacular name the tall fragrant plants of *A. annua*, *A. Dracunculus*, Linn. and *A. apiacea*, Hance. The root, stem, leaves, and seeds of these plants are all used in medicine.

The Malayan drug came from Canton; the broken flowering branches correspond with those of authentic specimens of *A. annua*.

Porter Smith says the green parts of the plant, which grows abundantly in waste places in Hupeh, are eaten as a vegetable. The dried leaves and stalks are used in skin diseases.

39. *Artemisia vulgaris*, Linn.

Compositae.

蕪艾: Ch'i ai: K'i ai: called locally 'Khee ngai.' Ai, ngai, Br. iii. 72; Pen ts'ao; Lour.; Tatar.; Debeaux; Faber; P.S.; A.H.; Hosie; St.; B.E.R. I ts'ao (vulnerary herb), Chih ts'ao (burning herb), Chiu ts'ao (cauterizing herb); ai hao and peh hao are other names for this variable species. *Tanacetum chinense* A. Gray, is cultivated at Peking under the name k'i ai.

The common mugwort grows in all parts of China. There are many varieties of the plant, but the best kind called K'i ai or Ch'i ngai comes from Hupeh, Anhuei, and Fukien and is exported from Canton and Amoy.

Stuart describes four forms of the drug: (1) The dried leaves of the plant; (2) the dried twigs done up in bundles; (3) Moxa, the dried leaves powdered; (4) Ai ping, picked to pieces by hand.

The Malayan sample imported from China consists of the dissected leaves with a white hairy under surface. They are employed as a carminative and haemostatic. The oil of the leaves examined by Nakao and Shibue (1924) contains 50 per cent. of cineole, a sesquiterpene alcohol and its ester and a-thujone.

40. 艾茸: Ngai or Ai (mugwort) yung (tinder): local name 'Ngai yoong'.

Ai ping or Moxa punk is the peculiar cottony excrecence or tomentum from the underside of the leaves of one or more species of *Artemisia*, which constitute the material for making inflammable cones or moxa.

Moxibustion, or the method of cauterizing the skin by burning, is of very ancient date in China and Japan. Rumphius quotes its Portuguese origin. Baillièrè suggests that moxa is derived

from *μύκης*, a fungus, which in a dried state was used by the Greeks to burn the skin, as mentioned by Hippocrates.

Stuart says Ai jung is made by grinding the leaves in a stone mortar with water, separating the coarser particles, and drying what remains. Others refer to the cottony under surface of the leaves as the source. But it seems that true moxa is produced by an insect which punctures the plant, producing subsequently yellow, hairy galls.

To use the moxa, a small portion of the fibrous material is made into a pellet and placed upon the ulcer or place to be cauterized, and ignited. The number of diseases for which it is administered is very large; from itch to sterility.

The tinder or punk in the Singapore shop was imported from Canton. It consists of the hairs and portions of the leaf broken up to a coarse powder.

41. **Asarum Sieboldi**, Miq. Aristolochiaceae.

細辛: Hsi (slender) hsin (pungent): Sai san (Cant.): called locally 'Sai sun'. Br. ii. 414; iii. 40 and 41; Pen ts'ao; Tatar.; J.R.; P.S. under *Heterotropa asaroides*; C.R. Alpha. 389; A.H.; T. & M.; St.; B.E.R.

This species of birthwort grows wild in most provinces of China, as well as in Korea and Manchuria. The leaves resemble in shape the rounded hoofs of horses, and this has suggested the use of the root as a horse medicine. The Malayan sample came from Chiklai.

It is probable that other species of *Asarum* afford this fragrant and pungent root. Bretschneider refers to *A. Thunbergii* as one source. Hosie speaks of Hsi hsin from Szechwan the product of *A. himalaicum*, Hook. f. and Thoms. Regnault identifies the drug in Annam with *A. virginicum*, Thunb. (*A. albivenium*, Regel). The wiry and fibrous rootlets, arising from a rhizome, are aromatic, camphoraceous and pungent, especially when fresh. They are sometimes called 'Japanese Wild Ginger'. Taoists use the roots for scenting clothes. The drug is employed as an emetic, diaphoretic, diuretic, and purgative. It is largely prescribed in rheumatism and apoplexy. The powder is an active sternutatory and is given in treatment of nasal polypus.

42. **Asparagus cochinchinensis**, Merrill (*Melanthium cochinchinense*, Lour.; *A. lucidus*, Lindl.). Liliaceae.

天冬: T'ien tung: T'in tung (Cant.): called locally 'Thin toong'. T'ien men tung, Lour. Fl. Cochin, 268. Br. iii. 176; Hanb. Sci. pa., 257; Pen ts'ao.; Tatar.; Henry, Chin. Pl. 463; P.S.; C.R. Alpha. 1301.; J.R.; T. & M., St.; B.E.R.; Ph. Soc. Mus.

Loureiro states that the plant yielding these medicinal tubers

has linear leaves and prickles, and is frequent in China and Cochin China. It is cultivated in Chekiang, Shantung, and around Peking. Commercial supplies of the root come from Hankow, Wenchow, and Ningpo. The Singapore drug came from Anhwei. Hance and Henry identify the drug as above, but the plant affording the drug, however, is not confined to one species. Hosie alludes to T'ien tung in Szechwan yielded by *A. filicinus*, Buch.-Ham., and Regnault says the Annam root is mixed with that of *Anguillaria coccinea*.

The tubers are spindle shaped, of the thickness of a pen to that of a cigar, horny, translucent, and yellowish-brown. They are usually flattened, more or less contorted, having a mucilaginous, slightly sweetish taste, but no marked odour. Under the microscope, starch with hilum and bundles of acicular raphides are seen, also muriform cells and spiral vessels. The drug is considered to be diaphoretic, expectorant and tonic, and a nervous stimulant. It is administered in phthisis, and as a drink to allay feverish thirst. The root is sometimes preserved in sugar as a sweetmeat.

43. *Aster trinervius*, Roxb.

Compositae.

紫苑: Tsz (purple) yüan (imperial): Tsz uen (Cant.): local name 'Tsz yoon'. Br. iii. 102.; C.R. Alpha. 1422; T. & M.; P.S. under *Convolvulus*.; St. and B.E.R. under *Aster tataricus*, Linn.

A common plant with purple flowers in Northern and Central China. The root is the officinal part and is exported from Chinkiang and Amoy.

The root is reddish-brown, fibrous, and pliable, with portions of the stem attached. It has little or no taste, but is said to have a fragrant smell when fresh.

The drug is used for coughs and pulmonary affections, and in the treatment of malaria and haemorrhages.

44. *Astragalus Hoantchy*, Franch.

Leguminosae.

川七: Ch'uan ch'i: local name 'Choon chat'. Henry, Chin. Plants; Pen ts'ao; P.S. under *Sophora*; Br. iii. 2; C.R. Alpha. 510; St.; B.E.R.; Ph. Soc. Mus.

黄茂 Huang ch'i is an important drug in the Pen ts'ao; it varies in character and appears to be afforded by different species of *Astragalus*. *A. Hoantchy* was collected as a source of the drug by David in Mongolia. Of this kind 3,500 piculs are exported annually from Tientsin. According to Hosie this plant also supplies the drug from Szechwan. The Hupeh drug is derived from *A. Henryi*, Oliver. (Hook, Ic. Plant. t. 1959, 1890) a plant found by Dr. Henry in the Fang district, where it is cultivated. Other drugs of this class noticed in the Customs Reports are named T'iao ch'i, pai ch'i, hung ch'i, ch'in ch'i, and hsi ch'i. The root from Malaya Ch'uan ch'i, means Huang ch'i

from Szechwan. It varies from $\frac{3}{4}$ to $\frac{1}{2}$ in. in diameter, yellowish-white in colour, with thick bark and pithy centre. The knotted upper portion is sliced, showing the thick fibrous bark and soft wood and pith. It has no distinct odour or taste. The drug is in great repute as a tonic, pectoral and diuretic medicine.

45. *Astragalus* sp.

Leguminosae.

北茂 : Pei ch'i (Northern ch'i): Pak shi (Cant.): local name 'Pak kee'. This is probably Huang ch'i from Manchuria and Chihli. It is the stem of the plant with whitish tasteless wood in thin slices.

46. *Atractylis ovata*, Thunb.

Compositae.

蒼瓜 : Ts'ang (red) chu (medicinal plant): local name 'Chong sooi'. Under Shu (chu) Bretschneider (iii. 12) describes this drug. It is called Shan kiang (mountain ginger) and Shan kie (mountain mustard) because of its pungency. There are two kinds: pai (white) chu, and chi or ts'ang (red) chu; the latter is reddish-brown and bitter and contains more resin. Pen ts'ao gives a figure of the plant yielding the latter, and this drug is chiefly referred to by Hanbury (255), Henry, Hosie, T. & M., and B.E.R. Porter Smith describes four kinds, and Stuart says there are three plants yielding the red kind. There are about nine or ten varieties of the drug passing through the Customs (C.R. Alpha. 961). These drugs come from Chihli, Szechwan, Manchuria, and Hupeh, and are exported from Newchwang, Tientsin, Chefoo, and Hankow. The drug from Malaya is labelled 'Prepared rhizome from Seongchow' (Che kiang). The root is finger-shaped, roughly moniliform, branching, 1 to 3 in. in length; cuticle rough, brown, beset with rootlets; the cut surface exhibits a spongy, whitish substance, spotted with a reddish resin. It has a slightly aromatic odour and taste.

The drug is stomachic and stimulant. It is a heart tonic in Annam. It enters into the composition of some of the most famous medicines as the 'Elixir of Longevity' and 'Elixir of Felicity'.

47 and 48. *Bambusa arundinacea*, Retz.

Gramineae.

天竹芸 : T'ien chu yuen: T'in chuk wan (Cant.).

天竹黃 : T'ien chu huang: T'in chuk wong (Cant.): local name 'Thian chook wong'. T'ien chu is Shintu (Scinde) transliterated, indicating its Indian origin. Pen ts'ao; Tatar.; P.S.; Hosie; T. & M.; J.R.; St.; B.E.R.; C.R. Alpha. 211. Singkara (Java).

Under the name of Tabashir, a corruption of the Sanskrit Tvak-kshira, bamboo manna was known to the early Arab travellers in the East. The port of Thana on the west coast of

India was famous for its tabashir in the time of Idrisi (1135 A. D.) and supplied it to all parts. Ibn Sina describes tabashir as a useful medicine (*Pharmacographia Indica* iii. 589, Dr. Brandis, *Indian Forester*, xiii.). It is found in the joints of bamboos which grow profusely in Southern and Western China. Price T. 15 a picul.

The drug is a mineral or siliceous concretion of a black, greyish or white colour found in the culms of the bamboo. It occurs in irregular shaped pieces of various sizes. The black or grey colour is due to organic matter, and may be removed by ignition, when it becomes white and pearly. Superstitious properties are attached to it. It is said to be a sovereign remedy for catarrh, and an astringent and stomachic and useful in erysipelas.

49. **Belamcanda chinensis**, Lem.: (*Pardanthus chinensis*, Ker.; *Ixia chinensis*, Linn.). Iridaceae.

射干: She (arrow) kan (shield): She kon (Cant.): local name 'Siai kan'. Br. iii. 153; Pen ts'ao; Tatar.; Lour.; P.S.; T. & M.; C.R. Alpha. 1120; Hosie; St.; B.E.R.

The plant grows throughout China, and from the Himalayas to Cochin China. It is peculiar in having a long stem resembling a lance or arrow, hence its name. It is cultivated largely in Honan and at Peking. The root is exported from Amoy and Hankow. The Singapore sample came from Yunnan. The rhizome is as thick as the little finger and cut into hard, longitudinal slices. Dark brown outside with transverse markings, and a few rootlets. Within, it is light yellowish-brown; taste bitter and acrid.

This is an important drug in the Pen ts'ao where it is recommended as expectorant, deobstruant, and carminative. It is given in pulmonary and liver complaints and for purifying the blood. In Malaya it is a remedy for gonorrhoea. According to Rheede it is an alexipharmic in Malabar, being given to those who have been bitten by the cobra, and to cattle which have fed upon poisonous plants.

50 and 51. **Benincasa cerifera**, Savi. Cucurbitaceae.

冬瓜: Tung (winter) kua (gourd): local name 'Toong kwa'. Br. iii. 265; Pen ts'ao; Tatar.; P.S.; A.H.; J.R.; Hosie; Wilson; St.; B.E.R.

The White, Tallow or Wax Gourd, is cultivated all over China. It grows best when sown towards the end of the season, so it is called 'Winter gourd'. The fruits often attain a large size, and the surfaces are covered with a layer of wax which gives them a white appearance. Two drugs are yielded by these fruits: (a) the skin, (b) the seeds.

冬瓜皮 : Tung kua p'i (skin). The rind or skin (C.R. Alpha. 1391) is exported from Ningpo and Canton. It is thin, light brown, and is regarded as a cooling medicine. When incinerated, the ash is applied to painful wounds.

冬瓜仁 : The seeds, Tung kua tzü (C.R. Alpha. 1392), and kernels (C.R. Alpha. 1390), called Tung kua jin by Hosie, are exported from Hankow. The seeds are oval, yellowish-white, with a distinct border and a notch at the narrower end; the kernel is black and oily. The fried seeds are eaten as a delicacy with tea. They are considered to be tonic, nutritive, and demulcent.

52. **Betula utilis**, D. Don, var. Betulaceae.

樺皮 : Hua p'i (bark): called locally 'Khan phie'. Hwa mu, P.S.; C.R. Alpha. 498; St.; B.E.R.

The bark is called Hwa p'i and Shu p'i. Henry says Hua is the common name for Chinese White Birch, Shu or Ch'u is occasionally the name of *Ailanthus*. Specimen of bark in Ph. Soc. Mus. is labelled *Ailanthus*.

This Birch is abundant in mixed forests of the mountains of West Szechwan. Wilson observed that the bark was collected in large quantities and sent down by river to the plains where it is used as the inner lining of straw hats. Chinese saddlers, shoemakers, cutlers, and candle makers, also employ it in their trades.

The bark, which came from Szechwan, is sold in the shops in small rolls about $\frac{1}{3}$ in. in diameter. The bark is in papery layers, outside they are light brown with numerous dark brown lines or lenticels, the inner layers are whitish.

The bark is used in the form of decoction for jaundice and bilious fevers. It is said to stain the hair a black colour.

53. **Blechnum orientale**, Hook. Filices, Polypodiaceae.

管仲 : Kuan chung: Kun chung (Cant.): local name 'Koon choong'. Br. iii. 14; C.R. Alpha. 647; Hosie; Feng wei ts'ao, 'Phoenix tail plant', St.; B.E.R.

The fern rhizome sent under this name from Anhwei corresponds with the characters of the root and stem found on herbarium specimens of the above plant. The caudex is stout, erect, clothed at the base with fibrillae or dark-coloured scales.

The plant inhabits Australia and the Polynesian Islands and extends northwards to China and the Himalayas. The root is collected in Fukien and Kwangtung and is exported from Canton.

Bretschneider says Kuan chung is common in Mid China, and that the root in shape, colour, and hairy appearance, is like the

head of an owl. The source of the drug in Hupeh has been referred to several ferns. Dr. Henry has identified three of them as *Nephrodium Filix-Mas*, Rich., *Onoclea orientalis*, Hook., and *Woodwardia radicans* Sm. In Shantung *Aspidium falcatum*, Sm. has supplied the drug. (See *Cyclophorus*.)

54. **Bletia hyacinthina**, R. Br. Orchidaceae.

白芝 : Pai (white) chi (orchid): Paak k'ap (Cant.): local name 'Phak kep'. Br. iii. 25; B.E.R.; C.R. Alpha. 935; Henry; Lan hua in Peking, St.; P.S. under *Amomum*; Ph. Soc. Mus.

A common plant in mountain valleys in Northern and Mid China. The root is exported from Hankow and Ningpo. The Singapore sample came from Canton.

The drug is a corm, oval, flattened, umbilicated on one surface, or irregularly radiated. The interior is horny, translucent, hard, and white in colour, with a gummy, bitterish taste. When placed in water the root forms a thick mucilage which in Peking is used for manufacturing wainscoting. The root is called Kiu ken or 'mortar root', because it is good for making paste.

In medicine the drug is demulcent for children of dyspeptic tendency. It is also given in dysentery, haemorrhoids and ague.

55. **Blumea chinensis**, DC. Compositae.

九里明 : Chin (nine) li (mile) ming (bright): local name 'Kow lee meng': C.R. Alpha. 119; Matsumura, p. 334; B.E.R.

This plant is common in Yunnan, Hong-Kong and Western China. The leafy stalks came from Canton where it would appear to be a local drug. The Chinese name has also been given to *Senecio scandens*, Ham. An allied species, *Blumea balsamifera*, DC. in Hainan, yields Ngai Camphor (Ai na hsiang) (B.E.R.; Hanbury, *Science pa.*, pp. 393-5).

56 and 57. **Bombax malabaricum**, DC. Malvaceae.

The Malabar Silk Cotton tree is found in the tropical eastern Himalaya, the forest regions of India and Burma, Ceylon, Java, and Sumatra. The tree grows in Kwangtung and the south-west of China. It affords two drugs in this collection: the flowers and root.

(56) 木棉花 : Mu (tree) mien (cotton) hua (flower): called locally 'Mook min fah'. C.R. Alpha. 870; Ph. Soc. Mus.

The flowers are about 2 in. long, calyx cup-shaped, petals oblong and fleshy, reddish-brown, numerous filaments. They are used externally for boils, sores, and itch.

(57) 木棉根 : Mu mien ken (root): called locally 'Mook min kan'.

The root of this tree is known in the Customs Reports (Alpha. 871). Bretschneider (ii. 515) says the bark of the cotton tree is a drug exported from Canton. Other reference

to the tree and root are made in *Kew Bulletin* 1896, p. 70, and by Stuart, Read, and Porter Smith. The latter, however, refers the plant to *Euonymus*. The drug sent under this name consists of transverse slices of branches or stems of a tree, about 1 in. in diameter with no special characters. It cannot be stated with any confidence whether the drug is from the silk cotton tree or not.

58 and 59. **Bonnaya reptans**, Benth. Scrophulariaceae.

韓信草: Han hsin ts'ao: local name 'Han sin chow'.

定經草: Ting ching ts'ao: local name 'Thin keng chow'.

The first name occurs in the Customs List (Alpha. 358) as a local Canton product.

The second name is given in the same list (Alpha. 1304) as a drug exported from Fukien. The names in the collection refer to the same plant; a small herb about 2 to 3 in. high, with root, stem, and leaves. It appears to be a local product and not an officinal Chinese drug. *Bonnaya* is a small genus of herbs found in tropical and sub-tropical Asia; widely distributed in India and Malaya.

60. **Boswellia** sp. Burseraceae.

乳香: Ju (milk) hsiang (fragrance): Ue heung (Cant.): local name 'Joo heong'. Br. iii. 312; Tatar.; P.S.; J.R.; T. & M.; C.R. Alpha. 563; St.; B.E.R.

Olibanum, Frankincense, or Thus is a fragrant oleo-gum-resin collected in Eastern Africa and Southern Arabia. It exudes from the trees as a milky juice which hardens on exposure to the air. Bombay is the emporium of this drug which is exported to China and Malaya. This accounts for one of its Chinese names, 'Western perfume'. It is a stimulating and healing plaster for boils and ulcers, and is administered internally for leprosy and scrofula. The chief use of olibanum, however, is as an ingredient in incense.

61. **Brassica chinensis**, Linn.: (*B. campestris*. Linn., subsp. *B. chinensis*). Cruciferae.

白菜: Pai (white) ts'ai (vegetable) ping (cake): called locally 'Pak chai piang'. Br. iii. 245; 'Sung', Pen ts'ao; Debeaux; P.S.; St.; B.E.R.

Chinese cabbage or Sung is cultivated in the north of China and in the valley of the Yangtze for its leaves which are esteemed as a pot-herb as well as for the oil expressed from the seeds.

The plant is represented in the drug shops as dry, round, light-coloured cakes of vegetable matter made from the broken leaves. The cakes are about 2 in. in diameter and $\frac{1}{4}$ in. thick.

Dr. Read of Peking says they are known as 'Cabbage Cakes'. The entire plant is antiscorbutic, arthritic, and resolvent, and these virtues are supposed to reside in the prepared cakes which are kept in the shops all the year round. They have been found to contain a large amount of various vitamins (see Hsien Wu, in *Chinese Journ. Physiol.*, 1928, Bulletin upon Metabolism).

62. *Brassica juncea*, Coss. Cruciferae.

白芥子 : Pai (white) chieh (mustard) tzü (seed): local name 'Pak kai tsz', Kiai (kie) Br. ii. 362; iii. 246; P.S.; T. & M.; Pai chieh, C.R. Alpha. 96, 938; Hosie; St.; B.E.R.; Ph. Soc. Mus.

Chieh is a mustard plant which resembles the Sung, but the leaves are more hairy and have a pungent taste (Br.). This white mustard is cultivated for its seed in most parts of China; Szechwan, Chihli, and Shantung are mentioned as the provinces of greatest production. In Japan, *B. cernua*, Thunb., is said to be grown for its seed. The seeds are light yellow and 2 mm. in diameter. Mustard seed at one time was a Buddhist unit of long measure. Kie tsz are exported from Chefoo, Amoy, Shanghai, and Hankow. The price in East China is T. 2.5 a picul. Mustard seeds are warming, sudorific and a well-known aid to digestion. The oil expressed from the seed is employed in cooking. In medicine the oil is used as an embrocation and is applied to the skin in eruptions and ulcers—though it is not used in China to the same extent as in India.

63. *Buchnera cruciata*, Ham. Scrophulariaceae.

羽前大 : Yü ch'ien ta: local name 'Yee cheen'.

This is a small plant, 6 to 16 in. high, with bright blue flowers, growing on dry grassy slopes among scrub in South China and N.E. India. The dry stem and spiked flower heads constitute the drug; they are dark coloured, and cut up into pieces about an inch long. The name of this plant does not appear in the available lists of Chinese drugs.

64. *Buddleia officinalis*, Max., and other species.

Loganiaceae.

蒙花 : Meng (Mongol) hua (flowers): local name 'Moong fah' Mi meng hua, C.R. Alpha. 843; A.H.; Hosie; St.; B.E.R.; Ph. Soc. Mus. (The flowers exhibited are those of *Edgworthia chrysantha*, Lindl., A.H.).

There are numerous species of *Buddleia* in China, and the flowers are greatly admired, Buddhists call them Shin chin hua 'watered satin brocade flowers'. The above species is distributed along the Southern provinces. *B. curviflora*, Hook. and Arn., according to Hosie, supplies the drug in Szechwan. The dried

flowers sold in Malaya came from Canton. The small tubular brown corollas with stellate hairs are mixed with stalks and portions of leaves. These flowers are used almost exclusively for diseases of the eye, especially opacities of the cornea, but also for affections of the liver.

65 and 66. **Bupleurum falcatum**, Linn., and other species.
Umbelliferae.

紫胡 : Ch'ai (firewood) hu (foreign, of N.W. origin, hemp, pepper): local name 'Chai foo'.

銀紫胡 : Yin (silver) ch'ai hu : Ngan ch'ai oo (Cant.): local name 'Yin ch'aiwoo'. Br. iii. 29; Tatar.; P.S.; C.R. Alpha. 16,1148; J.R.; Mat. 57; Hosie; St.; B.E.R.; Ph. Soc. Mus., sample from Singapore.

The plant is common in North and Mid China; the old plants are used for firewood, hence the Chinese name. In the Peking mountains the drug is supplied by the above species and *B. octoradiatum*, Bunge; the best kind called Yin ch'ai hu is said to come from Shensi. The drug is exported from Tientsin, Hankow and Chinkiang; the price ranging from T. 2.5 to T. 5 a picul. *B. sachaliense*, F. Schmidt, (*B. jucundum*, Kurz), according to Regnault, is the source of the drug in Annam.

The drug consists of the rootstock and roots, the latter thin, 3-5 mm. in diameter, brown, tough, and almost devoid of aroma.

Yin ch'ai hu is a larger root and occurs in thin longitudinal slices of a soft woody structure with wavy fibres.

The root causes perspiration; it is said to be effective in thoracic and abdominal inflammation and fever, and useful in flatulence and indigestion.

67. **Caesalpinia Sappan**, Linn. Leguminosae.

蘇木 : Su (to revive) mu (mood): local name "Soo mook". Su fang mu, P.S.; St.; B.E.R.; C.R.; J.R.; Ph. Soc. Mus. sample from Singapore. Govang (Indo-China), Sepang (Malay).

Sappan wood comes largely from Sumbawa, east of Java, also from Siam, Cochin China, and Malaya.

The wood was an important article of commerce in the middle ages and is still used as a colouring material in the East.

The wood occurs in small billets, chips, and match-like strips, of a rich orange-red colour. Porter Smith says there is an inferior wood called Yang muh, much lighter in colour.

Since it dyes a red colour it is supposed to have a special affinity for the blood. It is therefore used as a vulnerary for wounds, haemorrhages, and disturbance of the menstrual functions. It is also considered astringent and sedative.

68. **Campanumoea pilosula**, Franch., or **Codonopsis Tangshen**, Oliver. Campanulaceae.

防黨 : Fang (protect) tang (party): local name 'Fong theong'.

Fang tang is Tang shen from the Fang district of Hupeh, C.R. Alpha. 1251; Gauger; Tatar; P.S. under *Campanula*; Br. iii. 4; J.R.; Henry, Ic. Plant. 1966; St.; Wilson, *A Naturalist in W. China*; Ph. Soc. Mus.

Tang shen is distinguished in commerce by several designations indicating its source and manner of packing. Fang tang shen is one of the ginseng substitutes produced in Hupeh, Shensi, Shansi, and Szechwan. Wilson says the plant yielding it is cultivated in the mountains of the Hupeh-Szechwan frontier, and the thickened rootstock is greatly valued. Henry found *Codonopsis Tangshen* in Hupeh, and the thick roots with a sticky juice when fresh, were exported from Hankow and Ichang. Similar roots are observed on botanical specimens of *C. lanceolata*, Benth. and Hook f., from Szechwan, and *C. meleagris*, Diels, from Yunnan. The root from Malaya occurs in short transverse sections, 1 cm. across, showing a grey-brown, angular, wrinkled surface; in the centre is a light brown ligneous cord surrounded by dark brown cells full of juice, sweet to the taste like malt. Like Ginseng, the drug is an all round tonic and stimulant.

(69) **各黨** : Lu tang: Lo tong, Cantonese and local name. Lu tang is Tang shen from the Luan prefecture of Shansi, C.R. Alpha. 774, 1251. This is another ginseng substitute and is exported from Tientsin. The botanical origin is not definitely known, but the root bears some resemblance to Fang tang and it is probably derived from one of the above campanulaceous plants or an allied species.

The sample of Lu tang is met with in long, tapering, slender, pale-yellow, or reddish-yellow pieces, slightly twisted and thickened at the crown. It is smaller than Fang tang, 3-5 mm. in diameter, and lighter in colour, wrinkled and furrowed longitudinally and transversely. The central woody core is 1 mm. in diameter, and is surrounded by a dark brown ring. The taste of the root, like the former drug, is sweetish and resembles malt.

70. **Campsis grandiflora**, (Thunb.), K. Schum. (*Tecoma grandiflora*, Delaun.). Bignoniaceae.

靈消花 : Ling (spirit) hsiao (dissolving) hua (flower): local name 'Leen seiw fah'. Br. ii. 165; iii. 170; Lour; Tatar.; P.S. under its synonym. *Bignonia*; Parker; C.R. Alpha. 188; St.; B.E.R.; Ph. Soc. Mus.

This handsome climber occurs in North and South China and

in Japan; it is cultivated in gardens for the sake of its flowers. One of its Chinese names means 'striving skywards', alluding to the creeper flowering on the summit of high trees. The dried reddish flowers are 5-6 cm. long, salver shaped and five cleft. They are exported from Shanghai and Canton. In medicine they are used specially for female complaints. The flowers are referred to here, but the drug sent under this vernacular name consists of the flowers of *Plumeria acutifolia*.

71. **Canavalia gladiata**, DC.

Leguminosae.

The large, black, oblong seeds of this plant, 2.5 cm. broad and 4 cm. long, are sold in the Malay drug shops under the name of Kachang parang. The seeds are of an allied species, *C. ensiformis*, DC., pass through the Chinese Customs as 力豆 Tao tou (sword bean) C.R. Alpha. 1256, and are probably produced in the Fukien and Kwangtung provinces. The long pods are much relished as an article of diet and are said to benefit digestion.

72. **Cannabis sativa**, Linn.

Moraceae.

夫麻仁: Fu ma (hemp) jen (kernel): Fu ma yan (Cant.): local name 'Foh mah yin'.

大麻: Ta ma; 火麻: Huo ma (fire hemp); Huang ma; Hsiao ma; Br. iii. 217; P.S.; J.R.; C.R. Alpha. 486; Henry; Hosie; Wilson; St.; B.E.R.

The terminology of the Ma or textile plants is very confused as the name is applied to linseed, sesamum, and castor oil. The hemp plant is cultivated from Shantung to Szechwan for its oily seeds as well as for its fibre. The seeds are the part chiefly used in medicine. They are small shining achenes, lenticular in form and with white oily albumen. Tonic, alterative, emmenagogue, and laxative properties are ascribed to them. The expressed oil is used as a cosmetic and for the hair.

73 and 74. **Carthamus tinctorius**, Linn.

Compositae.

紅花: Hung hua (red flower): local name 'Hong fah'.

西紅花: Hsi (West) hung hua: local name 'Sai hong fah'. Hosie; C.R. Alpha. 530; Pen ts'ao; P.S.; Hung lan hua B.E.R.; St.; T. & M.; A.H.; Ph. Soc. Mus. Kusumba (India).

The safflower plant was introduced from Turkistan into China by Chang Kien, and is especially cultivated in Hunan and Szechwan. The red florets are used as a dye, and are sold either in bulk or in little compressed packets. In Singapore the two kinds are employed. The second sample, distinguished as Hsi (West or Indian), is wrapped up in packets covered with black paper to preserve the freshness of the drug and protect it from the light.

Although chiefly used as a pigment *Carthamus* flowers have stimulant, sedative, and emmenagogue properties, and are supposed to affect the heart and the liver and prevent the formation of white corpuscles in the blood.

75. *Cassia angustifolia*, Vahl. Leguminosae.

香鴻樛: Fan (foreign) hsieh (purging) yeh (leaves): local name 'Siah yip'. Ta hwai yeh, P.S.; C.R. Alpha. 450; B.E.R.; Ph. Soc. Mus.

These are the ordinary Indian senna leaves imported into Singapore; they are commonly sold in various cities of China under the same name. The leaves are 2.5 to 3 cm. long by 6 to 8 mm. broad, unequal at the base and elongate-lanceolate in shape. Porter Smith says the leaves of a *Sophora* have been found to answer the purpose of Alexandrian and Indian senna as an aperient. They are much larger than true senna leaves.

76. *Cassia Tora*, Linn. Leguminosae.

草决: Ts'ao (plant) chüeh (to discern): called locally 'Chow keat'. Ts'ao chüeh ming. Tatar.; P.S.; Hanb. Sci. pa. 231; Br. iii. 110; C.R. Alpha. 1341; J.R., T. & M.; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The plant grows as a weed throughout China and India, and is generally diffused in the tropics. The seeds are exported as a medicine from Canton.

The seeds are 2 or 3 lines long, cylindrical, pointed at one extremity and rounded or truncated at the other; colour dark brown. They are used externally and internally for all sorts of eye diseases, as the name indicates; preparations of the seeds are also given for liver complaints and boils. In India the plant is used for destroying ringworm. Elborne in 1888 found emodin in the seeds, a principle resembling chrysophanic acid, which is an acknowledged remedy for ringworm and similar skin eruptions. The leaves of the plant are said by Indian physicians to be a substitute for senna.

77. *Caucalis Anthriscus*, Scop. (*Torilis anthriscus*, Gmel.) Umbelliferae.

浮鼠: Ho shê (floating louse): Foo shat (Cant.): local name 'Hok sat'. Ku sheng, tsei i (stealing clothes), Kou shê (dog's louse); kwei mai (devil's wheat) Br. ii. 91; iii. 216; Tatar.; P.S.; A.H.; Ph. Soc. Mus.

The Hedge Parsley is distributed in Northern Asia, Europe and Northern Africa.

The fruits are yellowish, about the size of wheat grains, hispid and covered with prickles, characters for which appropriate names are given in the vernacular. Ku sheng is occasion-

ally exported from Hankow, but this is probably the name for seeds of *Nigella sativa*. The Malayan sample came from Szechwan where the fruits are called 'Flower of grass'. They are used for 'worms and opium smokers'.

78. *Celosia argentea*, Linn. Amaranthaceae.

青相子 : Ch'ing (green) hsiang tzu (seed): Ts'ing seung tsz, (Cant.): called locally 'Ching seong chee'. Br. iii. S2; Pen ts'ao; Lour; Tartar.; P.S.; T. & M.; Ch'ing hsiang, St.; B.E.R.; Ph. Soc. Mus.

This is a species of Cockscomb found throughout tropical Asia. It is called Wild Cockscomb, and resembles *C. cristata*, but it is always regarded as a distinct species and is called by a different vernacular name. The dried plant is antiscorbutic and cooling. Ningpo furnishes a large quantity of seed for medicine. The seeds are smaller than those of *C. cristata*, and have a reputation for clearing the vision and healing diseases of the eye. The name suggests 'green jequirity seeds'.

79. *Celosia cristata*, Linn. Amaranthaceae.

鷄關花 : Chi (fowl) kuan (crest) hua (flowers): local name 'Kai kwan fah': Tatar.; P.S.; J.R.; Debeaux; C.R. Alpha. 50; St.; B.E.R.

The Cockscomb is common in China where are cultivated at least three varieties, with red, yellow, and white flowers. The plant is consumed as a vegetable, and the dried flower-heads and seeds are sold in the drug shops.

The small, black, shining, lenticular seeds are employed in disorders of the blood as haemorrhage and menorrhagia, and for making emollient lotions for ophthalmia.

80. *Centipeda orbicularis*, Lour. (*C. minima*, Kuntze; *Myriogyne minuta*, Less.). Compositae.

我鳥乃食 : E or O (Goose or bird) tai (bad) sh'ih (food): local name 'Yoo pak seek'. Shih hu sui, B.E.R.; Chu ts'ao, Watters; Pe kong chau (Local druggist); Chikkana, Chhikika (Sanskrit).

Sneezewort. The dried herb is sold with its leaves and small fruits matted together. It is collected in Shantung, Kiangsi, and Kwangtung. It is an Indian drug and has probably been introduced into China and Malaya.

The leaves of this plant are thrust up the nostrils of persons affected with ophthalmia (Watters). In India and Ceylon the plant is used as a sternutatory and to relieve headache and colds in the head. (P.I.).

The plant contains essential oil, myrioginic acid, and bitter principles.

81. *Cercis chinensis*, Bunge.

Leguminosae.

京皮 : Ching p'i. Ching (the old name of the province now comprised under Hupeh and part of Honan) p'i (bark): local name 'Keng phee'. C.R. Alpha. 1408; Br. ii. 356, 521; Tzu ching, St.; B.E.R.; Ph. Soc. Mus.

This is the Judas tree or Red bud, a native of Asia from Syria to Japan. On account of its fine purple flowers and graceful habit it is much cultivated in gardens. It has sometimes been confounded with a species of *Vitex*, which is known as 'ching' 荆, and the bark as 荆皮 : ching p'i.

The bark is in quills, channelled longitudinally or in sliced curved pieces, dark brown in colour, 5 mm. in thickness, covered with whitish lichen outside, and astringent to the taste.

The drug is said to be good for headache and catarrh. Stuart reports that the wood and bark are as bitter as gall and are used for diseases of the bladder.

82. Charcoal (Vegetable).

百草霜 : Pai ts'ao shuang : Paak ts'o seung (Cant.): local name 'Pak chor sing'.

Porter Smith gives this name for charcoal although the usual name is t'an. Shuang is a name given to frost or to powder of a white or black colour like quinine or soot. According to Stuart and the Customs List (Alpha. 966) the above name is given to soot, which is administered as a styptic, absorbent, alterative, and topical remedy. In the Pen ts'ao charcoal for medicinal purposes is said to be made from oak wood. Norman Shaw (*Chinese Forest Trees*, 1914) informs us that oak is still the usual source of charcoal. It is sold in the form of lumps the size of a walnut. Mixed with honey, charcoal is given for throat complaints, and is combined with other drugs in the treatment of dysentery. The powder mixed with sesame oil is applied to burns and scalds.

83. *Chrysanthemum indicum*, Linn.

Compositae.

白菊花 : Pai (white) chü (chrysanthemum) hua (flower); local name 'Pak kook fah'. Br. ii. 404; iii. 69; Tatar.; P.S.; J.R.; C.R. Alpha. 942; St.; B.E.R.; Ph. Soc. Mus.

Several varieties of chrysanthemum are common in China, the flower heads of which are used in medicine. The principal kinds found in the shops are called pai (white), huang (yellow) and yeh (wild) chü. The drug under notice agrees with botanical specimens of *C. indicum*, although the books are not clear in distinguishing the different specific sources. White chrysanthemum flowers are exported from Swatow and Chekiang. The flower heads are made into tonic and sedative preparations.

Infusions are frequently applied as a collyrium in eye affections. In Malaya the flowers are obtained locally and are used for sore eyes and to promote longevity.

84. **Chrysanthemum sinense**, Sab. Compositae.

黄菊 : Huang (yellow) chü (chrysanthemum): local name 'Wong kook'. Br. ii. 404; iii. 69; Lour.; Mat.; S. & T.; Henry; Hosie; St.; B.E.R.

This yellow-flowered composite is found wild and cultivated all over China; it is a well known garden plant and is the principal species to which the name chü is applied. Huang chü is a drug exported from Chinkiang. In a dried state the yellow flowers do not differ much from the white chrysanthemums. The disks of both are yellow, and the rays of the former are sometimes rose coloured. In therapeutics they are regarded as practically identical. The flower heads are made into a decoction, or soaked in wine, and administered in maladies connected with the eyes and head.

85. **Cibotium Barometz**, J. Smith (*Dicksonia Barometz*, Link, *Polypodium Barometz*, Linn.). Filices-Polypodiaceae.

狗脊 : Kou (dog) chi (backbone): Kau tsek (Cant.): local name 'Kow chiak'. Br. iii. 13; Hanb. Sci. pa. 120-125; Loureiro; P.S.; C.R. Alpha. 606; St.; J.R.; B.E.R.

The hairy rhizome of this fern sometimes resembles a lamb, hence the specific name 'barometz', Russian for lamb. It is the *Agnus Scythicus* of Loureiro, or Tartarian or Vegetable Lamb, a drug of great repute alluded to in medical works of the sixteenth and seventeenth centuries. The plant is common in China, and it extends from Assam to Malaya and the Philippine Islands. The Malayan sample came from Canton. The drug consists of the lower part of the caudex, reddish brown in colour, in longitudinal slices, covered on the outside with golden brown moniliform hairs suggesting the fur of an animal. The root is employed as a tonic and is said to exercise a special action on the genito-urinary organs. It is also given for lumbago, according to the law of signatures. In Annam, like other fern roots, it is a vermifuge. The golden brown hair is called in Malaya 'Pen-awar jambi', and is used for stanching wounds. In 1856, Hanbury wrote an interesting paper (l.c.) on this drug, and described it as a new styptic. Its action is mechanical.

86. **过絲籠** : Kuo (to cover over) ssu (silk, thread) lung (dragon) meaning 'covered with dragon's hair': Local name 'Ko kong loong'. This is probably the article catalogued in the Chinese Customs Report (Alpha. 681) called Kuo cheang lung, a local Cantonese name.

The drug from Malaya is labelled 'From China and locally' and consists of pieces of the lower part of a fern caudex. The name and character of the drug present some resemblance to the Tartarian Lamb, except that all the hair has been carefully removed. It is presumed that the crude root or stem of the fern is sometimes scraped and sold separately from the hairy tomentum.

87. **Cinchona Calisaya**, Weddell.

Rubiaceae.

納皮 : Nah p'i: Naap p'i (Cant.).

Cinchona or Peruvian bark is called locally 'Kai na phee', na being the last character or syllable of the sound for cinchona, and p'i representing 'bark'. Porter Smith uses the names Kin tan p'i and 金鷄納 Kin ki na as the Chinese names for cinchona bark, the latter name is most commonly used to-day and is the official Chinese name. He adds 'The latter name expresses the colour, value, and nature of this most useful drug especially in the form of yellow bark'. Stuart calls it Chin chi lo. In the appendix to the Pen ts'ao it is said that foreigners of Macao introduced the drug in 1801. Its specific action in the cure of malarial fever was soon recognized, and the bark was used long before the introduction of quinine. The drug is represented in the Singapore collection by a piece of the yellow bark from India or Java.

88. **Cinnamomum Camphora**, Nees. (*Camphora officinarum*, Nees).
Lauraceae.

樟木子 : Chang (camphor) mu (wood) tzü (seed): local name 'Cheong mook che'. Chang, Br. ii. 513; J.R.; C.R. Alpha. 24; St.; B.E.R.

The Camphor tree is common in Middle and Southern China. It abounds principally in the province of Kiangsi and in Formosa. It is also plentiful in Japan. The Chinese name is said to be derived from Yu Chang, an ancient name for Kiangsi. In addition to the camphor or stearoptene prepared by distillation of the wood, the parts of the tree entering into commerce are the twigs, the bark, and the fruits.

The fruits are of the size of marbles, of a brown colour, irregularly shaped, corrugated on the surface with an aromatic flavour and pungent taste of camphor. The fruits are not normal, as they appear to have been punctured by insects, like the fruits of certain species of Cinnamon in India.

89. **Cinnamomum Cassia**, Blume.

Lauraceae.

桂皮 : Kuei (Cassia or Cinnamon) p'i (bark): Kwai p'i (Cant.): local name 'Kwai phee'. Br. iii. 303; Tatar.; P.S.; St.; B.E.R.; Kayu manis (Malay).

The Cassia bark tree grows in Honan, Kwangsi and Kwangtung, the southern provinces of China. 'Vast quantities both of Cassia seeds and Cassia lignea are annually brought from Kwangsi (whose principal city derives its name from the forests of Cassia around it) to Canton and then shipped off at about 24 dollars a picul to England.' (Reeves. *Chinese Mat. Med.*, 1828).

The bark is darker and thicker than Ceylon cinnamon. The thin bark, curved or rolled in tubes, is considered best for medicinal purposes. There are two other kinds: one in flat and thick slices, and the other only partly rolled and slightly curved inwards.

Bretschneider classifies the Cassia products, exported from Canton, as follows: (1) Kuei p'i, the Cassia bark, just noticed. (2) Kuei chih, cassia twigs, (3) Kuei chih p'i, bark of twigs, (4) Kuei tsz, cassia buds or immature fruits.

(90 and 91) 木圭支 : Kuei chih: Kwai chi (Cantonese and local name).

桂支尖 : Kuei chih chien: Kwai chi tsim (Cantonese and local name).

These are names for the broken twigs and branches of the Cassia tree. Br. iii. 303; C.R.; Hosie. Porter Smith observes that samples in the Hankow drug market were small twigs and branches cut transversely having very little flavour. On the other hand it is reported that the twigs and ends of the branches are exported from Szechwan for distillation of the oil. The Malayan samples, from Kwangsi, are of two kinds: small twigs about an inch in length, and short pieces of the same in transverse slices. They have a faint odour of cassia.

(92) 桂木 : Kuei (cassia) mu (wood): local name 'Kwai muk'. Br. iii. 303; Stuart. This sample is composed of transverse woody slices of the branches or small stems of the tree, about 1 in. in diameter, and having a faint odour and taste of cinnamon or cassia.

(93) 桂尾 : Kuei (cassia) wei (tails): Kwai mei (Cant.): local name 'Kwai bee'. This drug is composed of thin longitudinal slices of a light brown root, about 1 cm. in breadth and from 5 to 7 cm. long. It has no odour or taste.

94. *Citrus Aurantium*, Linn. Rutaceae.

庸橘皮 : Kuang (Canton) chü (orange) p'i (peel). Local name 'Kor phee'.

This is probably the Ch'eng or Coolie orange and Kuang chü

or Canton orange of Stuart. Keuh pih, Hanb. Sci. pa. 239; Tsing koei pi, green mandarin orange of Annam, J.R.

The Malay sample came from Canton and consists of two kinds of peel. The first is the skin of one whole orange cut into three pieces and dried. The other is a sample of similar orange rind, cut up into reddish brown filamentous threads. Both drugs are fragrant and bitter.

95 and 96. **C. Aurantium**, Linn. var. (*C. sinensis*, Osbeck.).

A variety of tight skinned sweet orange from Kwangtung. This appears to be the origin of two more drugs of the citron family: 橘紅: Chü (orange) hung (red): Kat hung (Cant.): locally called 'Kit hoong'; P.S.; C.R. Alpha. 228 from Fukien. Two grades of peel are included under this name. One in thick slices, externally dark brown, covered with a yellow bloom consisting of short hairs, and inner surface dirty white. The other is also thick, but not hairy on the outside; the pieces of peel, about 2 in. long and 1 in. broad, are cut like the fingers of a hand. They are also sold in the form of 6-rayed stars. The hairy skin is sold at a high price in South China. Under the name of Hua chou chü hung this drug is mentioned in the Pen ts'ao.

The flowers are called 橘紅花 Chü (orange) hung (red) hua (flowers), local name 'Kat hong fah'. The dried flowers pass through the Customs (Alpha. 229), and come from Fukien and Chekiang. They are broken fragments of orange flowers of a light brown colour with a bitterish taste.

97. **Citrus grandis**, Osbeck (*C. Aurantium*, Linn., var. *decumana*, Linn.; *C. decumana*, Risso). Rutaceae.

柚核: Yu (pumelo) ho (kernel): local name 'Yam vat'.

Yu or Hui is a fruit of the Citrus family which has been known from the days of the Great Yü, who mentions it in his tribute roll. Hu kan, 'jug orange', is another name for the fruit because of its occasional shape. Besides the seeds represented in this collection, the peel (Yu p'i) and flowers (Yu hua, C.R. Alpha. 1540) are used in medicine. References to the fruit as a medicine occur in Br. ii. 487, iii. 281; P.S.; Tatar.; Debeaux; S. & T.; J.R.; St.; B.E.R.

These large fragrant fruits with thick skins are collected from trees growing in Central and South China. Amoy is famous for its pumelos.

The outer part of the rind is bitter and aromatic and makes an excellent cordial, also employed by the Chinese in dyspepsia and cough. The seeds or pips have similar properties, and are sometimes given in lumbago.

98. **Citrus japonica**, Thunb. (*C. madurensis*, Lour.; *C. microcarpa*, Bunge). Rutaceae.

金桔: Chin (golden) chieh (small orange): Kam kat (Cant.): local name 'Kim kat'; Pen ts'ao, name. **金橘** Chin chü; Tatar.; S. & T.; P.S.; Br. iii. 281; C.R. Alpha. 150; Hosie; St.; B.E.R.; other names given by Stuart: Chin tou, 'golden bean'; Hsia chü, 'summer orange'; Shan chü, 'wild or hill orange'; Chi k'o ch'eng, 'give quest orange'. It is probably the Tsing pe of Hanbury (Sci. pa. 239) who calls them 'small, immature fruits'. Ph. Soc. Mus.

This is the Cumquat or Kumquat of Tonkin, Annam, and Canton. It is a small round fruit of the size of a cherry, with an agreeable odour and acid pulp. The fruits are used in medicine, and, preserved in syrup, they are highly esteemed for dessert.

99. **Citrus medica**, Risso. var. **sarcodactylis**, Swingle (*C. medica*, var. *digitata*, Lour.). Rutaceae.

佛手: Fu (Buddha) shou (hand): Fat shau (Cant.): local name 'Foot sow'. This is 'Buddha's Hand' or 'Fingered Citron', one of the many varieties of *C. medica*. The fruit is formed by the natural separation of its constituent carpels into a form somewhat resembling a hand with the fingers laid closely together longitudinally. The Jews carried the citron in the left hand at the Feast of Tabernacles as a sacrifice of a sweet smell, and possibly the Chinese name of this denotes some similar practice connected with the worship of Buddha. Two drugs are afforded by this fruit; the dried slices and the flowers.

(100) **佛手片**: Fu shou p'ien. The dried slices, Fu shou p'ien, pass through the Customs (Alpha. 325), and are referred to by Smith, Hosie, and Stuart. The slices are thin and shrivelled, a greenish-yellow cuticle fringing the white crumpled, inert, cellular tissue, which forms the greater part of the drug. It is used as a tonic, stomachic, and stimulant.

(101) **佛首花**: Fu shou hua. The flowers, are about 13 mm. long, showing the persistent calyx, oblong ovary, style, and capitate stigma. They are in broken fragments, of a dull yellowish colour, with a bitter taste, but devoid of aroma. Sample in Ph. Soc. Mus.

102. **Citrus nobilis**, Lour. (*C. nobilis*. var. *deliciosa*, Swingle). Rutaceae.

柑核: Kan (orange) ho (kernel): local name 'Kam vat'. Kan is the Tangerine or Mandarin Orange, or loose skinned type of orange from Wenchow in the province of Chekiang. It is the fruit peculiar to Central China. Kan ho is

the name of the pips of the mandarin orange passing through the Customs and exported from Ningpo, Hokkien, and Canton. The seeds are bitter. They are first torrefied in order to remove the husks, and are taken as a stimulating remedy.

103. **Citrus sp. (?)**

Rutaceae.

胡株柑: Hu (foreign) ch'iu kan (orange): local name 'Woo chew kan'.

From the name of this drug it appears to belong to an orange tree. It is a sliced root of more than an inch in diameter, with prominent medullary rays and a thick, corky bark.

In the above nomenclature and arrangement of the oranges of China, the article on 'Citrus' by W. T. Swingle (*Plantae Wilsonianae* ii. 141) has been followed. The names are somewhat bewildering, but the explanation is due to the fact that the orange is known by four different names: Ch'eng, Chieh, Chü, and Kan, and some of the preparations made from them do not contain any of these four names.

104 and 105. **Clausena Wampi**, Oliver (*C. punctata*, R. & W., *Cookia punctata*, Sonn.).

Rutaceae.

黄皮核: Huang (yellow) p'i (bark) ho: **黄皮根**: Huang p'i kan: local name 'Wong phee'. Two drugs are supplied from this source; the seeds Huang p'i ho (C.R. Alpha. 519); root, Huang p'i kan (C.R. Alpha. 520). Tonkin name, Hong bi.

The tree is a native of South China and Tonkin, and is cultivated in India and the Indian Archipelago. It is sparingly grown around Luchow in the neighbourhood of the Yangtze river (Wilson). It yields the delicate 'yellow skinned' fruit, like a small lime, with large seeds and flavour of an orange. The seeds are of the shape of small almonds 10-12 mm. long by 6-8 mm. broad, whitish, with a thin brownish skin near the base.

The woody root is sold in slices and shavings with no perceptible odour or taste.

The fruit of the Wampi is much esteemed and is made into a delicious preserve. In Tonkin the dried fruit with the seeds is given in bronchitis (Crevost and Lemarié).

106. **Clematis chinensis**, Retz., and other species.

Ranunculaceae.

靈仙: Ling (spirit) hsien (fairy): Ling sin (Cant.): also local name. Wei ling hsien. C.R. Alpha. 1443; Lour., Hosie, *Szechuan Drugs*; A. Henry, *Chinese Plants*; St.; B.E.R.; Sample from Singapore in Ph. Soc. Mus.

This clematis is distributed in Northern, Southern, and Eastern China, and has been recorded as the origin of the above named drug, but Dr. Henry doubts the identification. Botanical

specimens of the plant supplying this drug should be examined. The root and leaves are exported from Kwangtung, Chekiang, and Fukien. The Malay drug is a knotted rootstock, with long, simple, wiry rootlets, blackish brown in colour, without taste or odour. The action is antimalarial, diuretic, and antirheumatic.

107. **Cnicus japonicus**, Max.: (*Cirsium japonicum*, DC.).
Compositae.

大小勳: Ta (large) hsiao (small) kiai (plant): called locally 'Ta sew kai'. Ta ki (big thistle), siao ki (little thistle), Br. iii. 83; Ta chi (*C. spicatus*, Max.); Hsiao chi (*C. japonicus*) B.E.R.; Tatar.; P.S.; J.R.; St.; Henry; Ph. Soc. Mus.

Thistles are frequent in China where the roots are usually official medicines. Soubeiran observed that species of *Cnicus*, (*Cirsium*), *Carduus*, and *Centaurea*, all belonging to the Cynaraceous branch of the Compositae, are known as Ki or Chi. Many are named after animals as Hu chi (tiger thistle), Ma chi (horse thistle), and the small one, Mao (cat) chi. The plants have a bitter taste, and the stem and leaves are nourishing and antiscorbutic. The root is used as a drug in Annam.

The root from Canton occurs in slices about an inch in diameter, and in smaller tuber-like pieces, whitish and starchy within, with a bitter taste. Preparations of the root are used externally for ulcers and abscesses. Internally it is good for flatulence. Stuart says the use of the tuberous root promotes the plumpness of the body.

108. **Cnidium Monnieri**, Cusson: (*Selinum Monnieri*, Linn.:
S. japonicum, Miq.). Umbelliferae.

蛇床子 She (serpent) ch'uang (bed) tzü (seed): local name 'Siah chong tee'. She ch'uang, she su (serpent's millet), she mi (serpent's rice), Br. ii. 157; iii. 49; Hanb. Sci. pa. 233; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 1114; A.H.; Hosie; St.; B.E.R.; Ph. Soc. Mus.

This fragrant umbelliferous plant is common all over China, and locally in Europe. The fruits are exported as a drug from Canton and Amoy.

The fruits are of the size of rice grains, ovoid, yellowish and hairy; mericarps with prominent equal ribs, one vitta between each; commissure bivittate. Warm taste with very little odour.

The drug is supposed to act upon the kidneys and to be aphrodisiac, antirheumatic, and vulnerary. In the form of a decoction the fruits are used as a remedy for itch and leprosy.

109. **Cocculus trilobus**, DC.: (*C. Thunbergii*, DC.).

Menispermaceae.

防杞: Fang (protector) chi (self): Fong kei, Cantonese and local name. Fang ki, Br. iii. 183; Pen ts'ao; Tatar.; P.S. under

Convolvulus; A.H.; C.R. Alpha. 291; Mu (ligneous) fang ki; T. & M.; St.; B.E.R.; Ph. Soc. Mus.

This plant with a twining stem grows in Central, Eastern, and Southern China and in Japan. The root is exported from Canton and Hankow; the Malayan sample came from Kwangsi. The name Fang ki is applied to other menispermaceous plants. Han fang ki is obtained from *Menispermum dauricum*, DC., of Japan. In Hupeh Dr. Henry has noticed that *C. trilobus* is known by other Chinese names: Ch'ing t'eng is one of them. The root occurs in thin transverse slices with an oval outline, about 1 in. in diameter, yellowish in colour, and exhibiting black medullary rays like spokes of a wheel. The taste is bitter. The drug is given for rheumatism, also for diseases of a graver character as cholera and pulmonary haemorrhage.

110. **Coix lachryma**, Linn.

Gramineae.

土 蕪 米 : T'u (earth) i (coix) mi (rice): local name 'Yee mai'. I i jen, kiai li, Br. iii. 228; Lour.; Tatar.; P.S.; C.R. Alpha. 547; St.; B.E.R.; Ph. Soc. Mus.

The plants yielding Job's tears are much cultivated in Mid China. There are many varieties of the fruits; sometimes the seeds are enclosed in hard, globular or pear-shaped, lustrous capsules, called beads and pearls, which are made into necklaces and rosaries. The soft shelled fruits contain white edible kernels, resembling 'Pearl Barley' and are often called by that name. These are exported from Ningpo, Chefoo, Shanghai, and Hankow.

The kernels deprived of their shells, are used as a food and medicine throughout China, India, Malaya, and the Philippines. They make an excellent nourishing diet-drink for invalids, and have diuretic and cathartic properties. They are also employed for lung and chest complaints.

(111) 沙 蕪 米 : Chao (Roast) i (coix) mi (grain): Ch'au yee mai (Cant.): local name 'Chow yee mee'.

These grains resemble 'popped rice', but they are actually puffed Job's tears, or the grain expanded by heat.

112. **Commiphora sp.**

Burseraceae.

没 藥 : Mo yao: Mut yeuk (Cant.): local name 'Mook yeok' P.S.; C.R. Alpha. 879; T. & M.; St.; B.E.R..

The drug received under this name, the Chinese name for myrrh, and as a 'resin from India', is not true myrrh. It consists of a dark-coloured insoluble gum, which swells in water, and has none of the bitterness and fragrance of the true drug. Porter Smith reported that his specimen of Muh yoh was a worthless foreign drug sold as a substitute. Holmes has also observed that Indian bdelliums are occasionally found mixed

with myrrh. Stuart, under *Balsamodendron*, describes a substance called Chia mu yao, East Indian *Bdellium* imported into China from India to adulterate the drug. Most writers on Chinese drugs speak of imported myrrh as being a very inferior article. Samples in the north still smell of genuine myrrh.

113. *Coptis anemonifolia*, Sieb. and Zucc. Ranunculaceae.

鳳尾蓮 : Feng (Phoenix) wei (tail) lien : local name 'Foong mee lin'. A Japanese drug called Kikuba oren, sometimes sold under the Chinese name Huang lien. The plant is figured in Journ. As. Soc. Bengal, 1909. p. 76, 'On *Coptis*', by Mr. I. H. Burkill. Feng wei lien appears as a drug in the Customs (C.R. Alpha. 315).

The rhizome is as thick as a goose-quill and covered with fibrous and wiry rootlets. It is not so knotted or divided as in the other species; it often branches at the crown into two or three heads which terminate in tufts of leaf stalks, crowded together like a brush. The inner part of the root is bright yellow, and the taste is very bitter. It is as highly esteemed as a medicine and used in ways like the root of *Coptis Teeta*.

114 and 115. *Coptis Teeta*, Wall., var. **chinensis**, Franch.
(*C. chinensis*, Franch.) Ranunculaceae.

川蓮 : Ch'uan (Szechwan) lien : local or Cantonese name 'Choon lin'.

正黃蓮 : Chen (genuine) huang (yellow) lien : local or Cantonese name 'Chin van lin'. Huang (yellow) lien, chi lien, Br. iii. 26; Pen ts'ao; Cleyer, 1682; Bergius, 1778; Tatarinov, under *Leontice*; Hobson under *Gentiana*; P.S. under *Justicia*. Henry in '*Chinese Plants*', 137, enumerates Shui lien, mu lien, and chi chao lien as names for *Coptis* root, the different names refer to different qualities and places of origin. Stuart and Read describe the drug.

As will be seen by the references, *Coptis* root is a very ancient medicine of the Chinese. It is one of the six great yellow drugs often quoted together—*Rehmannia*, *Phellodendron*, *Scutellaria*, *Astragalus*, *Coptis*, and sometimes rhubarb (see the T'u thu chi ch'eng). There is little doubt that it is the Mamiran of Paulus Ægineta, known to the early Indian traders. Bernier, who visited Kashmir in the train of the Emperor Aurangzebe, mentions Mamiran as a medicine very good for the eyes, which was brought into that country by caravans from Tibet. The botanical origin of the drug was first described by Wallich in 1836. A very full account of the drug and its botanical sources is published in a paper 'On *Coptis*' by Mr. I. H. Burkill in the Journ. As. Soc. Bengal. N.S.V. (1909), pp. 73-88.

The plant is cultivated in plantations on the outskirts of virgin forests in the mountains of Western China. The ground is roofed by shed-like structures, over which are spread branches and leaves of trees so as to shelter the growing plants from the sun. The Japanese cultivate a different species of *Coptis* (see *C. anemonifolia*). Huang lien is sent to India by way of Singapore, and the plantations of Western China supply China, India, and Burma with this drug (Henry).

Bretschneider mentions Szechwan, Hupeh, Shensi, and Hunan as the places of production, and Hankow as the exporting centre (C.R. Alpha. 516). E. H. Wilson remarks that in Hupeh plantations of Huang lien are a profitable investment. The drug sells at Chengtu at 4 taels 5 m. per catty (Hosie).

The kind from Szechwan which is most esteemed is a yellowish rhizome as thick as a crow-quill or larger, having a few spinous projections where rootlets have been broken off; the whole rhizome is pointed or knotted, but at the upper end the points are much more marked and knuckle-shaped, and a stem-clasping petiole remains attached to each. The interior is hard, the cortical portion dark, the central part is pierced by a pith of deeper shade. The taste is intensely bitter and aromatic.

The roots contain the alkaloid berberine, and are used as a collyrium. The drug is an all round tonic and stomachic medicine, and is regarded as a panacea for many ills. It was formerly official in the United States Pharmacopoeia.

116. *Corchorus capsularis*, Linn.

Tiliaceae.

充蔚子: Ch'ung wei tzu: Ch'ung wai tsz (Cant.): local name 'Choong wai chee'.

This is the name for the seeds of *Leonurus sibiricus*, L. The cultivation of the jute (*Corchorus spp.*) for its textile fibre is one of the staple industries in N.E. India. The plants are also cultivated in South China and other parts of tropical Asia. Jute has been identified by the Japanese as Huang ma, and it is mentioned by Bretschneider (ii. 388) as one of the hemp plants of the Chinese. Dr. Stuart remarks that it may be regarded as the Ta ma (great hemp) of the Pen ts'ao, but he does not speak of any part of the plant being used in medicine. But the term Ta ma is often used for hemp (*Cannabis*) and sometimes for the castor oil plant. Two samples of the seeds come from Malaya as a recognized drug; they are small, greyish, angular, and bitter. No directions are given as to their properties or method of administration. Kobert, in 1906, separated a toxic glucoside from several species of corchorus, but not from *C. capsularis*. It is probable that the seeds have been introduced into Chinese medicine as a substitute for the seeds of *Leonurus* (C.R. Alpha. 283) which are considered to be constructive and aphrodisiac.

117. *Cordyceps sinensis*, Berk. Fungi-Hypocreaceae.

夏草冬虫 : Tung (winter) ch'ung (insect) hsia (summer) ts'ao (herb): local name 'Toong choon choo'. This name is also given by Reaumer, Du Halde, Tatarinov, Thunberg, Reeves, P. Smith, Westwood, Stuart, and Read. Specimens in Ph. Soc. Mus.

This curious combination of animal and vegetable, called 'Caterpillar Fungus', was mentioned by Reaumer in 1726, and by Du Halde in his *History of China* in 1736. After many surmises as to its nature, Berkeley gave it a name and described and figured the fungus in Hooker's *Journal of Botany*, 1843 (pp. 207-8). See also *Vegetable Wasps and Plant Worms*, by M. C. Cooke, 1892.

Each individual is about three inches long. Half is a caterpillar of cylindrical form, of a light brown colour. Head, neck, and segments of the body and legs are distinctly recognizable. Projecting from the back part of the neck is a slender club-shaped body, black, and measuring $1\frac{1}{2}$ to 2 in. long; this is the fungus. They are sold in bundles bound by a red silk thread; each bundle contains a dozen parasites and weighs about a quarter of an ounce.

The fungus is abundant in the south of Tibet, Szechwan, Hupeh, and Honan. Wilson in his travels observed that the Chung ts'ao fungus occurs at 12,000-15,000 ft. altitude. Nearly all that was used about forty years ago came from Kiating fou in Szechwan, Hosie, in a later report, states that it is still found in considerable quantity in the Litang District.

The drug is classified with a number of rare medicines called 'Lang tan ho', and is held in high esteem throughout the Chinese Empire. It is one of the most costly drugs in the country; it is sold for its own weight, and sometimes four times its weight, in silver. Hosie says the wholesale price at Litang is Ts 5 to 6 a catty. The annual export to Tachienlu is about 2,400 catties valued at 4,000 taels (1905).

The drug is regarded as extremely strengthening, and rivals ginseng in this respect. In Annam and Malaya it is given for its tonic and aphrodisiac properties. It is also said to be efficacious in jaundice, phthisis, and a number of other diseases. This fungus is said to enjoy in China the same reputation that truffles do in Europe.

118. *Coriandrum sativum*, Linn. Umbelliferae.

胡 荽 : Hu sui, St.; B.E.R.; Yüan sui, C.R. Alpha. 1565; Ketubah (Malay).

Coriander fruits. These well-known fruits are used as a spice and flavouring agent in medicine throughout the East. They have carminative and corrective properties.

119. *Cornus officinalis*, Sieb. and Zucc. Cornaceae.

山茶黃: Shan (mountain) chu yü: local name 'San yee yook'. Br. ii. 498; iii. 339; Tatar.; P.S.; C.R. Alpha. 1094; Henry; St.; B.E.R.

The Cornelian Cherry is a large tree growing in the mountainous parts of China and in Japan. It has prickles, white flowers and red edible fruits like the jujube (*Zizyphus*). In Chekiang the tree is cultivated for its fruit, from which a medicinal paste is made. The pulp of the fruit, which is a drupe, is sour, the stone is oblong, whitish, 10–13 mm. long and 4–5 mm. in diameter. The hard thick shell contains round oil cavities which distinguish it from the nut of the jujube fruit, which is solid. Shu suan tsaο (sour jujube from Szechwan) is one of the names of the drug. The pulp of the fruit is exported from Ningpo. Various medical qualities are ascribed to the drug, among which are diuretic, astringent, tonic, anthelmintic, and antilithic.

120. *Corydalis ambigua*, Cham. and Schlecht. Papaveraceae.

元湖: Yüan hu: local name 'Goon woo'. Official name **延胡索** Yen hu so. Hanb. Sci. pa. 256; Pen ts'ao; P.S.; T. & M.; St.; B.E.R.; Yüan hu p'ien, sliced tubers, C.R. Alpha. 1529; Ph. Soc. Mus.

The plant occurs in Siberia, Amur, and Kiangsu, where the roots are collected for medicine.

The drug consists of fine slices of a tuber of a yellowish or brownish-yellow colour. The taste is bitter and beanlike. The tubers themselves are small, hard, brown, spherical, or somewhat flattened in form, half an inch in diameter. Externally they are covered with a thin, wrinkled cuticle; when broken, they exhibit a bright yellow, semi-transparent, waxy appearance. They contain the alkaloids, corydaline, protopine, dehydrocorydaline, berberine, and other alkaloids (see Chou T.Q. *Chinese J. Physiology*, 1928–9, and Japanese work in *Journ. Pharm. Soc. of Japan*). Tonic, diuretic, and alterative properties are attributed to this drug.

121. *Crataegus pinnatifida*, Bunge. Rosaceae.

山 檣: Shan (mountain) cha (hawthorn): local name 'San chai'. Shan li hung, Br. ii. 244; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 1082; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus.

This small, thorny tree with red fruits occurs in Manchuria, Northern, Central, and Western China. The small fruits or haws attain the dimensions of crab apples and are frequently, but erroneously, so called. In commerce the fruits are sold whole in a dried state, or in circular slices showing the seeds, pulp, and

rind. They are valued at T. 1.5 a picul. The taste is extremely acid and astringent. Dried and powdered, the drug is administered as a peptic, stomachic, and antiscorbutic. In Peking the fruits are collected in the mountains and made into an excellent sweetmeat.

122. *Croton Tiglium*, Lam.

Euphorbiaceae.

巴豆子 : Pa (Szechwan) tou (bean) tzü (seed): local name 'Pai tow chee'. Pa tou, Br. iii. 331; Hanb. Sci. pa. 230; Pen ts'ao; Cleyer; P.S.; T. & M.; St.; B.E.R.; C.R. Alpha. 79, 933; Lour.; Bidendjireh khatai, Persian name, meaning, 'Ricinus or castor oil seed from China'.

As the Chinese name indicates, *Croton* seeds are gathered principally in Szechwan. They are exported from Hankow and Canton. The tree is probably indigenous to China; it grows in Cochin China, and is cultivated in many parts of the East from Mauritius to the Indian Archipelago.

On account of their drastic purgative properties the seeds and oil are regarded by the Chinese as extremely poisonous. This is one of the five poisons having violent purgative properties; the others are Lang tu (wolfsbane): *Veratrum* root; *Aconite* root; and *Cantharides*. Chiang (strong) tzü (seed) is the name given by druggists for Pa tou, as, being poisonous, they are forbidden to be sold under their official name (Dr. Henry). The bark is used as a tonic in Annam.

123. *Cucumis Melo*, Linn.

Cucurbitaceae.

田瓜丁 : T'ien (field) kua (melon) ti (stalk): local name 'T'ien kwa tee'. T'ien or kan kua, Br. ii. 382; iii. 292; P.S.; Kwa ti, peduncles, T. & M.; C.R. Alpha. 1293; Hosie; St.; B.E.R.; Ph. Soc. Mus.; Mukuwauri (Japan). The characters for t'ien (field) and t'ien (sweet) are both employed for this drug.

Bretschneider explains that by 'ti' the footstalk of a flower or fruit is meant, and that the drug Kua ti or stalks of certain gourds and melons is noticed in the Pen ts'ao and other medical works. This peculiar drug is collected in Honan, and is imported into Chefoo and Fuchow from Canton. It is also used in Japan. The Malayan sample came from Tientsin.

The peduncles are a little more than an inch long, of a light brown colour, contorted and tapering to a fine point, and very bitter to the taste.

Stuart says the drug is vaunted as a remedy out of all proportion to its importance. General anasarca and indigestion are said to yield to its use. Other doctors refer to its cooling and demulcent properties.

124. *Cunninghamia sinensis*, R.Br. Coniferae.

杉葉 : Shan yeh: local name 'San yin'. Br. ii. 228; iii. 302; P.S.; Henry; B.E.R.; St.; Ph. Soc. Mus.

Shan or Sha is the name of large conifers and is usually applied to the above tree. Read refers the name to the Japanese Cedar (*Cryptomeria japonica*, D. Don.). *C. sinensis* is a common and valuable tree of Middle, Southern, and Western China and of Japan. It is a handsome tree which yields an excellent timber. The wood, bark, seeds, and leaves are medicinal. The specimen from the drug shop in Malaya consists of thick shavings of the white, woody stem. The drug is employed as a stimulant, tonic, and sedative.

125. *Curcuma longa*, Linn. Zingiberaceae.

黃薑 : Huang (yellow) chiang (ginger): Wong keung (Cant.): local name 'Wong keong'. Huang chang C.R. Alpha. 75, 511; Br. ii. 408; Pen ts'ao; Tatar.; Debeaux; P.S.; St.; B.E.R.

Turmeric is indigenous to Southern Asia and is extensively cultivated in Kwangtung and Szechwan. Yü lin in Kwangsi is said to derive its name from the plant.

The drug from Malaya is a subcylindrical rhizome, attenuated towards the ends with one or more knobs or shoots growing from the sides. It has a hard and firm consistence, exhibiting when broken a dull waxy or resinous section of an orange colour with a peculiar aromatic odour and taste. Sometimes in the South a sliced form of the tuber is sold. On account of its yellow colour the Chinese regard turmeric as an auspicious article in religious observances, and it is used in preparing the sacrificial wine called 'Chang'. For this reason it is used more as a dye than as a condiment. It is, however, kept in all drug shops, and is used externally for cutaneous affections and internally against colic, amenorrhoea, and congestions.

126. *Curcuma longa*, Linn., var. *macrophylla*, Miq. Zingiberaceae.

乙金 : Yüe (fragrant plant) chin (gold): Yuet kam (Cant.): local name 'Wat kam'. Yü kin, Br. ii. 408; Pen ts'ao; Cleyer; Tatar.; Hanb. Sci. pa. 254, Fig. 11; P.S.; C.R. Alpha. 1548; Mat. 106; St.; B.E.R.; Ph. Soc. Mus., drug from Singapore, labelled *C. aurea*.

The plant producing this turmeric is a native of Southern and South-Western China, and is extensively cultivated.

The tubers are ovate, about one inch long, covered with a brownish-grey cuticle, breaking with a shining, horny fracture, of an orange yellow colour, with an inner and outer portion. The aroma and taste are similar to those of turmeric. The drug from Singapore is in thin circular transverse slices about 2 cm.

in diameter, of a pale yellow colour, showing a brown ring half-way between the centre and circumference. It is sold at from T. 6 to 8 a picul. These tubers are used as a dye, especially for cottons, and give the auspicious yellow colour to the garments of priests. They are also employed as a condiment, and in medicine they are said to purify the blood and assist in affections of the heart and lungs.

127. **Cuscuta sp.**

Convolvulaceae.

葇花 : T'u (hare) hua (flower): called locally 'Tow fah'. T'u sz' tsz' (hare's silk seeds), Br. iii. 163; Hanb. Sci. pa. 240; Pen ts'ao; Cleyer; Tatar.; P.S.; J.R.; C.R. Alpha. 1382; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The dodders are found everywhere in China, and all parts of the plants are used in medicine. Hanbury says the plant was formerly official in Europe as a purgative under the name of *Herba Cuscutae Majoris*. In China the small round seeds like black mustard, are chiefly sold in the shops and they do not differ very markedly from those of *C. europaea*. The Chinese species are *C. chinensis*, Lam., and *C. japonica*, Chois. The Malayan drug consists of the dried flowers with the filamentous stems. The young shoots are made into lotions for sore heads and inflamed eyes. The seeds are said to be tonic, diaphoretic and demulcent.

128. **Cycas sp. (?)**

Cycadaceae.

流行 : Liu hsing: local name 'Low hung'.

This drug, said to come from Szechwan, consists apparently of dried sections of a fruit of a greyish-brown colour not unlike the carpophylls of a *Cycas*. The Chinese name, however, does not represent a *Cycas*. It is suggested that the name is a contraction of Wang pu liu hsing, an article in the Customs (Alpha. 1440) identified as *Saponaria Vaccaria*, Linn., but this affords no clue to the origin of the above drug.

129. **Cyclophorus porosus**, Presl: (*Polypodium fissum*, Baker).

Filices: Polypodiaceae.

石韋 Shih (rock) wei (thong): local name 'Siek wai'. Shih p'i (rock leather) Br. iii. 203; Hanb. Sci. pa. 266, under *Niphobolus lingua*, Spr. (*P. lingua*, Sw.), an allied species to the above; Pen ts'ao; Tatar.; C.R. Alpha. 1161; P.S.; St.; B.E.R.; Ph. Soc. Mus.

This fern grows in Shensi, Shansi, Hupeh, and other provinces, and the dried fronds of this and perhaps other species of fern are exported from Ningpo and Canton, often mixed with moss and reeds. It is common on stone walls and by the sides of wells. The fronds are tongue-shaped, about one foot long by one inch broad, leathery, and hairy.

The fronds, either sterile or fertile, are pectoral, diuretic, and astringent. They are useful in urinary calculus and rheumatism. In Malaya they are considered a remedy for gonorrhoea.

130. **Cynanchum japonicum**, Hemsl. var. **purpurascens**, Max.: (*Vincetoxicum purpurascens*, M. & D.).

Asclepiadaceae.

白前: Pai (white) ch'ien: Pak ts'in (Cant.): local name 'Paik cheen'. Pai ts'ien; Sou yao (cough medicine) Br. iii. 45; C.R. Alpha. 939; St.; B.E.R.; J.R. under *Asclepias vincetoxicum*. Sample from Singapore in Ph. Soc. Mus.

The plant grows in Central China, to a height of a foot or more. According to Bretschneider the root is exported from Canton. The Malayan sample is labelled 'From Szechwan'.

The drug consists of small knotted rootstocks from which arise thin, brown, wiry, brittle rootlets. The rootlets have a light brown exterior, the fracture is starchy and white, with a central brown cord showing porous vessels. The drug has no marked odour or taste.

The root has a reputation for assisting bronchial and lung troubles; it is used locally, in the Malay States, for liver complaints.

131. **Cyperus rotundus**, Linn.: (*C. odoratus*, Osbeck).

Cyperaceae.

香付: Hsiang (fragrant) fu: local name 'Heong foo'. So (knot) ts'ao, Br. iii. 59; C.R. Alpha. 412; Pen ts'ao; Lour.; Tatar.; Debeaux; P.S.; Henry; Hosie; J.R.; St.; B.E.R.

This sedge grows very plentifully in moist or boggy ground throughout China. The small, dark, hairy tubercles are ovate, oblong, pointed at both ends, about an inch or less in length, the skin is purplish-black and the flesh is whitish, turning light brown, hard, and horny. The odour is similar to that of turmeric. They are exported from Canton and Ningpo.

The small tubers are used in medicine and as a perfume. They are said to act on the lungs and liver. Their general action is tonic, stimulating, and stomachic.

This sedge probably supplies the Arabian and Indian drug named 'Suad'. This is a sweet smelling rhizome, round, black, and hard like a knot, which is an ingredient in medicines and perfumes.

132. **Cyperus sp.**

Cyperaceae.

三菱: San (three, triangular) ling (water plant): Cantonese and local name 'San ling'. Br. ii. 97; iii. 59; Ching san ling, C.R. Alpha. 1062; J.R.; S. & T.; P.S.; St.; B.E.R. San ling is a general name for several cyperaceous plants (Bret.); Ph. Soc. Mus. under *Alisma flava*.

The identification of this drug has not been definitely settled. Tatarinov concluded that it was derived from several species of *Cyperus* and *Scirpus*. Porter Smith and Stuart refer it to *C. rotundus*, the Customs Report to *C. Iria*, and Read to *Scirpus maritimus*. Bretschneider states that the plant yielding the drug is met with in Honan, Hupeh, Szechwan, and Shensi, and that the roots are exported from Hankow, Ching kiang and Ningpo. The Malayan drug came from China.

The tuberous roots are top-shaped, pointed at one end, and have apparently been cut and trimmed to separate the running roots. The Chinese name indicates the triangular shape which the tubers sometimes exhibit. Internally they are hard, yellowish, and woody, with a slight aroma. The Malayan sample is in round transverse slices about one inch in diameter: the exterior is black and the inside pinkish-brown in colour and horny in consistence. Under the microscope starchy parenchyma predominates without distinct starch granules. In China and Annam the drug is in great request as a tonic, stimulant, and excitant.

133. *Dalbergia* sp.

Leguminosae.

降香: Chiang (to descend) hsiang (fragrant): Kong heung (Cant.): local name 'Kong heong'. Chiang chen hsiang, B.E.R.; P.S. Chinese imports; C.R. Alpha. 48. Kayu laka (Java and Lampongs); Laka wood of Sumatra, Java, Borneo, and Celebes.

The origin of the wood is referred to *D. parviflora*, Roxb., by Brandis (*Indian Trees*, p. 239). According to F. W. van Eeden (*Houtsoorten van Nederlandsch Oost-Indie*, Haarlem, 1886) the source of Kayu laka is given as *D. Zollingeriana*, Miq., but in the edition of 1906 it is called *D. sp.*, as the former species was found to be a climber and supposed not to be a suitable source of a commercial wood.

'The roots (of this plant) found throughout Malaya, are collected in Pahang for export, because they can be burned to produce incense used in Chinese ceremonies. It is said a great deal of this product is used in making joss sticks. It can also be used to furnish a dye stuff. It is collected throughout the Netherlands Indies, Borneo, and the Philippines. The amount exported from Singapore in 1920 was 2,857 piculs valued at \$22,486' (Foxworthy, 1922). Earlier writers have wrongly ascribed the source of this wood to *Tanarius major*.

134. *Daphne Genkwa*, Sieb. & Zucc.

Thymelaeaceae.

元花: Yüan hua: local name 'Yoon fah'. Pai hua (poisonous flower), Tu yü (fish poison); T'ou t'ung hua (headache flower) Br. ii. 465; iii. 156; Tatar.; P.S. under *Passerina*;

T. & M.; Men t'ou hua (plant that stupefies the head) Henry; C.R. Alpha. 1561; St.; B.E.R.; Ph. Soc. Mus.

The plant is a native of Central China. The flowers which are officinal are exported from Chin kiang. Their poisonous nature has been known from very early times; that the flowers are a fish poison is recorded in a Chinese dictionary of the first century.

The small corollas with hairy tubes and reddish limbs have a bitter and acrid taste. They are largely employed in a dry state or in alcoholic tincture as a cordial, tonic, and febrifuge, also in cough mixtures.

The bark is used as a vesicatory. People have been known to rub the skin with the drug to produce inflammatory swellings in order to simulate wounds.

135. *Daphne odora*, Thunb. Thymelaeaceae.

千里香: Ch'ien (1,000) li (mile) hsiang (fragrant): Ts'in li heung (Cant.): locally called 'Chin lee heong'. Henry MS.; Matsumura, Chinese Plants, 112; Jui hsiang, B.E.R.; Shui (Jui) hsiang, St.

This shrub called 'A thousand miles of fragrance', because of the powerful odour of its flowers, grows throughout the southern provinces of China.

The stems and roots, about the thickness of a quill, are light brown in colour and bitterish in taste. They are usually cut into short lengths.

The root and leaves in the form of decoction are used for sore throats, and as a wash for small-pox pustules. The root is regarded as poisonous and should be used with caution.

136. *Datura Metel*, Linn.: (*D. alba*, Nees). Solanaceae.

鬧羊花: Nao (stupefy) yang (sheep) hua (flowers): local name 'Now yang fah'.

Yang (sheep) chi chu (to reel) Br. iii. 155; Hoffman and Schultes; Tatarinov and Horaninow under *Hyoxyamus*; P.S.; Hanb. Sci. pa. 266 under *Rhododendron*; C.R. Alpha. 894; Man t'o lo hua, St.; B.E.R.; Parker, 'Canton Plants'.

The white flowered Thorn Apple is a common plant in China and India. The shrub is frequent on the mountain slopes of mid-China where it reaches a height of 3 or 4 ft. The poisonous properties of the plant, especially its stupefying action on sheep and cattle, is indicated in its vernacular names. These names, however, are given to other plants, as Hanbury refers the drug to a *Rhododendron*, and Dr. Henry confirms the identification and speaks of the reputed danger to cattle that browse on the flowers of *Rhododendrons* and *Azaleas*.

The long white corollas of the Thorn Apple, like other parts

of the plant have dangerous narcotic properties. Their deliriant action in producing laughter and dancing has been noticed. Digested in wine they form a tincture acting as an anaesthetic. A lotion is made from them which reduces eruptions on the face and swellings of the feet.

Dendrobium nobile, Lindl.: and other species.

Orchidaceae.

137. 金釵: Chin (gold) ch'ai (hairpin): local name 'Kim sak fook'. C.R. Alpha. 145.

138. 正金釵: Cheng (genuine) chin ch'ai: local name 'Chen kin cha'.

139. 小叢釵: Hsiao (small) huan (bent) ch'ai (hairpin): Siu waan ch'a (Cant.): local name 'Siew van cha'. Hanb. Sci. pa., but not *Triticum repens*, 262; C.R. Alpha. 508.

140. 石斛: Shih (rock) hu (plant): local name 'Chak hook'. C.R. Alpha. 1148.

141. 馬鞭草: Ma (horse) pien (whip) ts'ao (plant): local or Cantonese name 'Mar phin choo'. A name for *Verbena officinalis*.

The five drugs sent under these various names are portions of stems of species of *Dendrobium*. The number of specimens perhaps represents the popularity of this type of medicine. The above are only a few of the vernacular names given to these plants, and the names are frequently interchanged. The specimens are straight-jointed, solid, cylindrical stems of an epiphyte varying in thickness, mostly swollen between the joints, yellow in colour, often deeply striated and furrowed, and sometimes showing traces of rootlets proceeding from the nodes. The thicker stems are usually cut up into lengths of one to two inches. They are tasteless and odourless. The first named sample agrees in every particular with botanical specimens of *D. nobile*, thus confirming Dr. Henry's identification of the drug from Szechwan. Bretschneider refers Shih hu to *D. moniliforme*, Swartz and *D. ceraia*, Lindl. *D. reptans*, Franch., affords one of the drugs from Japan. These orchids grow among rocks in the central and southern provinces, and under the name of Huang ts'ao or 'Yellow plant', they are actually cultivated in West Hupeh and Szechwan as a medicine (Br. iii. 202). The drugs under various names are exported in a fresh or dried state from Hankow and Canton. Hosie gives the market value of Shih hu at T. 40 a picul, and that of Chin ch'ai and other inferior qualities at T. 10 to 25 a picul. The drug is credited with tonic, stomachic, pectoral, and antiphlogistic properties.

142. *Dianthus superbus*, Linn.

Caryophyllaceae.

罂麥: Chü (great) mai (wheat): locally called 'Kooi mak'. Tatar.; C.R. Alpha. 237; Br. iii. 112; P.S. under *D. Fischeri*, Spreng. (now *D. chinensis*, L.); St.; B.E.R. The vernacular name is given because of the resemblance of the seeds to grains of wheat. Sample in Ph. Soc. Mus.

This is a common flowering herb in China, a foot or more in height, bearing purplish red flowers.

The dried flowering plants, tied up in yellowish bundles, are exported from Hankow and Yunnan. The stems are round, yellowish-brown, with hairy leaves clasping at the base.

The drug is employed as a diuretic and anthelmintic and for clearing the eyesight. In Malaya it is used as a remedy for gonorrhoea.

143. *Dichroa febrifuga*, Lour.

Saxifragaceae.

常山: Ch'ang (constant) shan (mountain): local name 'Seong san'. Classified under *Orixa japonica*, Th., by Stuart and Read; Br. iii. 141; Debeaux; Hosie; C.R.; J.R.; Cay theong son, Cham chan (Cochin China).

This shrub occurs in the Himalayas, Java, Annam, and China, especially in the provinces of Szechwan, Shensi, Hupeh, Chekiang, in hill forests 4,000 to 8,000 ft. high. With regard to the name, Bretschneider says Ch'ang shan is properly the name of a mountain which is also called Hengshan, ch'ang and h'eng having the same meaning (perpetual). It was also the name of a prefecture in Chilhi where the drug is produced. It is exported from Hankow, Canton, and Ningpo.

The drug consists of the stem and leaves. The stem is in reddish-brown, quill-shaped pieces with a distinct pith. The root contains a crystalline glucoside, but no tannin. (*Pharm. Ind.* i. 588).

The febrifugal properties of this drug were first noticed by Loureiro, and it is still considered an excellent remedy for all kinds of fevers.

144. *Dicliptera chinensis*, Nees.

Acanthaceae.

九干菜: Chiu (nine) kan (stem) ts'ai (plant): Kau kon ts'oi (Cant.): local name 'Kow kon choi'. Kou kan ts'ai, C.R. Alpha. 610.

A plant of Hunan, Hong-Kong, and Formosa. The flowering tops constitute the drug. They are recognized by the peculiar persistent bracts, ovate, and connate at the base.

145. *Dictamnus albus*, Linn.: (*D. fraxinella*, Pers.). Rutaceae.

白朮皮: Pai hsien p'i; Pai (white) hsien (strong smell) p'i (bark): Pak sin p'i (Cant.): local name 'Pak sin phée'. Pai

yang (goat) p'í, Br. iii. 35; P.S.; S. & T.; T. & M.; C.R. Alpha. 947; St.; B.E.R.; Ph. Soc. Mus. sample from Singapore.

This is a common plant in Mid China, and is distributed throughout Manchuria, Korea, and Japan. As its name indicates, the plant has a strong smell resembling the odour of goats. The root bark is officinal and is exported from Newchwang, Wu hu, Hankow, and Szechwan.

The root is shaped like a small turnip. The whitish root is sold in oblique slices, showing the wood and soft corky bark. The root-bark also occurs in curved fragments, with a peculiar pungent flavour and bitterish taste. The drug is used in skin diseases. Internally it is given for its tonic, sedative, and anti-pyretic qualities.

146. **Diospyros Kaki**, Linn.

Ebenaceae.

京柿蒂: Ching Shih (Persimmon) ti (peduncles): local name 'Ching see tee'. (Ching, a district comprising Hupeh and the greater part of Hunan.) Br. ii. 491; iii. 279; Tatar.; P.S.; C.R. Alpha. 1159; St.; B.E.R.; Ph. Soc. Mus.

The fruit of this tree, which is common in China and Japan, is the Persimmon or Chinese Fig, a large thick skinned juicy fruit of an orange or yellowish colour and astringent taste. It is called Shih among the fruits eaten by the Chinese in ancient times. The dried fruits (Shih ping) are sold alone, and cakes (Shih shuang) are made of them in Amoy.

The drug sold in Malaya belonging to this plant is made up of the calyces and parts of the peduncles of the fruit. This is a medicine exported from Canton and Amoy. The brown disk-shaped and lobed calyces are about $\frac{3}{4}$ in. in diameter, with portions of the peduncles attached. They are slightly astringent. Stuart remarks that the drug is made into a decoction for obstinate coughs and dyspnoea.

147 and 148. **Diospyros Lotus**, Linn.

Ebenaceae.

沙棗仁: Ch'ao (roasted) tsao (jujube) jen (kernel): Ch'au tso yan (Cant.): local name 'Choo yin'.

沙柿仁: Ch'ao shih jen: Ch'au shi yan (Cant.): local name 'Chow yin'. J.R.; St.; B.E.R.; Wilson; Hei tsao (black jujube) the colloquial name of the tree in Peking, and in the Customs (Alpha. 368); Suan tsao (sour date) (C.R. Alpha. 1205). Tatarinov gives the name Meh tsau rh to this fruit which he says is the *Zizyphus Lotus* or true lotus of the Lotophagi. That it is of recent introduction in China is supported by the absence of any reference of this black date or black jujube to any kind of *Diospyros* in Chinese botanical works, and by the divergent names given to the fruit.

The seeds are imported from Chekiang. They are small,

reddish-brown, flattened or disk-shaped, about 5 mm. in diameter. The testa is frequently cracked and loose through the action of heat.

The fruit is antifebrile and is used to promote the secretions. The seeds are regarded as sedative.

149. **Dolichos Lablab**, Linn.

Leguminosae.

白 菘: Pai (white) tou (bean): local name 'Pai tou'. Pien tou, Br. iii. 233; P.S.; C.R. Alpha. 957; Henry; Hosie; St.; B.E.R.

This bean is in general cultivation. It is called, according to Hosie, Ssu chi tou (four seasons bean) because it can be grown throughout the whole year.

The seeds are black, brown, white, and variegated. The black seeded kind is called ts'io tou (magpie bean), for the seed has a white rib or hilum like that seen on the wing of a magpie. The white seeds are preferred for medicinal use and are exported from Shanghai. The sample from Malaya is light brown with a white hilum, oval in shape, 10 by 13 mm. The ripe seeds are eaten boiled; in medicine they are said to be tonic and to relieve flatulence.

150. **Drosera Burmanni**, Vahl.

Droseraceae.

錦 地 蘿: Chin (brocade) ti (earth) lo: local name 'Kam tee loh'.

Sundews are small herbaceous plants growing in grass-land, and interesting from the fact that the leaves have glandular hairs which close upon flies and insects that rest upon them. The above species is a tiny herb with tufted leaves and peduncles often red and flowers pink; it grows in sandy soil. The drug from Szechwan is the dried plant with the glandular leaves of a reddish-brown colour. This is an article of commerce (C.R. Alpha. 160), but not much is known about its medicinal use. The leaves are said to have blistering properties, and this was confirmed by the writer in the case of fresh leaves of *D. peltata* from the Nilgiri Hills in India. The leaves of some species of sundew contain a crystalline yellow colouring matter; this has been examined by Prof. E. H. Rennie, Australia.

151. **Dryopteris sophoroides**, O. Kuntze: (*Nephrodium sophoroides*, Desv.).

Filices-Polypodiaceae.

鳳 尾 草: Feng (Phoenix) wei (tail) ts'ao (plant): local name 'Foong mee chow'.

Feng wei ts'ao is the name of a fern that passes through the Chinese Customs (Alpha. 317), and is referred to in the Pen ts'ao. It is probable that more than one species of fern is included under this name.

The fern grows wild near Hong-Kong, in Formosa, and as far as Japan. The fronds are slender, substramineous, and pubescent, one to two feet high. The green fronds are used in medicine.

Stuart refers the Phoenix tail fern to the Male fern, *Nephrodium Filix-mas*, and says it is used as an anthelmintic and corrective.

152. **Eclipta alba**, Hassk.

Compositae.

旱蓮草: Han (dry) lien ts'ao (plant): local name 'Hon lin choi'. C.R. Alpha. 359. This is the name of the Hupeh product, P'eng chi ts'ao is the name of the Canton product, Dr. Henry. Lien k'iao (Br. iii. 120), Li ch'ang (B.E.R., St.); the Japanese name. Drug sellers in Singapore supply the plant under the additional names of Eng wai and Muah chi chao; Ph. Soc. Mus.

A common weed in the rainy season. The whole plant is largely used in the East. The plant when crushed exudes a black sticky juice, on account of which it is called Mo ts'ai 'ink vegetable'. The Chinese drug is exported from Canton; the Malayan sample came from Yunnan.

The plant is considered an astringent, and is used for checking haemorrhages and fluxes and strengthening the gums. Ridley remarks that the plant is rubbed on the gums for toothache, acting as a counterirritant. The juice of the pounded herb is universally used for dyeing the hair. It is also employed in tattooing to communicate a blue colour to the punctures.

153. **Edgeworthia Gardneri**, Meissn.

Thymelaeaceae.

蕭銀: Fu or P'u (wasting sickness) yin (silver): Fu ngan (Cant.): local name 'Phoo yin liow'. Pun nion, name used by Chinese in Perak, Ph. Soc. Mus.

E. Gardneri is a shrub about ten feet high, bearing yellow fragrant flowers. It occurs in Western and Central China and is distributed in the Central and Eastern Himalayas, and Japan. It includes the species, *E. papyrifera*, S. & Z., the bark of which forms a paper material.

The Singapore sample consists of slices of the rootstock and pieces of the stem. The stem bark is reddish-brown and tough; its outward appearance with that of the silvery white liber correspond with these characters on botanical specimens of the authentic plant. The Perak sample consists of similar slices of the root with portions of the stem. The drug is said to be a remedy for buboes. The plants of this order are regarded as poisonous, and their preparations are usually applied externally.

154. **Elephantopus scaber**, Linn.

Compositae.

地胆頭: Ti (country) tan (gall) t'ou (head): local name 'Tee tam tou'. Ti tan (ts'ao) Parker, 'Canton Plants'; Bret-

schneider, Early European Researches, 156. Go jihva (Ox tongue) of Sanskrit writers. 'Prickly leaved Elephants foot' (Ainslie).

This small plant with hairy, radical leaves spread flat upon the ground is a common weed in most tropical countries.

The drug consists of the dried leaves and portions of the fibrous root. This is not recorded as a usual Chinese medicine, but in India it is given for pains in the stomach and is considered a good vulnerary (*Pharm. Ind.* ii. 243.).

155. **Eleutherococcus Henryi**, Oliver: (*Aralia palmata*, Lour.). Araliaceae.

香加皮: Hsiang chia p'i (bark): local name 'Heong kah phee'. Wu kia p'i, Br. iii. 344; Pen ts'ao; Lour.; Tatar.; P.S.; C.R. Alpha. 1449; Henry in *Hook. Ic. Pl.*, XVIII (1889, t. 1711); St.; Hosie; Ph. Soc. and Kew Museums.

The tree is found in Shensi and Hupeh and in the valley of the Yangtze. It varies in habit and becomes a large tree in the north. The name Wu chia refers to the five parted or palmate leaves. Loureiro and Tatarinov describe the drug under *Aralia palmata*. Dr. Henry considers there are two drugs included under the Chinese name; the red kind from Patung, and the white kind from *E. leucorrhizus*, Oliv., exported from Szechwan. Hosie observes that *E. senticosus*, Max., yields the drug from Manchuria and North China; this is exported from Tientsin and Newchwang, and is valued at H.T. 3-5 and upwards a picul. The root-bark occurs in quilled pieces, with a soft, light, yellowish-brown outer layer, and a tough, dark-brown fibrous inner portion. It is bitter and astringent. The Malayan sample came from Canton, and is used locally for 'wind complaints'. Loureiro speaks of it as good for scabies and hydropsie. In China it is used in the form of a tincture for rheumatism and tertiary syphilitic diseases.

156. **Elsholtzia cristata**, Willd. Labiatae.

香薷: Hsiang (fragrant) ju: Heung ue (Cant.): local name 'Heong yee', Br. iii. 63; Pen ts'ao; Tatar.; Debeaux; P.S.; J.R.; C.R. Alpha. 413a; Hosie; St.; B.E.R.

The plant is found in Tibet, Japan, and southwards to India. It is wild and cultivated in the Central Provinces of China and is common on the Peking mountains. The drug, composed of the dried leaves, stems, and parts of the root, is exported from Hankow and Canton. The Singapore sample came from Canton.

In China and Cochin China the plant is not only consumed as a medicine, but also as a pot herb and condiment. In Annam the flowering tops are employed as a diuretic. In Japan the

leaves are used for tea. In a general way, like other labiates, the drug is regarded by the Chinese as carminative, stomachic, and astringent.

157. **Enteromorpha intestinalis**, Link. Algae-Ulvaceae.

昆布: K'un pu: local name 'Kwan poo'. Br. ii. 201; iii. 201; C.R. Alpha. 677; K'un pu is *Laminaria japonica*, Ar.; (B.E.R.), *L. saccharina* (Bretschneider and Stuart); *Ulva sp.* in Ph. Soc. Mus. The name evidently is applied to various specimens of seaweed. Bretschneider says that K'un pu is produced in the Eastern Sea. The alga is twisted like hemp into ropes and dried in the shade, and carried to China for food. It is exported from Ningpo and Wenchow.

The Singapore specimen labelled 'Alga from Canton and Japan' is in irregular pieces, yellowish-black in colour, soft to the touch and tough in consistence.

According to the books, *Laminaria*, known as 'Sweet Tangle' is called K'un pu, but in Malaya it has the Chinese name Hai tai or 'Sea ribbon'.

158 and 159. **Ephedra sinica**, Stapf, and other species.

Gnetaceae.

麻王: Ma (hemp) wang (royal), 麻王根: Ma wang ken (root): Ma wong kan (Cant.). Ma huang (hemp yellow), Br. iii. 97; Tatar.; P.S.; T. & M.; J.R.; C.R. Alpha. 801, root 802; St.; B.E.R.; Holmes, *Ph. Journ.*, Nov. 1926; Dr. O. Stapf, *Kew Bull.* 3. 1927, 133; J. Small; C.R. A. Short, *Quar. J. Pharm.*, April-July, 1928.

Many species of *Ephedra* are met with in Asia and Northern China, and their stems have formed an important drug in the Far East for several centuries. Royal hemp or yellow hemp is obtained chiefly from at least three species: *Ephedra sinica* of Chihli and Tanna, North China, *E. equisetina*, Bunge, and *E. distachya*, Linn. Moreover *E. Gerardiana*, Wall, *E. intermedia*, Schenk and Meyer, and *E. monosperma*, C. A. Meyer, and other varieties also yield the drug.

The parts used in medicine are the grey green glaucous switches or thin leafless branches, from 7 to 30 cm. long with internodes 3 to 5 cm. apart, terminating in a sharp point; these arise from a main stem, hard, woody, and wrinkled longitudinally and covered with a bark of reddish-brown colour with patches of silvery grey cork, diameter 4 to 7 mm. The scale leaf is a useful character for distinguishing the three main species. These occur in pairs at the nodes and are connate at the base to form a cup.

1. *sinica*, the teeth are as long as the cup and tend to be slender, fairly sharp, and frequently recurved.

2. *equisetina*, teeth much shorter than the cup and rather blunt.

3. *distachya*, teeth relatively short, but quite sharp and the whole brownish.

The two drugs from Singapore are the thin stems cut up into lengths of 5 to 6 cm., and the root, partly cut into slices, showing the reddish-brown bark.

The drug has reached considerable importance as it yields an alkaloid ephedrine, isolated in 1887 by Nagai in Japan. Ephedrine is of value in the treatment of asthma and hay fever and other affections, and has a similar action to adrenalin, but is less toxic. It also contains a second alkaloid pseudoephedrine, the action of which is more prolonged. The drug is diaphoretic and antipyretic, and the root is somewhat astringent.

160. **Epimedium sagittatum**, Baker: (*Aceranthus sagittatus*, Sieb. & Zucc.) Berberidaceae.

淫羊各: Yin (excess) yang (goat) huo: local name 'Yim yong kok'. Br. iii. 17; Tatar.; P.S. under *Populus*; S. & T.; C.R. Alpha. 1536; Henry; Hsien ling p'i, St.; B.E.R. under *E. macranthum*, M. & D.

A plant of Middle and North China, and according to Siebold, introduced from China into Japan. Dr. Henry found it in glens near Ichang in Hupeh, and observed that the drug was exported from Hankow to Canton.

The leaves are used in medicine. They are cordate with unequal base, acuminate, shining, and netted on the surface, with sharp, irregular teeth.

The leaves are tonic, stimulant, and antirheumatic. They have the reputation of being a powerful aphrodisiac and useful in kidney troubles. Goats eating the plant are said to be incited to excessive copulation, hence the Chinese name.

161. **Equisetum arvense**, Linn. Equisitaceae.

駮骨草: Po (graft) ku (bone) ts'ao (grass): common name 'Kweet cheong'. Wên ching, Chieh hsü ts'ao (because of its jointed appearance) St.; Chieh ku ts'ao, *E. ramosissimum*, Desf., Henry; Porter Smith tells us that Wên ching is a species of horsetail brought from Pe chi li. It is probable, from the Chinese name, that the drug is confused with a fern. In the Customs (Alpha. 1048) there is a medicine called Pu ku sui, or fragments of Pu ku, this is (Alpha. 624) identified as *Polypodium Fortunei*, Kze. *Equisetum arvense* is distinguished from *E. hyemale* by its thinner stems and the different arrangement of the vascular bundles. It is prescribed in decoction as an anodyne and carminative.

162. *Equisetum hyemale*, Linn. Equisetaceae.

木賊: Mu (wood, tree) tsei: local name 'Mook chak'. Pen ts'ao; Tatar.; Debeaux; P.S.; Henry; Hosie; J.R.; C.R. Alpha. 877; St.; B.E.R.; Ph. Soc. Mus.

This Horsetail or Scouring Rush grows in watery situations in Kansu and Shensi. Hosie reports its occurrence as an article of export from Szechwan. The Singapore sample was obtained locally.

The leafless, striated, fistular stems, 5 mm. in diameter, deprived of their cuticular sheaths, and cut into lengths of 3-4 cm., comprise this peculiar drug. Sometimes the stems are sold in the form of coarse powder.

On account of the siliceous material enclosed in the stems they are used for scouring and polishing wood.

In medicine they are an astringent remedy used in a variety of ailments, such as ophthalmia, leucorrhoea, and haemorrhages. In Annam the drug is considered depurative.

163. *Eriocaulon Wallichianum*, Mast. Eriocaulaceae.

穀精: Ku (grain) ching (essence, spirit): called locally 'Kook ching'. Ku chü, C.R. Alpha. 619; Tatar.; P.S.; J.R.; St.; B.E.R.; Ph. Soc. Mus.

This plant occurs in India, China, Malaya, Borneo, and Philippines to Australia. Probably more than one species of *Eriocaulon* affords the drug. The Singapore sample was obtained locally.

Stuart remarks that species of *Eriocaulon* are troublesome weeds which spring up after the grain has been harvested. This accounts for the peculiar name 'grain essence grass', as the plant is supposed to be produced spontaneously from the aura of the grain.

The button-shaped, whitish flower heads, 12 mm. across and 6 mm. deep, are situated at the end of the rush-like stalks. The flower heads are either sold separately or the entire herb is made up in bundles.

The resemblance to an eye suggests the use of this drug for sore eyes and eye diseases, for hemicrania and other forms of headache, and as an astringent for bleeding of the nose.

164. *Erodium* sp. Geraniaceae.

鴉草: Ya (crow) ts'ao (herb): local name 'Ah choo'.

Portions of the stem and leaves, with a few flowers and fruits of this small herb, were sent under the above name. There is no reference to this plant being used in Chinese medicine, except that an unidentified drug passing through the customs (Alpha. 694, 1488) is called by the same vernacular name.

165. *Erythrina indica*, Lam. Leguminosae.

海同皮: Hai t'ung p'i: Cantonese and local name 'Hoi t'ing'phee'. Henry; Tz'u t'ung, Mat. 135, B.E.R.; Ph. Soc. Mus. as *Elaeococca spinosa*.

The Indian Coral Tree, a native of the East Indies, is cultivated in India, China, and Malaya for its useful wood, ornamental habit, and medicinal properties. It is a tree about thirty feet high with prickles on its stems and branches, and is often planted for supporting the weak stems of the pepper vine. The bark is the part chiefly used in medicine, and its virtues have been recorded by Rheede, Rumphius, and Loureiro. In China it is exported from Canton and Ningpo (C.R. Alpha. 357, 1402), but Hai t'ung p'i has been variously identified as the bark of *Acanthopanax* and *Bombax malabaricum*. There are different T'ung trees the barks of which have economic uses; T'ung or pai t'ung is *Paulownia imperialis*, S. & Z. (Br. iii. 320); Yu t'ung, yielding oil, is *Aleurites*; Wu t'ung is *Sterculia platanifolia* (Br. ii. 515). The sample of bark of *Erythrina indica* came from Canton, and is sold in slices with pieces of wood attached. It is an expectorant and febrifuge. The bark contains an alkaloid which acts upon the central nervous system (*Pharmacographia Indica*, i. 451).

166. *Erythronium dens-canis*, Linn. Liliaceae.

光菇: Kuang (smooth) ku (tuber): Kwong ku (Cant.): locally called 'Kong koo'. Hanb. Sci. pa. 262; P.S. under Tulip.; C.R. Alpha. 653; Egbakum (Japan).

This Liliaceous plant is found in Northern Asia. The small pseudo-bulbs resemble those of a tulip; they are from 12 to 14 mm. long by 8 to 9 mm. broad, oval, pointed at one extremity whitish or buff coloured and smooth. The thin outer membrane is removed; when cut, the external scale is seen to be very thick and starchy. The drug is applied to relieve scrofulous abscesses and ulcers.

These bulbs are similar to those of *Tulipa edulis*, Baker (*Orithiya edulis*, Miq.), called Shan tzü ku. These are ovate bulbs surrounded by a mass of fibrous rootlets; hence the name, Mao k'ö (hairy tuber). They enter into the composition of a famous nostrum, 'Universal counter poison' (Wan ping chieh tu wan).

167. *Eucommia ulmoides*, Oliver. Eucommiaceae.

杜仲: Tu chung: local name 'Too chong'. Br. iii. 317; Pen ts'ao; Tatar.; P.S.; T. & M.; J.R.; C.R. Alpha. 1362; Henry; Hosie; St.; B.E.R.; Wilson in 'Naturalist in W. China'.

The origin of this drug was discovered in the province of Hupeh by Dr. A. Henry, (*Hook. Ic. Pl. t. 1950 (1890)*); *Kew*

Bulletin, 1895, 122). Earlier writers ascribed it to a species of *Euonymus* or *Ulmus*.

E. ulmoides grows in Central China and the medicinal bark is exported from Ichang and Hankow.

The bark occurs in brownish, quilled and wrinkled pieces a few inches in length. The roughened cuticle is often removed, exposing the dark brown liber. On breaking the bark and drawing the fractured edges asunder, delicate silky fibres are seen, due to the presence of an elastic gum similar to gutta percha.

The bark is an old and valued medicine acting specially upon the liver and kidneys. It is employed in spermatorrhoea and excessive perspiration, and it is a tonic for the old as well as young.

168. ***Eugenia caryophyllata***, Willd. (*Caryophyllus aromaticus*, Linn.). Myrtaceae.

丁香: Ting (nail) hsiang (fragrance): local name 'Teng Leong'. Tatar.; P.S.; J.R.; T. & M.; C.R. Alpha. 1305; St.; B.E.R.

Cloves are obtained in the Moluccas and the East Indian Archipelago. They are also exported from Zanzibar to Bombay and from there are re-exported to China and Singapore.

Cloves are the unexpanded flower-buds of this tree. The Chinese name means 'nail scent' or 'nailspice', evidently from the shape of the clove resembling a small nail. They were known as a spice in China as early as 266 B.C. (*Pharmacographia*, p. 281).

Cloves are much used as a carminative, stimulant, stomachic, and tonic, and for diarrhoea and colic in children. The fragrance is due to an essential oil consisting of a terpene and an oxygenated oil called eugenol.

169. ***Euonymus pellucidifolius***, Hayata. (?) Celastraceae.

大丁香: Ta (great) ting (person) wong (royal): local name 'Tai ting wong'.

This drug from Malaya is described as a very bitter alterative. It is a mixture of sliced woody stems, about $\frac{3}{4}$ inch across, and some small twigs, 5 mm. in diameter. The latter have a slightly bitterish and astringent taste. The above species of *Euonymus* is found in Formosa (Hayata, *Ic. Pl. Formosanae*, iii. 57, 1913) and is called Shima azusa in Japanese, and Ti ting huang in Chinese, according to Matsumura. Dr. Read suggests from the name that the drug is obtained from *Erythrophloeum Fordii*, Oliver (*Hook. Ic. Pl. t. 1409*) found by Mr. Charles Ford in the Kwang tung province. The Chinese species resembles *E. guineense*, G. Don, of Tropical Africa, the bark of which is a powerful poison. It will be necessary to examine authentic samples of the bark and stems of the above trees before the drug can be properly identified.

170. *Eupatorium japonicum*, Thunb. Compositae.

澤蘭: Tsê (marsh) lan (orchid): local name 'Chak lan'. Tsê lan ts'ao; hu (tiger) lan, lung ts'ao (dragon jujube) Br. iii. 62; Pen ts'ao; Tatar.; P.S. under *Iris*; C.R. Alpha. 1355; Dr. Read refers Tsê lan to *E. japonicum*, and Lan ts'ao to *E. chinense*, Linn. (*E. Lindleyanum*, DC.). Stuart places both drugs under *E. japonicum*: Lan of the classics was probably a fragrant orchid, but the name at the present time seems to be applied to various species of this composite. *E. japonicum* grows on the margins of lakes in the East and South of China. Dr. Hance found in South China his species of *E. staechadosmum*, being cultivated for the fragrance of its flowers which resembled the odour of lavender; the leaves were exported from Canton.

The Malayan drug consists of the leaves with portions of the stem of the plant. The leaves show the triplinerved venation of the genus, but they have no special fragrance. The leaves are chiefly used as a diuretic and anthelmintic. There is in the Museum of the Pharmaceutical Society an exhibit of the leaves and stems of a species of 'Eupatorium from Perak, Leah pana, used for making a tea for indigestion'.

171. *Eupatorium* sp. (?) Compositae.

天香芦: T'ien (sky) hsiang (fragrant) hu: local name 'Thin hong foo'.

T'ien hsiang ts'ai is a fragrant composite noticed in the Pen ts'ao (Stuart). The stem with hairy leaves could not be specifically identified.

172. *Euphorbia Lathyris*, Linn. Euphorbiaceae.

續隨子: Hsü sui tze: local name 'Sook Chooi Che'. Br. iii. p. 240; C.R. Alpha. 16; Hosie; B.E.R.; Matsumura, Chinese Names of Plants, 139; Harz, Samenkunde, ii. 831.

This species of Spurge is found in the provinces of Chekiang and Szechwan, and the leaves and seeds are used in medicine. The plant is distributed in South Europe and Japan. The seeds are chiefly used, and are valued at T. 12 to T. 21 a picul. They are oval or barrel-shaped, 6 mm. by 4 mm., with a reticulated surface, greyish brown in colour, and truncated at one end. They contain about 46 per cent. of fat. According to Stuart the seeds and herbage are prescribed in diarrhoea.

173. *Euphorbia pekinensis*, Rupr.: (*E. lasiocaula*, Boiss.). Euphorbiaceae.

大戟: Ta (large) chi (lance): local name 'Tai Kik'. Ta Ki, Br. iii. 136; C.R. Alpha. 1215; P.S.; T. & M.; Hosie; St.; B.E.R.

The plant, about 2-3 feet high, grows in marshy places in Chihli and other parts of Northern and Mid China; its dried

roots are exported from Canton. The purplish stemmed plant from Hang Chow in Chekiang is considered best for medicinal purposes. Other species recorded as the source of this drug are *E. humifusa*, Willd. in Szechwan, and *E. adenophora*, M. & D. in Japan.

The drug consists of the branching flexible roots attached to portions of the stem. The roots break with a resinous fracture, and are acrid to the taste, causing an irritating sensation in the throat.

The root is purgative and emetic, and is supposed to have a specific action on the bowels and kidneys. It is poisonous in large doses.

174. **Euphorbia Sieboldiana**, M. & D. Euphorbiaceae.

甘遂: Kan (sweet) sui: Kom sui (Cant.): local name 'Kam sooi'. Br.iii. 138; Tatar.; P.S.; Henry; Hosie; C.R. Alpha. 584; Mat.; St.; B.E.R.; Ph. Soc. Mus.

In older works this drug has been referred to *Passerina*, and more recently to *Wikstroemia chamaedaphne*, Meissn., and *W. micrantha*, Hemsl., plants of the order Thymelæaceae, but the root resembles that found on botanical specimens of *Euphorbia Sieboldiana*, a common weed in Mid China, especially in Shensi and Kiangsu. The drug is exported from Hankow, Amoy, and Szechwan.

The roots are cylindrical or somewhat nodular, 8 mm. in diameter, reddish or light brown, and smooth on the exterior, with a few transverse fissures; it breaks with a brittle fracture, exposing a white, starchy interior, acrid to the taste.

The drug is administered in anasarca, ascites, tympanitis, and dysuria.

175. **Euryale ferox**, Salisb. Nymphaeaceae.

芡實: Ch'ien shih: local name 'Siew sat'. K'ien shi, Ki t'ou (cock's head) Br. ii. 396; iii. 297; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 125; J.R.; Hosie; St.; B.E.R.; Ph. Soc. Mus.

This aquatic plant grows in ponds, lakes, and submerged paddy fields, and has been cultivated throughout China from remote antiquity. The seeds, called 'Fox nuts', are exported from Wu hu and Chinkiang, and are valued at T. 2 a picul. The Malay sample came from Canton.

The seeds are oval or rounded, about $\frac{1}{2}$ in. in diameter, ruddy or brownish outside or mottled or veined, pale at the hilum, white and horny within; frequently in broken fragments. They are compared to the eyes of a fish.

The seeds are often used as food. They are tonic, astringent and deobstruent in their action. A biscuit made from the kernels is given to children suffering from the *kan* disease.

176. *Evodia rutaecarpa*, Benth.: (*Boymia rutaecarpa*, Adr.)
Rutaceae.

茱 萸 菜: Wu chu yü (Chu yü, of the Kingdom of Wu): Tso ng yue (Cant. and local name). Br. ii. 498; iii. 291; Tatar.; P.S. under *Zanthoxylum* sp.; T. & M.; C.R. Alpha. 1455; Henry, Chinese Plants, 96; Hosie; St.; B.E.R.

The ancient kingdom of Wu included Chekiang and Kiangsi, but this shrub has a much wider distribution as it occurs in Chihli in the North, Szechwan in the West, and in the Himalayas and Japan. The fruit, leaves, branches, and root are all used in medicine. The fruits are exported chiefly from Hankow and Pakhoi.

The fruits are small black carpels, usually separated from their pedicels, five in number, with pitted surfaces, closely connected, and mixed with the scabrous stalks of the umbellate inflorescence; they have a warm, bitter, and aromatic flavour with a pungent taste.

Clusters of the fruits are suspended in houses to expel evil spirits and ward off contagious diseases. The medical properties attributed to the drug are almost innumerable, it is generally recognized as a useful stimulant, carminative and stomachic.

177. *Fagopyrum esculentum*, Moench: (*Polygonum Fagopyrum*, Linn.)
Polygonaceae.

新 蕎 麥: Hsin (New) ch'iao (buckwheat) mai (wheat): San ki'u mak (Cant.): local name 'Sin khiew mak'. Ch'iao mai, Henry; St.; B.E.R.; P.S.; Debeaux; Regnault; Soubeiran, &c.

There are two kinds of cultivated buckwheat: the sweet, t'ien ch'iao mai, and the bitter, ku ch'iao mai. The second is afforded by *P. tataricum*, Gaertn., and is considered by the Chinese to be slightly poisonous. The use of the term mai indicates that they are both classified among the cereals. Buckwheat is an important crop in the Central Provinces, where it is in much demand as a food. The small triangular, nut-like fruits are sweet and oily and are nourishing and digestible. The grains are recommended as a diet in colic, choleraic diarrhoea, fluxes of all kinds, and abdominal obstructions.

178. *Fatsia papyrifera*, Benth. & Hook, f.: (*Aralia papyrifera*, Hook.)
Araliaceae.

通 草: T'ung (permeable) ts'ao (plant): local name 'Thong chow'. Br. ii. 82; iii. 184; Tatar.; P.S.; C.R. Alpha. 1405; J.R.; Henry, Chin. Plts. 299; Hosie; T'ung t'o mu, St.; B.E.R.; Kew Journ. Bot. iv. (1852) 53.

The name T'ung ts'ao is generally applied to the above plant in China. It is sometimes confounded with mu t'ung (*Akebia*

quinata) because the stem shows small holes or tubes which admit the passage of air.

The Chinese Rice Paper plant grows in Anhuei, Shantung, and Mid China. Dr. Henry, Hosie, and Wilson have referred to vast exports of rice paper or pith paper from Szechwan for making artificial flowers and for decorative purposes.

The specimen from Malaya consists of thin, delicate, transverse slices of a whitish pith-like stem, about two inches in diameter.

Broken rice paper (t'ung ts'ao p'ien) and cuttings (t'ung ts'ao sui) are used as surgical dressings and for absorbing discharges from wounds.

179. *Fibraurea tinctoria*, Lour. Menispermaceae.

黃藤: Huang (yellow) t'eng (creeper): local name 'Wong hung'.

F. tinctoria is a creeper in Cambodia, Cochin China, Malaya, and Borneo. Its tinctorial properties were observed by Loureiro and Debeaux. (*Notes sur quelques matières tinctoriales des Chinois*, 1866, Paris.) In the Kew Museum a specimen of root marked Huang t'eng is referred to this plant; it is a yellow dye used in Kwangtung, Kwangsi in China, also in Singapore. The drug from Malaya is in yellow, transverse slices about an inch in diameter, showing prominent medullary rays peculiar to a menispermaceous creeper. *F. chloroleuca*, Miers, is also a plant distributed in Malaya, the root and stem of which are used as local remedies.

180. *Ficus retusa*, Linn. Urticaceae.

榮樹須: Yung (banyan) shu (tree) hsü (beard): local name 'Yoong see soo'.

Adventitious or pendant roots of the banyan tree (C.R. Alpha. 1575) from Fukien and Kwangtung. They appear as twigs or small stems, longitudinally furrowed, thicker than a knitting needle. Stuart says the aerial rootlets of this fig are considered to be a sovereign remedy for the toothache. For this purpose they are mixed with salt, thoroughly dried and powdered, and applied to the decayed or aching tooth.

181. *Ficus* sp. Urticaceae.

無花菓: Wu (without) hua (flower) kuo (fruit): Moo fah koo, Cantonese and local name. 'Fruits of the flowerless tree' is a name frequently applied to the edible fig (*F. Carica*) and other species. Br. ii. 415; Parker; P.S.; T. & M.; St.; B.E.R.

A few dried fruits of a fig were sent as a drug under this name. The receptacle is pedunculate, pyriform, slightly verrucose, shortly hispid; scales umbilicate and prominent; basal bracts

none; about an inch long. The fruits of *F. chlorocarpa*, Bth., *F. stipulata*, *F. pumila* and *F. glomerata* have been noticed as having medicinal properties.

182. **Foeniculum vulgare**, Gaertn.

Umbelliferae.

小茴: Siao (small) hui (aniseed or fennel): local name 'Siew woo'. Hui-hsiang, hsiao hui hsiang, Pen ts'ao; Tatar.; P.S.; J.R.; T. & M.; A.H.; St.; B.E.R.; C.R. Alpha. 438.

Fennel or sweet fennel is confounded in older works with aniseed and star aniseed. Fennel is called small aniseed, and star aniseed great aniseed. This confusion not only exists in the Pen ts'ao, but also in Persian and Arabic works on materia medica. The fruits, commonly called seeds, are greyish brown, slightly curved, beaked, with five prominent ridges and the characteristic aroma of fennel. The fruits are in great demand as a condiment, and are prescribed in dyspepsia and diseases of children.

183. **Forsythia suspensa**, Vahl.

Oleaceae.

連翹: Lien ch'iao: local name 'Lin khew'. Lien k'iao, Br. ii. 120; iii. 120; Pen ts'ao; Tatar.; P.S.; Hanb. Sci. pa. 245; T. & M.; J.R.; C.R. Alpha. 719; St.; B.E.R.; Ph. Soc. Mus.

This yellow flowering shrub grows in mountain valleys in Hupeh, Shensi and other northern provinces of China, as well as in Japan. The drug is exported from Hankow and Tientsin.

As found in the shops the parts used in medicine are the empty, brown, boatshaped valves of the fruits, 14 to 20 mm. long, with a thin longitudinal partition on the smooth inner surface.

According to the books the drug is considered antiphlogistic, antiscrofulous, and emmenagogue; but it seems practically inert in the light of modern therapeutics.

184. **Fraxinus Bungeana**, A.DC.: (*F. pubinervis*, Blume).

Oleaceae.

秦皮: Ch'in p'i: Ts'un p'i (Cant.): local name 'Choon phoo'. Br. iii. 323; P.S.; St.; B.E.R.; C.R. Alpha. 172; Mat. 151.

The Chinese Ash, on which the wax insect lives, grows by riversides in Shensi, Honan, and Anhwei. Ch'in is the name of a feudal state in China (900-200 B. C.) occupying modern Shensi and Kansu, provinces where the tree grows. The bark is a drug which is shipped from Hankow, Ningpo, and Tientsin, and sold in Shanghai and Canton. The Malay drug is said to have come from Shanghai. The bark is thin, light-brown, tough, and fibrous, longitudinally furrowed externally, and darker inside. It has a bitterish and astringent taste. The virtues of the bark are mainly astringent; it is prescribed in cases of catarrhal fever and inflamed eyes. A decoction is used for snake and insect bites.

185. *Fritillaria Roylei*, Hook. and *F. cirrhosa*, D. Don.
Liliaceae.

正川見: Chen (true, genuine) ch'uan (Szechwan) pei (valuable): local name 'Chin choon pooi'. Pei mu, Br. ii. 423; iii. 36; Henry; St.; B.E.R.

The species of *Fritillaria*, or mother plants of this drug, grow principally in Western China. The name is properly 'Pei mu from Szechwan', and the origin of this product passing through the customs (Alpha. 993) has been called *F. Roylei* by Dr. Henry and Mr. E. H. Wilson. The latter authority states (*Naturalist in Western China*, pp. 39-40, 180-86) that Hsin kai tsze is famous for Pei mu, and the traders make an enormous profit with the tiny white corms. The plants grow at from 12,000 to 15,000 feet altitude, and the corms constitute one of the most highly valued medicines of the alpine regions of the west. They are a very expensive medicine, according to Hosie the drug is worth T. 2 or 4 per catty, almost double the price of *Pinella* corms. The drug corresponds in size and shape and colour with the corms of *F. cirrhosa* shown on the actual botanical specimens of the plants gathered by Mr. Wilson as a source of Pei mu. Probably other species contribute to the market supply. Wilson says: 'In Hupeh, the pseudo-bulbs of *Pleione pogmoides* and *P. Henryi*, as Ch'uan pei mu, are gathered on moist humus-clad rocks at 3,000-5,000 feet.' The corms are oval in shape, a little larger than peas, 5-7 mm. in diameter, with or without the central clove, white, starchy, and tasteless. These small corms from the West are more esteemed than the larger kind from North China and Tibet. The bulbs are powdered and boiled with dried orange skin and administered for tuberculosis and asthma.

186. *Fritillaria verticillata*, Willd. var. *Thunbergii*, Baker
and *F. Delavayi*, Franch. Liliaceae.

只見: Chih pei (valuable, treasure, cowrie): local name 'Che pooi'. Pei mu, Br. iii. 36; P.S.; Henry; S. & T.; St.; B.E.R.; Baemo (Japan). Porter Smith mentions the drug under the names 'Colchicum', 'Hermodactyl' and 'Uvularia'.

The above plants grow in Central, Northern, and Western China; the corms are dug up in the autumn, and, when dried, are exported from Hankow and Ningpo. The sample from Malaya came from Chekiang.

Pei mu, the name given to the corms means 'Mother of cowrie shells', because of their resemblance in size, shape, and colour to the shells of the cowrie (*Cypraea moneta*). They are also somewhat similar to the ancient drug, Hermodactyls, the corms of species of *Colchicum*. They are as large as cowrie shells with a furrow down one side, white, starchy, and tasteless. An

alkaloid, fritilline, has been found in the corms by a Japanese chemist.

The drug, whether of the small or large variety, is given in asthma, bronchitis, and tuberculosis.

187. *Fritillaria* sp.

Liliaceae.

平見: Ping (even, level) pei (treasure): Cantonese and local name 'Ping pooi'. Franchet, Journ. de Bot., xii. 222 (1898).

This is an intermediate form of the drug. The corms are round, about 1 cm. in diameter, therefore larger than the Szechwan pei and smaller than the Chekiang pei.

Dr. Henry enumerates the three kinds of roots:

(a) Ch'uan pei. From Szechwan and Tibet. Corms about the size of a pea. Lately introduced into cultivation in Chekiang. Very valuable; 60 to 100 taels a picul.

(b) Lu pei. Pei mu from Lushan west of Chêngtu. Corms about the size of small marbles worth 40 taels a picul.

(c) Chê pei, Hsiang pei, T'u pei; produced in Chekiang province. Corms large, $\frac{3}{4}$ in. in diameter; value 5 taels a picul.

188. *Garcinia mangostana*, Linn.

Guttiferae.

山竹果: Shan (mountain) chu (bamboo) kuo (fruit): called locally 'San chook hok'.

The mangosteen is a tree of the Malay States. The fruit is globular, as large as a small apple, with a thick, woody rind; it is crowned by the calycine segments which form a kind of rosette; within it is a sweet acidulous pulp and several seeds. The thick, reddish-brown rind of the fruit, cut into slices and dried, forms a commercial article in the drug shops of Malaya. It is exported from Singapore to Canton and India as a popular remedy for dysentery and chronic diarrhoea. The virtues of the fruit-rind and the stem-bark are mentioned by Rumphius, who tells us that they are useful astringents in various complaints. The drug is not much referred to in Chinese works.

189. *Garcinia dulcis*, Kurz.

Guttiferae.

Biji mundu (Singapore). This name is Malay.

These are rounded-oblong, light-brown, oily seeds, about one inch long, sold in the drug shops.

190. *Gardenia florida*, Linn.

Rubiaceae.

山梔: Shan (mountain) chih (siphon or cup or Gardenia): local name 'San Che'. Pen ts'ao; Lour.; Tatar.; Hanb. Sci. pa. 241-42 Fig. 8; Debeaux; Br. ii. 302; iii. 335; P.S.; T. & M.; Henry; Huang chih; C.R. Alpha. 512, 1092; St.; B.E.R.; other commercial names are: Kien (Fukien) chih tsz, exported from Hankow; Sien (bright) chih tsz'. Shan chih tsz is that usually employed in medicine, other kinds are used in dyeing.

The shrub is a native of India, China, and Japan; it is cultivated for its berries in the central, southern, and western provinces. The orange-coloured fruits, which come from Hokkien, are from $\frac{3}{4}$ to 1 in. in length, ovoid or oblong, smooth, crowned with the remains of the calyx which are prolonged down the sides of the fruits in six prominent ribs. The seeds are imbedded in an orange pulp. They are valued at T. 2.5 a picul.

The fruits have emetic, stimulant, and diuretic properties. In Malaya they are considered a cooling remedy. But the fruits are used more for dyeing than for medicine; they impart a fine orange colour to silk.

The red flowers are oppressively fragrant and are used for flavouring tea.

191. **Gardenia sp.**

Rubiaceae.

山梔根: Shan chih ken: local name 'San che ngaw'.

The drug consists of transverse sections of woody stems or root, with some twigs, with a light brown bark, without taste or smell. This is not a usual Chinese drug. In India the root of *G. florida* is a remedy for headache and hysteria.

192. **Gentiana Loureirii**, Griesb.

Gentianaceae.

地丁: Ti (ground) ting (nail), so called from the shape of the flower): local name 'Tee teng'. A name doubtfully given by Debeaux to *Fumaria officinalis*, and by Dr. Henry to *Viola Patrinii* (C.R. Alpha. 127); Mat. 378.

A small species belonging to the Section Chondrophyllae, allied to *G. pedicellata*, Wall. It is an annual with a rather wide distribution in South-West China. The drug came from Canton, and consists of the stem and sessile leaves and flowers. It is very bitter.

193. **Gentiana rigescens**, Franch.

Gentianaceae.

胆草: Tan (gall) ts'ao (plant); Taam ts'ao (Cant.): local name 'Tam chor'. Lung tan ts'ao, 'Dragon's gall plant', a name given to gentians and other bitter plants. Tatar.; P.S.; Lung tan, *G. scabra*, Bge, C.R. Alpha. 791; St.; B.E.R.; *G. Buergeri*, Miq., in Japan, T. & M.

A perennial species of the Section Pneumonanthae, allied to *G. scabra*, Bge., from which it may be distinguished by the thick obovate leaves and short calyx lobes. Distribution, Yunnan. The drug came from Szechwan, and consists of the wiry roots with portions of stem and a few leaves. In Singapore it is used as a bitter alterative.

194. *Gesnerad* (?)

Gesneraceae.

必薇: Pi wei: local name 'Pak mee'.

This plant is said to grow in water; it is imported from Canton and is available locally. It is a small plant with obovate, thick, radical leaves four inches long, clothed with whitish stellate hairs, and a fibrous root. It is probably a local medicine. There is a drug of the Customs called Pai wei (Alpha. 969) which is identified as a *Cynanchum*. This is quite different from the Malayan drug.

195. *Gleditschia sinensis*, Lam.: (*Mimosa fera*, Lour.).

Leguminosae.

皂莢: Tsao (black) chia (pod): Tso che (Cant.): local name 'Chor chee'. Br. iii. 325; Hanb. Sci. pa. 237; Lour.; Tatar.; P.S.; Henry; C.R. Alpha. 1331; St.; B.E.R.; Pods in Ph. Soc. Mus.

The Soap bean tree is a handsome tree growing in Central and Southern China. The fruit, bark, stem, and leaves are used in medicine.

The drug sent from Canton under the above name consists of thin slices of a woody stem. The bark is blackish; the wood white and dense with brown pith. It has no taste. It is given in medicine for fevers.

The pods or soap beans are strap shaped, 6 to 7 in. long and 1 in. broad. Hanbury, quoting Loureiro, says that the valves of the pods are regarded as attenuant, stimulant, and purgative. They are called in some parts 'Table knife pods', and are used for washing clothes.

196. *Gleditschia officinalis*, Hemsl.

Leguminosae.

皂角: Tsao chiao (Black horn or pod): Tso kok (Cant.): local name 'Chor kok'.

牙皂: Ya tsao (Tusk black pod) is the more correct name, being a contraction of Ya tsao chiao. Br. iii. 325; Cleyer; Hanb. Sci. pa. 248, under *Prosopis*; T. & M.; Henry, Chin. Pl. 499-500; C.R. Alpha. 1487; Stuart, under *G. japonica*; B.E.R.

Bretschneider and others have described this drug under *G. chinensis* and other leguminous plants. The pods, however, are from *G. officinalis*, according to material supplied by Dr. Henry (*Kew Bulletin*, 64, 82; *Hook. Ic. Pl. t.* 1412). The tree belongs to the west of China, and scarcely occurs east of Szechwan, though some plants are found at Patung. In Hosie's list of Szechwan medicines Ya tsao is identified correctly. The drug is exported from Hankow and Ichang.

The Malayan sample came from Canton. The pods resemble the tusks of a boar; they are indehiscent, 1½ to 2 in. long, by ½ in. broad, brown, smooth, slightly curved or sickle shaped,

sometimes abortive, and only light and spongy within. They are very acrid to the taste.

The pods contain saponin, and are used as soap. A solution applied to the skin is said to remove hair. In medicine they are expectorant, emetic, and purgative.

197 and 198. **Glycyrrhiza spp.** Leguminosae.

甘草: Kan (sweet) ts'ao (herb): Kom ts'ao (Cant.): local name 'Kam Chow'. Br. iii. 1; Lour.; Tatar.; Debeaux; P.S.; J.R.; C.R. Alpha. 587; Henry; Hosie; Wilson; St.; B.E.R.

The plants affording Chinese liquorice root are *G. uralensis*, Fisch., *G. echinata*, Linn., and *G. glabra*, Linn., growing throughout the region of Central Asia. Large quantities of the root come from the Ordos territory, a steppe lying to the north of Shansi, formally belonging to Inner Mongolia. Wilson found *G. uralensis* the source of the Sung pan product. Kansu and Szechwan afford market supplies. About 5,000,000 piculs of the root are produced annually (*China Year-Book*, 1928). During the War there was a great demand from the United States for this product for making chewing gum.

(198) Two samples of liquorice came from Singapore. One is the root from Kansu, in thin transverse slices, and the other the root in fine powder. **甘草粉**: Kan ts'ao fen: Kom ts'ao fan (Cant.). The root is a drug of great importance in Chinese pharmacy, and stands next to ginseng in popular estimation. Besides being used to disguise more nauseous medicinal substances, it has tonic, alexipharmic, alterative, and expectorant properties.

199. **Gossypium sp.** Malvaceae.

棉花仁: Mien (cotton) hua (flower) jen (kernel): local name 'Mai fah yan'. Mien hua tsze (cotton seed), C.R. Alpha. 848; Br. ii. 369; St.

The Cotton plant was unknown to the Chinese till about the eleventh century. Before that the floss from the seeds of the Silk Cotton tree (*Bombax*) was said to be used for manufacturing cloth. The Cotton plant is now grown in all parts of Southern and Central China. A quantity of the seed is obtained annually from Kiangsu.

The kernels are light brown, oval, oily, about the size of wheat grains. They consist of the embryo with conduplicated cotyledons, divested of the hard, hairy testa. Greenish resinous ducts are evident in the sections of the seeds.

The seeds are first washed before expressing the oil. Cotton seed oil is used in leprous, scabrous, and other forms of skin diseases. Purified from the nauseous resin, the oil is demulcent and suitable for domestic and pharmaceutical purposes.

200. *Gynura ovalis*, DC. and *G. pinnatifida*, DC.

Compositae.

田七: T'ien ch'i, T'in ts'at (Cant.): local name 'Theen Chat.' T'ien san ch'i, C.R. Alpha. 1298; Henry; San ch'i (Three seven) C.R. Alpha. 1059; St.; B.E.R.; Other names Shan ch'i (mountain varnish), Chin pu huan (gold no recompense). T'ien ch'i is an abbreviation of t'ien san-ch'i, said to be san-ch'i cultivated in T'ien chou in the Kwangsi province.

These plants are cultivated and wild in Kwangsi, Yunnan, and Hupeh.

The drug is a small tuberous root, top-shaped, from $\frac{3}{4}$ to 1 in. in length, wrinkled externally and marked by ridges, pale yellow and firm, darker coloured in centre, bitterish to the taste.

Vulnerary, styptic, astringent, and discutient properties are attributed to this drug. The name 'mountain varnish' is given to the root because it is supposed to cause the edges of wounds to adhere. From its extraordinary reputation among military and fighting men, the roots of these species of *Gynura* are very costly; 'Its value is beyond money', as one of the names indicates.

201. *Gyrophora vellea*, Ach.

Lichenes.

石耳: Shih (rock) rh (ear): local name 'Siah yee'. Br. ii. 41; C.R. Alpha. 1146; St.; B.E.R.; Ph. Soc. Mus.

This lichen is widely distributed, and is found in upland regions covering the face of rocks. It is called 'Rock ear' in China and Japan, and the fur traders in Canada call it 'Rock Tripe'. It has a circular outline, about 7 cm. in diameter, of a cartilaginous texture, greyish brown, and smooth on the outside, and almost black and rough on the inner surface. Sometimes the plant is curved in the form of an ear. Species of *Gyrophora* are eaten by travellers and others, and *G. esculenta*, Miy., (*Umbilicaria esculenta*, Minks), is specially prepared as a food in Japan. (Miss A. Lorrain Smith, *Camb. Bot. Handbook; Lichens.*) In medicine this lichen is used in haemorrhage of the bowels and prolapse of the rectum (Stuart).

202. *Hibiscus mutabilis*, Linn.

Malvaceae.

芙蓉花: Fu jung (Hibiscus) hua (flower): local name 'Foo yoon ha'. Fou yung hua, mu fu jung, P.S.; St.; B.E.R.; C.R. Alpha. 330.

This is a small tree that grows readily almost everywhere in China, and is cultivated in gardens. The flowers are red coloured or variegated, 3 to 4 inches in diameter; bracteoles 10, linear; sepals hairy, ovate-lanceolate, connate below the middle. These flowers are mentioned in the Pen ts'ao, and are an established remedy for pectoral and pulmonary complaints. Watters says

they are prescribed as a stimulant. The leaves are applied to swellings. The bark, like that of many other species of *Hibiscus*, is turned to account for making cordage or cloth.

203. **Hibiscus rosa-sinensis**, Linn. Malvaceae.

川 權 皮: Ch'uan (Szechwan) chin (*Hibiscus*) p'i (bark) Ch'uen kan p'i (Cant.): 'Choon kin phee', local name. Chü kan fa (the flowers), Parker, Canton Plants; C.R. Alpha. 271; St.; B.E.R.

Shu Kuei, meaning 'Mallow from Szechwan', is a name given to the Hollyhock (*Althaea rosea*, Cav.) and *Hibiscus manihot*, L., the stems and roots of both being used in medicine (Br. iii. 105). The drug sent from Singapore under the above name is made up of transverse slices of the stem of a malvaceous plant. The bark is dark coloured, very fibrous and mucilaginous and agrees in its outward characters with that of *H. rosa-sinensis*. Dr. Read places the bark of *H. syriacus* among the drugs of this natural order. Regnault, in his drugs of Annam, mentions the bark of a species of *Hibiscus* as having emmenagogue properties.

204. **Hibiscus syriacus**, Linn. Malvaceae.

伏 雙 花: Fu (Buddha) shuang hua (flower): Local name 'Vok seong fah'. Shun, Mu kin, Br. ii. 542; Debeaux; P.S.; C.R. Alpha. 858; Hung hua ch'a, St.; B.E.R.; Ph. Soc. Mus.; Mu kunge (Japan).

This is an ornamental shrub cultivated throughout China and India. It is a common hedge plant in Hupeh and Hunan, and is often chosen for making fences. The flowers, like those of *H. mutabilis*, blossom in the morning and fall off at night, hence the name Jih chi, ephemeral or fugitive flower.

The flowers are puce coloured when fresh, darker when dry, smaller than those of the Hollyhock. The sepals are ovate-lanceolate, light grey, longer than the 6-7 linear bracteoles. The flowers are used as an infusion like tea, and taken for itching and painful skin diseases, and as a diuretic. The dried leaves are sold in shops and are held to be stomachic.

205. **Hibiscus tiliaceus**, Linn. Malvaceae.

A sample of dark hairy fibre, named Kupeh, probably from the bark of this tree, was obtained in a druggist's shop in Singapore and used as an absorbent like lint.

206. **Hibiscus Trionum**, Linn. Malvaceae.

和 尚 頭: Ho (peace) shang (to esteem) t'ou (head): Wo sheung t'au (Cant.): local name 'Woh seong tow', meaning of the name 'Buddhist priest's head'. The drug occurs in thick slices, about an inch or more in diameter, of a reddish coloured

root with dark reddish brown bark. Dr. Read suggests the above plant as the origin. Botanical specimens of the plant are only about a foot in height, while the drug, from the size of its root, appears to belong to a much larger shrub or tree. *Hibiscus Trionum* occurs in Chihli and Shantung, and is widely distributed in warm regions of the old world.

207. *Hordeum vulgare*, Linn.

Gramineae.

麥牙: Mai (barley or wheat) ya (tooth, sprout): local name 'Mai ngai'. Br. iii. 219, 220; Tatar.; P.S.; C.R. Alpha. 817; St.; B.E.R.

In China barley is called Ta mai or great corn, and wheat Hsiao mai or small corn. Kung mai (naked barley) and No mai are varieties of barley grown in Szechwan and Shantung.

Mai ya or Kung mai nieh are names for barley sprouts used in medicine. They are prepared by moistening the grains with water, allowing them to germinate, and then drying them in the sun. The sprouts are rubbed off and the grain ground into flour. The germinated barley or malt with the radicle attached is used as peptic, stomachic, lenitive, demulcent, and expectorant. It enters into a number of prescriptions given for infantile complaints.

208. *Hovenia dulcis*, Thunb.

Rhamnaceae.

枳椇子: Chih (thorn) chü (*Hovenia*) tzü (seed): Chat cha tsz (Cant.); local name 'Chee Kooi Chee'. Kü, chi ku, chi kou, Br. ii. 489, 490; Kuai tsao (crooked jujube); Pents'ao; Kaempfer; Tatar.; Debeaux; Hanb. Sci. pa. 238; P.S.; C.R. Alpha. 429; Hosie; St.; B.E.R.

This is a common tree in the Eastern provinces of China, and distributed in India and Japan. It is frequently planted in gardens.

The part used in medicine is the curiously contorted, fleshy, russet-coloured, fruit-bearing peduncle, which has the flavour of pears. The pea-like fruits are seated on this, but are not so pleasant to the taste. Both the fleshy peduncles and fruits are considered to be antifebrile, laxative, and diuretic, and are used to diminish the effects of excess of wine.

209. *Hydnocarpus anthelmintica*, Pierre.

Bixaceae.

風油子: Feng (leprosy) yu (oil) tzu (seed): local name 'Foong yau tze'. Ta fung tsze, Hanb. Sci. pa. 244, Fig. 9; Pen ts'ao; Tatar.; P.S.; T. & M.; C.R. Alpha. 1221; St.; B.E.R.; Kew Bull., 1926, 17-23; Rock and Fairchild, U.S. Dept. Agric. Bulletin No. 1057 (1922). Chinese Chaulmugra seed.

The tree occurs in Siam and Indo-China up to elevations of 1,000 ft. The tree attains a height of 60 ft. The seeds are imported into China and Singapore from Siam and Cambodia. They are from $\frac{1}{2}$ to $\frac{7}{8}$ of an in. long, of an oblong or ovoid shape, very irregular, owing to the mutual pressure in the fruit. They consist of a hard, woody shell containing the oily albumen, enclosing large, heart-shaped, leafy cotyledons. The kernel forms 32 per cent. of the seeds. Methods for preparing the oil are recorded in the Pen ts'ao, and for ages this has been employed in the treatment of leprosy, parasitic pediculi, and many skin diseases. This knowledge has been confirmed and utilized in recent years. The oil has been found by Power and Barrowcliff to have two fatty acids, chaulmoogric and hydnocarpic acid (*Journ. Chem. Soc.* 1905, 884-96). Fractions of the acids rich in hydnocarpic acid, as sodium salts and esters of the acids, have been prepared and injected for leprosy. Sir Leonard Rogers has met with great success in using this treatment in the East. The oil is official in the Japanese Pharmacopoeia, and is similar in composition to that of the Indian Chaulmugra seeds (*Taraktogenos Kurzii*).

210. **Hypericum japonicum**, Thunb. Hypericaceae.

田基王: T'ien (field) chi wang: local Cantonese name 'Thin Kee wang'. C.R. Alpha. 1286; Siao lien kiao, S. & T.

This species of St. John's Wort is distributed widely from N.W. India to Japan and southwards to Australia. It is a small annual, a few inches high, with prostrate, glabrous, 4-angled stem, leaves $\frac{1}{2}$ in. or less, clasping the stem, ovate; flowers $\frac{1}{4}$ in. in diameter, yellow. It is probably the small lien k'iao of Su Kung (Br. ii. 120; iii. 120), the larger one being a *Forsythia*. The allied species, *H. chinense*, the Chinese St. John's Wort, called Kin sin, with much larger flowers, is that alluded to by Stuart and Read. These plants probably have similar properties. They are credited with astringent and alterative action, and externally they are used as vulneraries.

211. **Hypoxis aurea**, Lour.: (*Curculigo ensifolia*, R.Br.). Amaryllidaceae.

仙茅: Hsien (fairy) mao (a reed): local name 'Sin mow': Mao ken; C.R. Alpha. 453, 456; St.; B.E.R. Cleyer; P'ò lo mèn shên. 'Brahminical Ginseng'; Ph. Soc. Mus.

The plant is found in North India, Cochin China, and Japan. The drug comes from Hupeh, Fukien, and Kwangtung. The Singapore sample is labelled 'From Szechwan'. Hosie uses for the Szechwan drug the synonym *H. minor*, Don.

The root is cylindrical, of the size of a goosequill, in lengths of one inch or more, brown, wrinkled, and shrivelled. It swells in water and is mucilaginous, but has no distinct odour or taste.

The microscope reveals small starch grains and bundles of needle-shaped crystals.

Stuart alludes to the drug being called 'Brahminical ginseng' on account of its being brought from India. It resembles the Black Musali of the Hindu and Mohammedan physicians. From Sanskrit its name is Ho lun lei t'ò, the root of *Curculigo orchioides*, Gaertn. Its properties are similar to ginseng, being reconstructive, rejuvenating, aphrodisiac, and tonic.

212. *Ilex latifolia*, Thunb.

Illicaceae.

燈茶: Têng (lamp) ch'a (tea): local name 'Thung cha'.

Stuart and Read include an allied species, *I. pedunculosa*, Miq., under the Chinese name of Tung Ch'ing (winter green), in their lists of medicinal plants. Both of these species are evergreen trees of China and Japan, and the latter is mentioned in Br. ii. 490.

The leaves of *I. latifolia*, sent as a drug, are thick, ovate, pointed at each end, 13 cm. long by 4.5 cm. at the broadest part. They are probably used, like other *Ilex* leaves, as a substitute for tea or medicinal drink. Stuart says the ashes of leaves of species of *Ilex* are good for skin diseases and poisoned wounds.

213. *Illicium verum*, Hook. f.

Magnoliaceae.

大茴: Ta (great) hui (anise): local name 'Tai woo': P.S.; T. & M.; J.R.; Hosie.

Ta hui is the larger kind of anise in contradistinction to Hsaio hui, small anise, which is referred indiscriminately to the fruits of Anise (*Pimpinella anisum*) and Fennel (*Foeniculum vulgare*). Star anise is also called Pa chioh or 'eight horns'. Adas china (Malay).

True star anise is produced in Kwangtung, Cochin China, and Annam. It is cultivated in South East Kwangsi and in the territory of Tonkin, which together possesses the world's monopoly of this valuable product. Nanning on the West River in Kwangsi is the chief town of export. Hong kong is the chief distributing medium for foreign countries, both for the fruits and oil. The star shaped fruits composed of eight radiating boat shaped carpels vary from one to one and a quarter inches in diameter. They contain about 5 to 7 per cent. of essential oil consisting of solid and liquid anethol. Japanese Star anise called 'Skimmi' (*I. anisatum*, Lour; *I. religiosum*, S. & Z.) is poisonous. Wood cuts and descriptions of the two fruits are found in a paper by Mr. E. M. Holmes in *Pharm. Journ.* (3) xi. 489. The fruits of true star anise are given in colic and constipation, and used in confectionery and for seasoning food. The oil is largely consumed for flavouring spirits in the manufacture of liqueurs.

214. *Imperata arundinacea*, Cyrill. Gramineae.

白茅根: Pai (white) mao (grass) ken (root): Pak mau kan (Cantonese and local name). Br. ii. 459; iii. 37; Tatar.; P.S.; Mao kên, the drug; C.R. Alpha. 825; Mao ts'ao, the stems; St.; B.E.R.; Hosie; Wilson.

This grass is common in many parts of China bearing panicles of white flowers. It is used for thatching houses, and in the West the stems are used in the manufacture of paper. (See article on 'Lalang Grass', *Kew Bulletin*, 1909, 55.) The young shoots or 'needles' of the plant are eaten.

The medicinal roots are exported from Amoy and imported from Hong-Kong into Canton. They are whitish, long, thin, and flexible like a tendon, and are provided with joints and nodes. They have sweetish taste.

The roots have restorative, tonic, haemostatic, and antifebrile properties.

215. *Indigofera tinctoria*, Linn. Leguminosae.

大靑: Ta (great) ch'ing (blue): local name 'Tai ching'. Br. ii. 392; C.R. Alpha. 1218.

Loureiro, Faber, Hance, and Hosie have written about the cultivation of indigo in Kwangtung and Kwangsi in South China. Bretschneider states that it was introduced from Persia, probably meaning India. The chief use of indigo is as a dye, blue garments being particularly tasteful to the Chinese. A blue colouring matter is also obtained in China from *Isatis tinctoria*, *Polygonum*, and *Peristrophe tinctoria*, Nees.

The specimen of leaves and stems that came from Canton were recognized as belonging to the indigo plant, but they appeared to have been exhausted of all soluble substances. This is explained in an unpublished note by Sir Alexander Hosie; 'Indigo refuse, under the name of Ch'ing tai, is employed in medicine, and costs about T. 1.20 a picul.' As in England, the blue bag is used in China as a domestic remedy for the stings of bees and wasps.

216. *Inula japonica*, Thunb.: (*I. britannica*, Linn.; *I. chinensis*, Rupr. Compositae.

福花: Fu (happiness) hua (flower): local name 'Fook fah'. S'uan fu hua; in Shantung, Kin ts'ien hua (golden coin flower), Br. iii. 81; Pen ts'ao; Tatar.; T. & M.; C.R. Alpha. 475; P.S.; Hosie; A.H.; St.; B.E.R.; Ph. Soc. Mus.

This plant, an Elecampane, grows in North China, Mongolia, Korea and Japan. It is cultivated in gardens in Shansi and Hunan, and the flower heads, which are the most esteemed part of the plant for medicinal purposes, are exported from Canton. They are golden yellow heads of this composite, with a bitter

and aromatic taste. Sometimes the whole plant, dried, is on sale in the shops in China and Singapore.

The drug is tonic, stomachic, alterative, and carminative.

217. **Ipomoea Batatas**, Lam.: (*I. fastigiata*, Sw.).

Convolvulaceae.

西花粉: Hsi (West) hua fen: local name 'Fah foon'.

Hua fen (t'ien hua fen) is a well-known Chinese product (C.R. Alpha. 494, 1292) usually referred to the root of a *Trichosanthes*. The root and flour made from it are exported from Chinkiang and Hankow (Br. iii. 172). Bretschneider, however, doubts the origin of a specimen sold in an apothecary's shop in Peking. The above or 'Western' drug was imported from Kwangsi, and occurs in white circular slices of the Sweet Potato. This is confirmed by the microscopical character of the starch. This crop is cultivated everywhere in China. Hosie remarks, under Szechwan Plants, 'Sweet potato is preserved by being cut up into slices or strips, which are first scalded in boiling water and afterwards dried in the sun. They are kept for sale during the winter months'. The root enjoys a great reputation, both in cookery and as a medicine. In Malaya the root is made into a drink to allay thirst in fever.

218. **Juglans regia**, Linn.

Juglandaceae.

胡桃: Hu t'ao (Hu means *Persian* usually in Chinese names): local name 'Hup thor'. C.R. Alpha. 377; St.; B.E.R., B. Laufer, Sino-Iranica, 254-75.

The Walnut is distributed throughout Europe and Asia. According to Pliny it was introduced into Italy from Persia, and the Romans called the fruit *Nux persica*. The Chinese word t'ao refers to peach and walnut, and probably suggests a Persian origin, or the resemblance of the green fruit to the peach. The tree grows in Northern and Western China, Tangut, and Kokonor up to 8,500 ft. Hosie identifies *J. mandschurica*, Max. as the walnut of the mountains north of Szechwan. *J. Sieboldiana*, Max. is the walnut of Japan.

The few walnuts in the Malay collection came from Canton. Walnut kernels are said to produce plumpness of the body, and to strengthen and lubricate the muscles. They are recommended in heartburn, colic, and dysentery.

219. **Juncus effusus**, Linn.

Juncaceae.

燈心花: Têng (lamp) hsin (wick) hua (flower): Cantonese and local name 'Tang sam'. Têng hsin ts'ao (lamp-wick herb) Têng ts'ao (lamp herb) Hu hsü ts'ao (tiger beard herb) Br. ii. 176, 455; Henry, China Pl. 450; P.S.; St.; B.E.R.; Ph. Soc. Mus.

This rush grows abundantly in the marshes of Central and

Western China. It occurs both wild and cultivated, and is collected for its pith which is used for lamp wicks, and for mat making. Large quantities, according to Dr. Henry are exported from Szechwan, and come down the river in bales, stacked in two or three boats lashed together.

The stalks are steamed in order to remove the cuticle, and the white cord-like pith is used in medicine and surgery. The pith is a convenient medium for keeping open fistulous sores, and its medicinal properties are said to be antilithic, pectoral, and discutient.

220. *Kaempferia pandurata*, Roxb. Zingiberaceae.

莪 犬: O shu: Ngo shut (Cant.): local name 'Ngo soot'. Ngo shu or O shu, contraction of P'eng ngo shu. C.R. Alpha. 1003; Pen ts'ao; Mat. 191; A.H.; St.; B.E.R. Laufer, Sino-Iranica, 313.

The drug comes from the East Indies and the southern provinces of China. It occurs in slices of a rhizome about 1 in. in diameter, yellowish brown, somewhat like turmeric, but harder in consistence and darker. On the outside rootlets arise from small depressions, and the upper part is marked with circular scars. The odour is fragrant and lemon-like, and the taste pungent. Carminative, stomachic, and cholagogue properties are attributed to the drug.

221. *Laminaria saccharina*, Lam. Algae-Laminariaceae.

海 帶: Hai (sea) tai (ribbon): local name 'Hoi tai'. Hai tsai (sea vegetable) Br. iii. 200; P.S.; J.R.; C.R. Alpha. 354; St.; B.E.R. The name, Hai ts'ao (seaweed) in this collection is given to a species of *Sargassum*, while K'un pu, the name Bretschneider gives to *Laminaria*, is applied in Singapore to a species of *Enteromorpha*.

Laminaria saccharina, or Sweet Tangle, is a large seaweed growing on the coast of China, Manchuria, and Korea, and furnishes several dietetic preparations. Dr. Read believes *L. religiosa*, Miyabe, of the China Sea to be that most used in medicine; while Matsumura enumerates 14 species with separate vernacular names and therefore used for various purposes. The Malayan drug, which is said to come from Japan, occurs in flat, reddish-brown ribbons or fronds about four inches wide, and has a bitter and saltish taste. The seaweed, like several other kinds, contains iodine. Ancient Chinese writers prescribed preparations of algae for goitre, bronchocele and other disorders in which iodine is still an acknowledged remedy. Gilhar ka patta (the Hindustani name of the same seaweed), is highly prized in India for similar complaints.

222. **Languas Galanga**, Burkill: (*Alpinia Galanga*, Swartz,
Amomum Galanga, Lour.) Zingiberaceae.

紅荳蔻: Hung tou k'ou (Red nutmeg): Hung tau k'au (Cant.): local name 'Hoong tow kow'. Hung tow kow; Kaou leang keang tsze, Hanb. Sci. pa. pp. 107, 252. Figs. 10, 11. Similar vernacular names used by Loureiro, Rumphius, Tatarinov, Bretschneider (iii. 57); P.S.; T. & M.; J.R.; St.; Hosie. Dr. Read refers the drug to *Alpinia Kumatake*, Mak., (Jap. Bot. Mag. xvi, 49), a Japanese species distinct from Galanga.

These are the fruits of the Greater or Java Galanga, called Red or Galanga Cardamoms or Red Nutmegs. The plant is common in the Malay Peninsula, both cultivated and wild, and extends from the Eastern Himalaya to Tonkin, Annam, and Cochin China. There are various races of this plant produced by cultivation distinguished by the colour and aroma of their rhizomes. Hosie says the plant is cultivated in South China.

Hanbury's description of Galanga Cardamoms which he obtained from an authentic plant agrees with the sample from Malaya.

The capsules are 14 mm. long and 8 mm. broad, of an oblong form, somewhat constricted in the middle. Each fruit is crowned with the remains of the calyx; in a few a slender pedicel is attached. The capsules are shrivelled on the outside, and from a pale to a deep reddish-brown colour. The seeds are united in a three-lobed mass, completely invested in a whitish integument; they are ash-coloured, flattish, and somewhat three cornered. The seeds as well as the pericarps have a pungent burning taste and an aroma of galangal root.

The seeds are calefacient, alterative, stomachic, sternutatory, beneficial in colic, diarrhoea, and vomiting.

The aromatic rhizomes of the Greater Galangal are used in medicine as well as for seasoning food, but they are not so important medicinally as those of the Lesser Galangal (Hosie).

223. **Languas globosa**, Burkill: (*Alpinia globosa*, Horan.
Amomum globosum, Lour.) Zingiberaceae.

草蔻仁: Ts'ao (herbaceous) k'ou jên (kernel); Ts'o k'au yan (Cant.): local name 'Chow khow yin'. Tou k'ou, Ts'ao tou k'ou, Br. iii. 58; Hanb. Sci. pa. 95-7, 248, Fig. 3; Lour.; Tatar.; C.R. Alpha. 1314, 1346; P.S.; Crevost and Lemarié; St.; B.E.R. under *Amomum costatum*, Roxb.

This is the small round cardamom obtained from plants native of Cochin China, Tonkin, and South China. The drug is exported from Canton, and is sometimes called 'wild cardamom'.

The capsules are pedicelled, globular, 7 to 10 mm. in diameter, grey, much wrinkled. The pericarp is thin and easily torn from

the globular, adherent mass of seeds. Each seed has a bifurcate furrow on the outer face; odour and taste faintly aromatic.

In commerce the round clusters of seeds frequently occur without pericarps, as they do in this specimen.

The large round cardamoms are larger than the above; the capsules are less globular, and the pericarps are not so fragile.

The seeds are much employed as a condiment, and as a stomachic and carminative in medicine.

224. **Languas officinarum**, Burkill: (*Alpinia officinarum*, Hance).
Zingiberaceae.

良姜: Liang chiang: Leung keung (Cant.): local name 'Leong keong'. 'The Lesser Galangal, called Kao liang chiang, or briefly Liang chiang, after the name of Kao chou, formerly Kao liang prefecture in the province of Kwangtung, where it is principally collected' (Hosie). 'Wild ginger' is another meaning to the name, Br. iii. 57; Man kiang or the 'ginger of the Mantse', the aborigines of South-Western China, is another name for the root. This drug is mentioned in all works on Chinese Materia Medica: the Pen ts'ao, Loureiro, Debeaux, Tatarinov, Hanbury, Porter Smith, Soubeiran, Tsudsioka and Murai, Regnault, Stuart, and Read. But there has been some confusion between the origin of the drugs called Galangal derived from the Arabic khalanjan or corruption of the Chinese name. The source of the two drugs is discussed by Hanbury in a paper 'Historical Notes on the Radix Galangae of Pharmacy' (*Journ. Linn. Soc.* 1871; *Science Papers*, 370-5).

Garcia da Orta (1563) was the first writer to point out that there are two sorts of galangal—one of a smaller size and more potent virtues brought from China, and the other a thicker and less aromatic rhizome produced in Java. The Greater Galangal is yielded by *Alpinia Galanga*, now *Languas Galanga*, a plant of Java; the lesser Galangal is derived from a Chinese plant which Dr. Hance described, in 1867, as *A. officinarum*, now placed in the genus *Languas* of Koenig.

The latter plant is cultivated in Kwangtung in the South, and is both wild and cultivated in the island of Hainan.

The root is about two inches long, and less than half an inch in diameter; externally of a rusty brown colour, longitudinally striated and transversely marked with remains of leaf-sheaths. Internally it is greyish-brown, and breaks with a fibrous fracture; the odour is aromatic, and the taste is hot and spicy like a mixture of ginger and pepper.

Lesser Galangal is exported in large quantities from Hong-Kong and the Straits Settlements to India and Europe for use in medicine and as a flavouring material. It frequently takes the place of ginger as a spice. Its chief consumption in Russia is for

flavouring liqueurs. It is also used by perfumers. Manifold virtues are ascribed to it as a medicine, mainly, however, it is an aromatic stimulant, stomachic, and carminative.

Three specimens of the flowers of Lesser Galangal are included in the drugs from Singapore. They are labelled:

225. 川樸花: Ch'uan p'o hua: local name 'Choon pook fah'.

226. 春砂花: Ch'un sha hua: local name 'Choon sa fah'.

227. 橘紅: Chü hung: local name 'Kut hong'.

But it is strange that the names do not apply to flowers of the galangal plant. The first name is that of the fragrant flowers of a *Magnolia* from Szechwan. The second applies to the flowers of the hairy cardamom (*Amomum villosum*). The third name is that for orange flowers. There is not much information about the use of these small reddish flowers of galangal as a drug. Soubeiran and de Thiersant, under the heading of *Alpinia chinensis*, Roxb., a species allied to *A. officinarum*, remark that the plant growing in Canton affords medicinal flowers which serve as alexipharmic and for dissipating the fumes of alcohol from the breath.

228. *Leonurus sibiricus*, Linn.

Labiatae.

坤草: K'uen (earth) ts'ao (herb): local name 'Kwan chor'. Ch'ung wei, I mu ts'ao, Br. iii. 78; P.S.; C.R. Alpha. 283, 550; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The flowering stems and seeds of the Siberian Motherwort are the parts used in medicine. There is, however, some confusion regarding the origin of this drug. The Chinese names are also applied to *L. micranthus*, Max., and in Manchuria to *Lycopus lucidus*. It is sometimes confounded with *Verbena officinalis*, known as Ma pien ts'ao, the 'horse whip plant', and sometimes with a *Serratula*. The dried plant from Singapore is said to have been collected from plants raised in gardens in China and locally. It has square stems, pinnatifid leaves, and a faint odour and bitter taste. Porter Smith says it is prescribed as a tonic, alterative, vulnerary, and general remedy in puerperal and menstrual diseases. The latter property is indicated by one of the names, I mu, 'benefitting mothers'.

229. *Ligustrum lucidum*, Ait.

Oleaceae.

竟子: Cheng (chastity) tzü (seed): King tsz (Cant.): local name 'Ching chee'. Nü (girl) cheng (chastity), Br. iii. 342; P.S.; Tung ch'ing shu (evergreen tree); Ch'ung shu (insect tree): Hosie; Henry; Wilson; C.R. Alpha. 913; St.; B.E.R.; Ph. Soc. Mus.

This large-leaved Privet is one of the White Wax trees of China. It is evergreen, with oval pointed leaves, white

flowers in thyrsoid clusters and black fruit. Because of its white, fragrant flowers, the tree is regarded as an emblem of chastity. It grows throughout China, and according to Hosie it is the tree most commonly inhabited by the wax insect, especially in Szechwan. The fruits are used in medicine and are exported from Hong-Kong. These are berries nearly half an inch long, oblong, black, wrinkled, containing one nut. The taste is bitterish. The fruit is said to promote longevity. The fruit and bark are made into mixtures for rheumatism.

230. *Lindera strychnifolia*, Villar: (*Daphnidium Myrrhae*, Sieb. & Zucc.: *D. strychnifolium*, Sieb. & Zucc.).

Lauraceae.

台烏: T'ai (exalted) wu (black): local name 'Thoi woo'. Wu yao; T'ien tai wu yao, Tatar.; Debeaux; J.R. and P.S. under *Daphnis Myrrhae*; C.R. Alpha. 1235 and 1478; A.H.; Hosie; St.; B.E.R.; Ph. Soc. Mus. as *Daphnidium sp.*, Ou io (Annam).

A variable species of *Lindera*, with the habit of a tea shrub, frequently found in provinces south of the Yang-tze. The drug is imported from Canton, and consists of thin slices of woody roots, whitish in colour, with a thin brown bark, and having an aromatic odour and camphoraceous and pungent taste.

Tonic, astringent, and carminative properties are attributed to this drug which is supposed to act like Myrrh or Lign Aloes.

Kondo and Sanada have examined the root and found in it a crystalline alcohol of a camphoraceous odour and taste, called linderol, and other crystalline bodies.

231. *Linum usitatissimum*, Linn. Linaceae.

胡麻子: Hu (foreign) ma (hemp) tzu (seed): local name 'Woo mah chee', Br. ii. 388; C.R. Alpha. 486; P.S.; J.R.; Hosie; St.; B.E.R.

Flax was unknown to the ancient Chinese, and its cultivation most probably has been introduced from the west. In the Pen ts'ao the term Hu ma is applied to the seeds of *Sesamum* and Indian hemp (*Cannabis*). In the Chi wu (1848) a good drawing of the flax plant is shown under the name of 'Foreign hemp of Shansi'. Linseed is now grown extensively in the mountains of North China and South Mongolia, for its seed which is used for oil. Its fibre is of poor quality and is not suitable for textile manufacture.

232. *Lithospermum erythrorhizon*, Sieb. & Zucc.

Boraginaceae.

梗紫草: P' ien tzu (purple) ts'ao (herb): Pin t'sz ts'o (Cant.): local name 'Phin see chow'. Br. iii. 23; Tatar.;

Debeaux; P.S. under *Anchusa tinctoria*; T. & M.; J.R.; C.R. Alpha. 1024; Henry; Hosie; St.; B.E.R.

The plant, sometimes called Gromwell, grows in North and Central China, and is cultivated in certain districts for its dye root. It also grows in Japan where the root is called Japanese Alkanet. It is exported from Ichang, Newchwang, and Canton.

The drug occurs in long, woody, twisted roots, with the outer portion peeling off in flakes, all parts being of a purplish-red colour. The colouring matter is soluble in spirit and oils.

The drug is used as a dye in China, Japan, and other countries in the East. In medicine, because of its red colour, it is supposed to have a marked action on the blood. It is given in skin affections and eruptive fevers.

233. *Litsea* sp.

Lauraceae.

桂月: Kuei (cassia) yüeh (moon): local name 'Kwee yoot'. Br. iii. 304; Porter Smith, under 'Cassia Buds'; St.; B.E.R. under *Laurus nobilis*, Linn.

The sample consists of portions of fruits and peduncles of a lauraceous tree or shrub. They are probably the 'Cassia moon seeds' referred to by Bretschneider under *Litsaea glauca*, Sieb. There is a tradition that these seeds fall down from the moon. In the seventh century there was a fall lasting ten days. In the eleventh century a number fell during fifteen moonlight nights. In the Pen ts'ao these fruits are recommended for certain eczematous affections behind the ear, called 'moon sores'. Like cinnamon bark they are also used for diarrhoea and coughs.

234. *Lonicera japonica*, Thunb.: (*L. chinensis*, Wats.).

Caprifoliaceae.

金銀花: Chin (gold) yin (silver) hua (flower): local name 'Kam ngai fah'. Br. iii. 191; Lour.; P.S.; Tatar.; St.; B.E.R.; Hosie; Henry, Chin. Pl. 66; C.R. Alpha. 162-5; Ph. Soc. Mus.

The Chinese Honeysuckle or Woodbine is well distributed over China and is much cultivated about Peking. The flowers of the above, and probably other species, are exported from Chinkiang, Tientsin, and Canton. The Malayan drug is obtained locally and from China. The market value of the flowers is T. 6, and upwards a picul.

The fresh flowers are white and yellow in colour or, as the name suggests, silver and gold. The dried flowers in the medicine shops are small, brown coloured, and have the odour of tobacco. They have antifebrile, corrective, and astringent properties, and their continued use as a medicine is said to increase vitality and lengthen life.

235. **Lophanthus rugosus**, Fisch. Labiatae.

霍香: Huo hsiang (fragrant): local name 'Khok heong'. Tatar.; P.S.; T. & M.; J.R.; Hosie; C.R. Alpha. 371; B.E.R.; St. A number of Sanskrit and other foreign names are given in the Pen ts'ao for the plant.

This labiate grows in Annam, India, and other parts of S. Asia. Cultivated plants of this genus are brought from Ningpo and Hankow for medicinal purposes. The leaves and twigs in this collection were imported from Canton.

The drug in the form of tea is carminative and stomachic, and is useful in the treatment of uterine fluxes and blood diseases.

236. **Lophatherum gracile**, Brongn.: (*L. elatum*, Zoll.) Gramineae.

淡竹: Tan chu (bamboo): local name 'Tham chook'. Tan chu yeh (leaves). Br. ii. 463; St.; B.E.R.; Co may (Annam).

A grass in waste land in China, Japan, Java, and Amboyna. It is recognized by its cross-veined leaves somewhat resembling those of a young bamboo.

In Indo-China the root is mixed with fermenting cereal grains in the production of wine, giving the finished product a peculiar and agreeable odour (Crevost and Lemarié). The leaves are considered to have antifebrile and diuretic properties.

237. **Loranthus Yadoriki**, Sieb. & Zucc. Loranthaceae.

桑寄生: Sang (mulberry) chi (lodge) sheng (born): called locally 'Song kee sang'. Sang shang ki sheng (lodging on the mulberry tree; a parasite), Br. iii. 354; P.S.; C.R. Alpha. 1067; Henry; Hosie; St.; B.E.R.

The twigs and leaves of a number of parasitic plants or epiphytes, which go under the name of Chi sheng, are known specifically by the names of the trees on which they are attached, such as Yü (Elm), Liu (Willow), Sang (mulberry) chi sheng. They are all used in medicine; the last kind is most esteemed. The twigs and leaves in Szechwan are valued at H.T. 3-5 a picul. The Singapore drug is obtained locally and is also imported from Canton. The sample consists of the thin stems of a parasitic plant cut into transverse slices, showing a blackish bark, and a dense whitish wood with slightly radiating medullary rays. The drug is said to be a valuable female remedy; it is prescribed in puerperal difficulties, threatened abortion, and insufficient secretion of milk.

238. **Lycium chinense**, Miller. Solanaceae.

A common shrub in the Northern and Western Provinces with soft, thin leaves, and small, reddish-purple flowers and red fruits. The plant affords two well-known drugs.

杞子: Ch'i tzü (Berries): K'i tsz (Cant.): local name 'Kee chee'. Kou k'i tsz. Br. iii. 345; Tatar.; Debeaux; P.S. under *Berberis Lycium*; C.R. Alpha. 607; A.H.; J.R.; T. & M.; St.; Hosie; Chu (kou) ch'i, B.E.R.

The small red fruits are collected in the autumn when they are of the size of small grapes. When dry they are oblong, about $\frac{1}{2}$ in. long, wrinkled, black, one celled, and contain a few seeds. Mawkish and rough to the taste. They are imported from Hankow. In medicine they are tonic and cooling, and are given to improve the complexion and brighten the eyesight.

239 **土地骨**: Roots: T'u (local) ti (earth) ku (bone): local name 'Thoo tee kwaan'. J.R.; Ti ku p'i, 'earth bone skin'. Br. ii. 526; iii. 345; A.H.; T. & M.; C.R. Alpha. 1267, 1384; Ph. Soc. Mus. The root bark comes from Cochin China and exported from Hankow and Canton. It is in transverse sections, oval outline 1 in. by $\frac{1}{2}$ in. showing a yellowish-brown bark, white hard wood and brownish pith. The bark has a bitter taste.

The root has antifebrile, antirheumatic, and tonic properties, and is supposed to have a special action on the kidneys and sexual organs.

240. **Lycium sp.**: (?).

Solanaceae.

川地骨: Ch'uan (Szechwan) ti (earth) ku (bone): Ch'uen ti kwat (Cant.): local name 'Choon tee kwaan'.

This drug, as its name implies, comes from Szechwan. It consists of pieces of the lower part of the stem, as thick as a pencil, with yellowish-brown, corky bark; it has no specific taste.

241. **Lycoperdon sp.**: (*Bovista sp.*). Fungi-Lycoperdaceae.

馬勃: Ma (horse) po (wind): local name 'Mak pot'. Br. iii. 213; Tatar.; Debeaux; C.R. Alpha. 808; P.S.; J.R.; St.; B.E.R.; Sarang burong (Malay).

A specimen of Ma pu collected by Porter Smith and exhibited in the Museum of the Pharmaceutical Society, was identified by M. C. Cooke as a species of *Polysaccum*. (A. Henry, *Pharm. Journ.*, ii. [3] 161.)

The Chinese Puff-ball, met with in Central China, grows on decaying wood in damp places, and sometimes assumes a large size, e.g. *L. giganteum*. When ruptured, it discharges its spores in a fine powder. The Chinese name and the botanical name, *Lycoperdon* (λύκος: wolf, πέρδω: break wind) refer to this phenomenon. The dried puff-balls are exported from Chin-kiang and Canton. The drug occurs in broken, light-brown or buff-coloured globular wrinkled masses, hollow and soft, resembling tinder. Mixed with honey or sugar, the drug is given in affections of the throat and diseases of the lungs. The spores are used as a dusting powder.

242 and 243. **Lycopodium serratum**, Thunb.: (*L. javanicum*, Sw.). Lycopodiaceae.

金不換: Chin (gold) pu (not) huan (exchange): local name 'Kim pit woon'.

金耳還: Chin (gold) erh (ear) huan: local name 'Kam yee van'.

This club moss has slender, sub-erect stems, half to one ft. long, and dichotomously forked. The leaves are laxly disposed, lanceolate, bright green, crisped, and serrated, irregular in size on the same branch. It is distributed throughout China, Japan, the East Himalayas, and the Nilgiris in India, Ceylon, Java, and Sumatra. The entire plant is used in medicine. It seems to be a harmless substance, but from one of the Chinese names it is a remedy 'not to be exchanged for gold'. Bretschneider (iii. 212) refers to several other species of *Lycopodium*, growing in China and Japan, which are also used medicinally.

244. **Lysimachia foenum-graecum**, Hance. Primulaceae.

靈香草: Ling (spirit) hsiang (fragrant) ts'ao (plant): Ling heung ts'o (Cant.): local name 'Ling heung chow'. J.R.; C.R. Alpha. 732.

This name is not given in the Pen ts'ao, showing that the drug is of recent introduction. Tatarinov, Smith, and Hosie give the name Ch'ang shan to this plant, probably after a mountain of the same name in Chihli. The name P'ai ts'ao hsiang is given by Stuart and Read to *L. sikokiana*, Miq., growing in the region of Lingnan, the former name for Kwangtung and Kwangsi. A specimen from Malaya of a light coloured root in slices is shown in the Museum of the Pharmaceutical Society.

The drug, consisting of leaves and stems, was imported from Canton. The entire plant is sold in the drug shops of Annam. The leaves have the peculiar odour of foenugreek seeds and are similar in character to those of Hance's species. Hosie says the roots of the plant, grown in Kwangsi, are used in medicine and perfumery and are valued at T. 4 a picul. Hance observed that the leaves were used by women to make a perfumed oil for the hair, and were also made into pills. Chewing the root is said to correct fetid breath.

245 and 246. **Magnolia officinalis**, Rehd. & Wils.

川樸: Ch'uan (Szechwan) p'u (Magnolia): Chu'en p'ok (Cant.): local name 'Choon pok'. The bark.

川樸花: Ch'uan p'u hua (flower): local name 'Choon pok fah'. The flower buds.

These two drugs represent the flowers and bark of a *Magnolia*. The flower buds were identified as those of *M. officinalis*, of which species Sargent records (*Plantae Wilsonianae*, i. 391) the

following interesting passage. 'The tree is specially cultivated in the Upper Yangtse provinces for flowers and bark which are largely used in medicine, and exported from Central and Western China to all parts of the Empire. Flowers are a medicine for women; bark makes a decoction for coughs, colds, and consumption.' These drugs are mentioned in the Pen ts'ao and by all subsequent writers including Bretschneider (iii. 316), Hanbury (Sci. pa. 266), Stuart, Read, Henry, and Hosie. Other species of *Magnolia*, such as *M. hypoleuca*, S. & Z., *M. obovata* and *M. Yulon*, Desf., are referred to as the origin of these products. On the other hand the Chinese name of the tree is applied to more than one plant. Dr. Henry observes that P'u used alone indicates *Celtis sinensis*, Pers., the bark of which has no value as a drug. *Magnolia* grows in the mountains, and *Celtis* in the plains. The flower buds, hou p'u hua, are an article of commerce (C.R. Alpha. 382), and are used for fistula ani and in preparations for female complaints.

The bark (chung p'i) is covered with small tubercles and little linear markings. That from Szechwan is deemed the best and is distinguished as Ch'uan p'u, the drug under notice. Barks from other provinces are called Pan p'u, Nao p'u, Ch'ai p'u, according to size and thickness. It is sold in large tight cylinders, 7 to 9 inches long and very thick. Wilson says the bark is valued at 1,000 cash per ounce. The specimen from Malaya is in thin, square, match-like sticks, showing on one side a tubercular surface and a brown fibrous liber on the other. The bark had lost most of its bitterness and aroma. It is a tonic and stomachic remedy, and is given in fevers.

247. **Magnolia Sprengeri**, Pampanini, *Subsp. M. diva*, Stapf, and other species. Magnoliaceae.

辛川花: Hsin (bitter) ch'uan (Szechwan) hua (flower): local name 'San yee fah'. Sin i, hsin i; Pen ts'ao; Tatar.; S. & T.; P.S.; Br. iii. 306; T. & M.; C.R. Alpha. 464; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The flower buds of the magnolias are an important drug in China and Japan. Hsin i has been referred to various species of the plant, as *M. conspicua*, Salisb., *M. obovata*, Thunb., and in Japan, to *M. stellata*, Max. A specimen of the drug from Malaya was submitted to Dr. Stapf, who was studying the Chinese species of *Magnolia*, and he pronounced the buds to belong to the plant at the head of this article, which is described and illustrated in *Bot. Magazine*, t. 9116. This species is found in Central China and part of Szechwan, and includes varieties of *M. denudata* and *M. conspicua*. They are handsome plants when in flower. The name given to them in the south is *Yin ch'un* (welcoming the spring) as the flowers appear at that

season before the leaves. The flower buds are gathered in Shensi and Chekiang for medicinal purposes, and are exported from Hankow and Kiukiang. The opened flowers are said to have no medical virtues.

The buds which came from Szechwan are about 4 cm. long, globular, pointed clothed with silky hairs, looking not unlike a small peach; they have a fragrant odour and bitter taste.

The drug is regarded as a powerful febrifuge. It is also made into a sternutatory powder as a remedy for diseases of the nose. Divested of the outer hairs, which are injurious to the lungs, the buds are chewed to purify the breath.

248. *Melia Toosendan*, Sieb. & Zucc. Meliaceae.

川棟子: Ch'uan (Szechwan) lien (melia) tzü (seed): Ch'uee ling tsz (Cant.): local name 'Choon lin chee'. Br. iii. 321; A.H.; C.R. Alpha. 251; Hanb. Sci. pa. 244; Pen ts'ao; Lour.; Tatar.; P.S.; St.; Hosie; Ph. Soc. Mus.

This tree is related to the Nim or Margosa tree of India (*M. Azadirachta*), of great value in domestic medicine. The fruit of the Chinese species is a fleshy globular drupe, about an inch in diameter, covered with a shining, thin, horny, yellowish-brown skin, within which, surrounded by dried pulpy matter, is a large stony endocarp furrowed longitudinally, and containing seven or eight cells of which not more than six are usually developed. Taste bitter.

The dried fruits come from Szechwan and are named after that province. It is also a Japanese drug.

The fruits are said to drive away infection; they are employed as a vermifuge and febrifuge. The root is also very bitter and given for cutaneous diseases.

249. *Mentha arvensis*, Linn., var. Labiatae.

薄荷草: Po ho (mint) ts'ao (herb): local name 'Pok ho'. C.R. Alpha. 1035; Pen ts'ao; Tatar.; P.S.; Debeaux; T. & M.; J.R.; Henry; Hosie; St.; B.E.R.; Wu po ho: the drug from Wu (Soochow).

The Peppermint plant grows almost everywhere, but the drug coming from Soochow is regarded as the best. It is cultivated much in gardens, and is used with other vegetables to give flavour. Peppermint has been used as a drug in China and Japan for at least 2,000 years.

The leaves of the plant are from Canton, the emporium of the Chinese menthol trade. They are ovate, hairy on the veins, and the stems are purplish.

The essential oil and menthol or peppermint camphor (Po ho ping, C.R. Alpha. 1033) are yielded in Japan by *M. arvensis* var. *purpurascens*, and in China by *M. arvensis* var. *glabrata*, Holmes.

The oil and menthol are not mentioned in the Pen ts'ao and must be regarded as of modern origin. They appear to have been described first by Gmelin in 1829.

The leaves and stems are made into infusion, and used as carminative, antispasmodic, and sudorific. Menthol produces local anaesthesia in cases of headache and facial neuralgia.

250. *Momordica charantia*, Linn. Cucurbitaceae.

苦瓜子: K'u (bitter) kua (gourd) kan (fruit): local Cantonese name 'Koo kwa kan'. Lai kua (leprosy gourd), Br. ii. 387; Pen ts'ao; Tatar.; Debeaux; P.S.; K'u kua kan; dried fruit in slices, C.R. Alpha. 629; K'u kua ti: peduncles, C.R. Alpha. 630; Henry; St.; B.E.R.; Sliced dried fruit in Kew and Ph. Soc. Museums.

This gourd is cultivated in the southern provinces, and probably has been introduced from countries south of China. When young the fruit is eaten as a vegetable, when old it is taken as a medicine. The fruit is green, oblong in shape, varying from two to five inches in length; red when ripe, and marked by rows of wart-like protuberances which give it a leprous appearance.

The drug sold in Singapore consists of the peduncles with more or less of the lower part of the fruit attached, as if the pulp had been removed; it is very bitter.

The fruit is regarded as tonic and cooling, but it is a drastic purgative when ripe.

251. *Momordica cochinchinensis*, Spr.: (*Muricia cochinchinensis*, Lour.). Cucurbitaceae.

木鼈子: Mu (wood) pieh tzü (seed): local name 'Mook pit tsze'. Muh pee tsze; Fan muh pee; Pen ts'ao; Cleyer; Lour.; Tatar.; P.S.; Hanb. Sci. pa. 231 (where the seeds are figured, Fig. 2); C.R. Alpha. 872; St.; B.E.R.; Mu hsieh, a name of the seeds, which are likened to a turtle or crab.

This gourd is a native of China and Cochin China; each fruit contains from thirty to forty seeds which constitute the drug.

The seeds are orbicular or obscurely triangular, compressed, tubercled at the margin, and having a dark brown, fragile, rugose testa, marked with depressed reticulations; in diameter they vary from $\frac{3}{4}$ to $1\frac{1}{4}$ in. The yellow cotyledons within are extremely oily.

The seeds are aperient and useful in the treatment of tumours and malignant ulcers, and of obstructions of the liver and spleen.

252. *Morus alba*, Linn. Moraceae.

桑白: Sang (mulberry) pai (white): Song paak (Cant.): local name 'Sang pak'. Sang kên pai p'i, Br. iii. 332; Tatar.; P.S.; J.R.; Hosie; Henry; C.R. Alpha. 1071; St.; B.E.R.; Ph. Soc. Mus.

The mulberry is probably the best known tree in China, and is frequent from the Great Wall southwards. There are several varieties of the tree, probably brought about by cultivation and the constant removal of the leaves for sericulture. All parts of the plant are used in medicine: the fruit, leaves, twigs, stems, root, and ashes of the wood. The root-bark seems to be most appreciated; it is exported from Canton and Amoy, and is met with in all the shops.

The drug consists of portions of a root the size of a goose quill; some are larger and sliced, showing a white fibrous wood and an orange-red bark. Pieces of the root occur without the bark, and short channelled portions of bark without the wood.

The root bark is a restorative, tonic, and astringent remedy chiefly in nervous disorders.

253. *Mylitta lapidescens*, Horan. Fungi—family unknown.

雷丸: Lei (thunder) wan (ball): Lui uen (Cant.): local name 'Loo yoon'. Lui hwan; lei huan. Br. ii. 379; iii. 353; Cleyer in 1682; Tatarinov in 1856; P.S.; T. & M.; St.; B.E.R.; Described by Hanbury (Sci. pa. 198–206; *Journ. Lin. Soc.* 1860). Hosie, in 'Szechwan Products'; C.R. Alpha. 699; 'Little man's bread'.

Specimens of this hypogaeus fungus are found underground in the valleys in Szechwan, Hupeh, and Shensi. They were supposed to be formed by thunder metamorphosing the subtle vapour or spirit (ling) of plants. They are, however, the result of the parasitic myxomycetes attacking the roots of certain trees and developing from their substance these tubercular bodies, which afterwards lead an independent though parasitic existence.

They are rounded bodies with black skin, very hard, grey or white within, varying in weight from a few grains to half an ounce. They occur in shops in thin round slices about half an inch in diameter. They have very little of any smell or taste.

The fungus is recommended in epilepsy, chorea, and other nervous affections of children and for destroying parasites in the skin.

254. *Myristica fragrans*, Houtt.: (*M. moschata*, Thunb.).

Myristicaceae.

荳蔻: Tou k'ou: local name 'Tow khow'. Jou (fleshy) tou k'ou. Br. iii. 58; Tatar.; P.S.; C.R. Alpha. 1314; St.; B.E.R.

According to Bretschneider Tou k'ou is the Chinese name for Cardamoms. Pai (white) tou k'ou the fruit of *Amomum krevanh*, and ts'ao (herbaceous) tou k'ou, the fruit of *Languas globosa*. The difference is that the latter are capsules containing the fragrant seeds, while the nutmeg is a solid nut, the inner substance of which is reticulated and mottled like the betel-nut. The first Chinese author who mentions Jou tou k'ou states that

it is brought by ships from foreign countries where it is called kakula, the Arabic name for cardamom.

Nutmeg is a well-known spice obtained locally in Malaya. Strangely, the Chinese do not use it much as a spice, but as a carminative, stomachic, and antispasmodic among medicinal remedies for children and the aged. It is stocked by all Chinese druggists from supplies obtained from Singapore and Penang.

255. *Nauclea sinensis*, Oliver.

Rubiaceae.

勾行: Kou hsing: Kau hang (Cant.): local name 'Ngow thang'. Kou t'êng ('Hook creeper'); Henry, Hook. Ic. Plant. 1956; Br. iii. 185; Tatar.; P.S.; C.R. Alpha. 612; Hosie; St.; B.E.R.; Ph. Soc. Mus.

This thorny climber grows in Honan, Shensi, Hupeh, and Kiangsi. The drug is collected in Hupeh, where the plant was found by Dr. Henry, and is exported from Canton, Wenchow, Foochow, and Hankow. *Uncaria rhyncophylla*, Miq. is quoted by Tsudsioka and Murai as the Japanese source of a similar drug. Tatarinov wrongly presumes the parent plant of the drug to be the same as that which yields Gambier extract or Catechu pallida. The Singapore supply is obtained locally and is also imported from China. It consists of short pieces of reddish-brown stems, with two opposite, sharp, stiff, recurved stipules, compared to fish hooks. The thorns have feebly astringent properties, and a decoction is employed in fevers and nervous disorders of children.

256. *Nelumbium speciosum*, Willd.: (*Nelumbo nucifera*, Gaertn.).

Nymphaeaceae.

The Indian Lotus or Chinese Water Lily is a sacred plant growing in ponds and marshes. It is extensively cultivated from Persia to China and southwards to Australia, as well for its ornamental flowers as for its various useful properties. Nearly every part of the plant has a distinct name and economic use. In the Singapore collection no less than five drugs are supplied by organs of the plant. These are the seeds, or nuts, the germinating plumule, the stamens, the petals, and the root.

LOTUS SEEDS

石蓮子: Shih (stone) lien (lotus) tzü (seeds): local name 'Shak lin chee'. Lien shi, Br. ii. 395; iii. 295; Hanb. Sci. pa. 240; P.S.; C.R. Alpha. 726; St.; B.E.R.; Ph. Soc. Mus.

The nuts, or Egyptian beans, in shape and size resemble small acorns. They are elliptical, hard, and dry with a black testa and white farinaceous kernel. The Chinese name shih (stone) indicates their hardness. The seeds roasted and divested of their shells are a favourable article for dessert. Boiled or ground into flour the kernels form a valuable food and medicine.

LOTUS GERM

(257) 蓮心: Lien (lotus) chi (seed) hsin (heart or centre): locally called 'Lean chee sin'. Lien tsz'sin, Br. ii. 395; iii. 295; T. & M.; C.R. Alpha. 728; Lien i, St.; B.E.R.

This unusual drug is exported from Canton; and Mr. Burkill informs me that he has seen the Chinese preparing it in the Malay Peninsula. It is the plumule, caulicle, or germinating embryo of the ripe seed. They are small forked structures, yellowish in colour and bitter to the taste. A Chinese author, Lu Ki, says: 'In the centre of the seed is a small green hook (plumule) which is called *i* and is very bitter, whence the proverb, "bitter as the plumule of the lotus seed"'. The drug is given to reduce high fever, and is useful in the treatment of cholera, haemoptysis, and spermatorrhoea.

LOTUS STAMENS

(258) 蓮湏: Lien (lotus) hsü (beard): local name 'Lin soo'. Br. iii. 295; Tatar.; P.S.; J.R.; C.R. Alpha. 721; St.; B.E.R.; Ph. Soc. Mus.

The carefully dried and yellow fragrant stamens, or 'beard', as they are called, are sold in Hankow and in South China. They are an astringent and diuretic remedy, and are used as a cosmetic. In Tonkin they are employed for flavouring and improving the appearance of tea.

LOTUS FLOWERS

(259) 仁蓮花: Yen lien hua: called locally 'Yen lin fah'. Lien hua, buds and expanded flowers used in medicine, Br. ii. 395; iii. 295; C.R. Alpha. 722; Ph. Soc. Mus.

The dried red petals of this flower constitute the drug. They are used as a cosmetic application to the face to improve the complexion (Stuart).

LOTUS ROOT

(260) 藕節: Ou chieh: Lien (lotus) ou (root) chieh (joint or section): Ngau tsit (Cant.): local name 'Lin ngow chih'. Lien ou, ou tsie (rhizome) Br. iii. 295; Tatar.; Ou p'ien (slices); C.R. Alpha. 923; St.

The creeping root, cut in sections, shows a series of chambers in the tissue concentrically arranged terminating at the joints. These dried slices of the root stock are imported from Canton, Amoy, and Hokkien.

Hosie says: 'The long white rhizomes resembling a string of sausages, each about a foot long and separated from the others by a constricting fibre. It is these constricting fibres which are used in medicine and are credited with the property of restoring

to health persons suffering from nervous exhaustion'. Their special action is regarded as haemostatic.

The flour of the root (Ou fen, C.R. Alpha. 924); Ngou fen (Hanbury, 240) is used as an arrowroot by the Chinese. It is given in diarrhoea and dysentery, and it is the base of a preparation called *San ho fen*, a diet for infants.

261 and 262. **Nepeta tenuifolia**, Benth.

Labiatae.

荆芥: Ching chieh: 北荆芥: Pei Ching chieh: locally called 'King kai' and 'Pak king kai'. King kie (kiai), Br. iii. 65. Kiai is a generic name for mustard and other pungent plants. Ching chieh is a name applied to various labiate plants. Tatarinov, Stuart, and Hosie refer it to *Salvia plebeia*; Parker (of Canton) *Salvia*, *Origanum vulgare* and *Moslea lanceolata*, Max. Dr. Henry (*Chin. Pl.* 70) applies the name in Hupeh to *Phtheirospermum*, *Mosla*, *Elsholtzia*, *Melampyrum*. Under the same vernacular name the drug is known in Annam, and Regnault calls the plant the 'Calamint of Syria'. The flowering stems of these labiates are exported from Chin-kiang, Ningpo, and Hankow (C.R. Alpha. 175). Hosie valued the stalks at T. 1 to 3, and the flowers at T. 7 a picul. The Singapore specimens came from Hupeh and the flowering spikes and leaves were identified as those of the above specie of *Nepeta*. The plant is used for coughs and for cutaneous affections.

263. **Nephelium Litchi**, Camb.: (*Litchi chinensis*, Sonn.).

Sapindaceae.

荔枝: Li chih: Mérat; Delens; Smith; Tatar.; Debeaux; Seeds, C.R. Alpha. 701; J.R.; St.; B.E.R.; Li chi seeds.

This fruit with its sweet and delicious pulp is sold throughout China as well as Cochin-China, and is an important article of commerce in Fukien and Kwangtung, whence it is exported in quantity after having been dried in the sun. The Chinese use the fruit largely as dessert; the outer part of the fruit is astringent, and the leaves are applied to bites of animals.

The seeds in the Malay peninsula are used by the Chinese as an anodyne and are prescribed in various neuralgic disorders and in orchitis.

264. **Nephelium Longana**, Camb.

Sapindaceae.

龍眼花: Lung (dragon) yen (eye) hua (flower): Lung ngan (Cant.): local name 'Long gun fa'. Tatar.; P.S.; St.; B.E.R.; C.R. Alpha. 793; Parker.

Li chih nu (slave of the Litchi) is a name given to the plant because it is smaller than the Litchi. The leaves and flowers of the Longan tree are officinal, and are exported in small quantities from Canton (Br. iii. 285). The flowers are small, brown, and

hairy, mixed with short peduncles and portions of leaves. The drug is not mentioned in the Pen ts'ao, and must therefore be regarded as a comparatively modern medicine.

265. *Nervilia Fordii*, Schlecht.: (*Pogonia Fordii*, Hance: *P. pulchella*, Hook. f.). Orchidaceae.

正天葵: Chên (genuine) t'ien (sky) k'uei (mallow): local name 'Chin thin kai'.

K'uei is a name given to many plants, chiefly of the malvaceous order. Tung k'uei (winter mallow) has been referred to *Malva sylvestris* and *Abutilon indicum* (Br. ii. 105). T'u k'uei (hare's mallow) is said to be an Anemone, and in Japan *Eranthis Keiskii*, Franch. (Br. ii. 115). Stuart with some uncertainty discusses T'ien k'uei and T'u k'uei under *Eranthis* but his description seems to refer to a Malva-like plant. T'ien k'uei occurs in the Chinese Customs (Alpha. 1294) as an export from Canton, and is left unidentified. The Singapore drug was identified at Kew.

Nervilia Fordii is described in *Journ. Bot.* xxiii (1885), 247, and *Bot. Mag.* t. 6851. It occurs in the island of Hong-Kong and in the Lo fan shan mountains in the Canton province. It is named after Mr. Charles Ford, the Superintendent of the Hong-Kong Botanic Gardens. The leaves are the part used in medicine. They are 2 to 2½ in. in diameter, short stalked, orbicular, acute, deeply cordate at the base, with overlapping lobes, plaited by twelve strong nerves, sparingly clothed with cellular hairs.

266. *Nigella sativa*, Sibthorp. Ranunculaceae.

巨勝: Kü sheng.

The seeds of this plant are on sale in shops in Singapore. The small, black, triangular seeds have a pleasant odour of lemons and are largely used in India as a medicine and as a spice. According to Birdwood this drug is the Black Cummin of the Bible, the Melanthion of Hippocrates and Dioscorides, and the Gith of Pliny. Bretschneider remarks (iii. 216) under 'Kü sheng tsz', 'the black kind of Kü sheng tsz', was identified by Maximowicz as a *Nigella*, although no species of this genus has been observed in China by botanists. The white (or yellowish) kind of Kü sheng seemed to belong to *Ixeris* or *Mulgedium* (Compositae). Porter Smith relying on Tatarinov identifies the Kü sheng tsz' with the seeds of *Sesamum indicum*, but Braun (Hankow Med.) states that the seeds exported from Hankow bear no resemblance to sesame seeds. There is no doubt that *Nigella* seeds are used in China and Malaya, and most probably are imported from Persia and India. Chu sheng tzu of the Customs (Alpha. 46) has been identified as the seeds of *Impatiens balsamina*, Linn.

267. **Oldenlandia Heynii**, G. Don. Rubiaceae.

丹草: Tan (red, elixir) ts'ao (herb): local name 'Tan chow'.

The herb is said to be collected locally as a drug in Malaya, but it is not a usual Chinese drug.

It is an annual slender herb, much branched with linear leaves, and varies from a straggling diminutive herb of 1 to 2 in., to an erect plant a foot high; the solitary filiform peduncles are usually one flowered.

O. corymbosa, Linn., not readily distinguishable from *O. Heynii*, is a plant that frequents cultivated fields at the end of the rainy season in India. It is mentioned in Sanskrit medical works and is considered a cooling medicine of importance in the treatment of fevers (*Pharm. Indica*, ii. 198).

268. **Ophiopogon japonicus**, Ker, and **Liriope spicata**, Lour.: (*O. spicatus*, Ker). Haemodoraceae.

麥冬: Mai tung: Mak tung (Cantonese and local name), short for Mai men tung. 'The root (tubers) resembles the kung mai (barley) whence the name mai (wheat or barley) men tung,' Br. iii. 104; Hanb. Sci. pa. 256-7, Fig. 12; Pen ts'ao; Lour.; Kaempfer; Cleyer; P.S.; T. & M.; J.R.; Henry; Hosie; St.; B.E.R.

This important drug appears to be afforded by at least two allied plants. *Liriope spicata* with large leaves, and *O. japonicus* a smaller plant with smaller leaves. These plants grow throughout China and in Mongolia and Japan. They are specially cultivated near Peking and in the province of Chekiang for their roots which are exported from Ningpo, Ichang, and Hankow. According to Hanbury the drug consists of cylindrical fleshy tubers from 1 to 2 in. in length, and from $\frac{1}{8}$ to $\frac{1}{4}$ in. in diameter, tapering at either extremity. They are of a pale yellowish-grey colour and translucent, soft, and flexible. A central ligneous cord runs longitudinally through each. They have a sweet and agreeable taste. These are presumably from *Liriope spicata*. The Singapore tubers are much smaller, not more than $\frac{3}{4}$ in. in length and $\frac{1}{8}$ in. in diameter. They have the same character of the larger root and the decoction similarly does not give the blue starch reaction with iodine. They are probably the roots of *O. japonicus*. The candied tubers are eaten as a medicine and are regarded as tonic and aphrodisiac. Porter Smith suggests that their action is analogous to that of squills as a pectoral tonic in coughs.

269. **Origanum vulgare**, Linn. Labiatae.

茵陳: Yin ch'en: local name 'Yan chan'.

Yin ch'en hao, is a name for *Artemisia capillaris* (Br. iii. 73). This is another instance of the identification of certain fragrant

Chinese plants being somewhat mixed. *O. vulgare* is quoted by Loureiro as a Canton drug under the name of King kie, but this name is applied to several other labiates (Br. iii. 65.) See *Nepeta*. The specimen came from Canton. The stems are purplish-brown with opposite leaves, clothed with glandular hairs, and having a thyme-like odour. The drug is said to have refrigerant properties.

270. **Oroxylum indicum**, Vent. Bignoniaceae.

千曾底: Ch'ien ts'eng ti: Ts'in ts'ang tai (Cant.): called locally 'Chin chang chee'.

The seeds of this tree are used in medicine. They are flat, thinly discoid, and light buff coloured. They are 2 in. broad by $1\frac{1}{2}$ in., winged and translucent all round except at the base. When powdered they have a yellowish colour, a peculiar rancid odour and bitter and acrid taste. It is not known for what purpose they are used in Chinese pharmacy, but in India the seeds are called 'Damree' and are employed as a medicine for cattle (See *Agricultural Ledger*, No. 6. of 1898, by D. Hooper).

Oryza sativa, Linn. Gramineae.

Rice constitutes the base of much of the food consumed in China as it does in many other parts of the East, but certain varieties of specially prepared grains are used in medicine. From the Malay peninsula there are three forms of rice supplied as drugs.

271. **穀芽**: Ku (cereal grain) ya (sprout): local name 'Kook nga', Br. ii. 335; P.S.; C.R.; St.; Ph. Soc. Mus.

Rice grains germinated and dried with their filamentous sprouts. Malted rice is used as a peptic, carminative and tonic, having much the same effect as germinated barley or malt.

272. **紅谷米**: Hung (red) k'oh (guest) mi (rice): local name 'Hong kook mai'. Hung kang mi, T. & M.; C.R.

Mi is the common name in China for milled rice. Red rice is common rice soaked in infusion of sappan wood, the colour of which it absorbs. Hosie, however, informs us that 'Hung mi is rice dyed by being boiled with inferior meat to impart a fine red colour'. Red rice is used on ceremonial occasions for presenting to guests.

273. **山甲血**: Shan (mountain) chiah (armour) hsuëh (blood): local name 'Sun kap hit'.

This name refers to the blood of the pangolin or scaly ant eater, an animal product used in medicine (C.R. Alpha. 1089). The specimen is that of dirty rice grains. Probably the rice is used as a vehicle for absorbing and administering the peculiar medicinal agent.

274 and 275. **Pachyma cocos**, Fries. Fungus, family unknown.

茯苓: Fu (China root) ling (spirit or fungus): Fuk ling (Cant.): local name 'Fook ling'.

赤茯苓: Ch'ih (naked or peeled) fu ling: Ch'ik fuk ling (Cant.): local name 'Chek fook ling'. This drug is mentioned by all writers on Chinese materia medica from the Pen ts'ao downwards. It is best described and figured in a paper by Curry and Hanbury published in the *Journ. Linn. Soc.* xxiii (1860) 94, and reproduced in Science Papers (200-206, 267). Br. iii. 350; Ph. Soc. Mus.

The drug occurs as large tuberiform bodies having a rough blackish-brown skin and consisting internally of a compact mass of considerable hardness and of a whitish colour, made up of mycelium, and insipid to the taste. It is sometimes called 'Indian Bread'.

The tubers are found with the roots of fir trees in Central and Western China. Abundant supplies of the drug come from Szechwan. Hosie observed that the fungus can be propagated by attaching slices of the growths to fresh cut pieces of fir wood which are then buried in the ground and covered over with sand. Stuart says Fu shen is the name for smaller tubers which cling to the roots. Shên mu is the portion of root of the fir tree encircled by the fungoid growth. Three forms of the drug pass through the Customs at Canton: Fu ling, the tubers (C.R. Alpha. 332); Fu ling p'i, the outer black wrinkled skin (Alpha. 333); and Shih fu ling, the white substance of the tuber from which the black skin has been removed. Each part has a medicinal value; even the unpromising looking outer skin is considered useful as a diuretic in dropsy.

276. **Pachyma hoelen**, Fries, after Rumph.

Fungus, family unknown.

茺苓: Chu ling: Chue ling, Cantonese and local name. Chu ling (pig's tubers), Br. iii. 352; Tuber Regium, Rumph. (*Herb. Amboy.*, xi. 123); Berkeley (*J. Pr. Lin. Soc.*, iii (1859), 102); Hanb. Sci. pa., 269; Debeaux; Tatar.; P.S.; Cleyer; J.R.; T. & M.; Hosie; St.; B.E.R.; C.R. Alpha. 214, 874; Ph. Soc. Mus.

These tuberiform bodies are parasitic on the roots of the Feng tree, *Liquidambar formosana*, Hance, beneath which they are picked up in the spring and autumn. They are black lumps resembling pig's excrement, and are smaller and less regular in shape than the preceding drug, *P. cocos*. They are covered with a black, more or less shrivelled cuticle, which closely invests a homogeneous yellowish-brown substance or mycelium which gives no reaction for starch with iodine. The sample from

Malaya is in thin circular slices of a very light brown or whitish colour from which the outer black portion is removed. The fungus is produced mostly in Honan, also throughout Western and Central China, and is exported from Hankow, Tientsin, Ichang, and Canton. It is valued at T. 5 a picul. It is used as a food and medicine, and many fanciful virtues are attributed to it.

277 and 278. *Paeonia lactiflora*, Pall. (1773): (*P. albiflora*, Pall. (1789): *P. officinalis*, Thunb.). Ranunculaceae.

赤苟 : Ch'ih (red) shao (paeony): Ch'ik cheuk (Cantonese and local name).

白苟 : Pai (white) shao (paeony): Pak cheuk (Cantonese and local name). Pen ts'ao; Tatar.; Debeaux; Lour.; P.S.; T. & M.; Br. ii. 403; iii. 52; Henry; Hosie; C.R. Alpha. 143, 1112; St.; B.E.R.; Ph. Soc. Mus.

The name Shao yao for these drugs is probably generic. There are two kinds of plants described in the Pen ts'ao; one with red flowers Mu shao yao yielding the Ch'ih shao root; and the other with white flowers, Chin (gold) shao yao, yielding the pai shao. The paeony grows wild in Anhwei, Honan, and Szechwan, and is cultivated in Kiangsu and mountains in the north of China. The roots from Malaya are so different in structure that they are possibly afforded by separate plants.

The Ch'ih shao from Anhwei is in thin longitudinal slices of a woody root, 10 cm. long by 3 cm. broad; they are fibrous in structure, brown in colour, and tied up in bundles. Bretschneider says Ch'ih shao is exported from Tientsin and Newchwang.

Pai shao from Hongchow and Shanghai is in hard heavy pieces, tapering, of the size of the thumb, and from four to six in. long, or cut into oval, transverse slices. It is pinkish white in colour, somewhat translucent, showing on the outside the remains of a few scars and tubercles. Sir Alexander Hosie says both kinds of root are exported from Szechwan; the dried roots of the cultivated red flowered variety are valued at T. 2 a picul, while pai shao is valued at T. 5 a picul.

These drugs are much prized by Chinese doctors who use them in tonic, alterative, and astringent medicines, and as a general remedy for diseases of women. They are also said to have a special action on the spleen, liver, stomach, and intestines.

279. *Paeonia suffruticosa*, Andr.: (*P. moutan*, Sims). Ranunculaceae.

牡丹皮 : Mu (male) tan (red) p'i (bark): Mau tan p'i (Cant.); local name 'Mow tan phee', Tatar.; P.S.; J.R.; T. & M.; Br. iii. 53; St.; B.E.R.; Hosie. In the Chinese Customs Reports

the root-bark (Alpha. 857), the root, tan kên (1242), and small rootlets, tan hsü (1241) are catalogued. Ph. Soc. Mus. Tan ken from Singapore.

The Tree Paeony or Moutan is a favourite garden plant of the Chinese, and it has been known from very early times. It is sometimes called Hua wang or 'King of Flowers', and Pai liang chin or '100 ounces of gold'. Bretschneider says it grows in the mountain valleys of Szechwan and Honan; it is also found in Manchuria and the North. The cultivated plant is of more value medicinally than the wild kind. The drug consists of the root bark, the sample of which came from Wu hu. It sells for T. 2 a picul and the best kind Pa tan hutan at T. 7 a picul. Mou tan erh, a fungus or excrescence which grows on the roots is valued at T. 5 a picul. The root bark is found in the shops in small quilled pieces, brown on the outside and purplish within. It has a warm pungent flavour and faint odour. As a medicine the root-bark is employed in colds, fevers, and nervous disorders. Continued use of the drug is said to give vigour to the body and prolong life.

Panax Ginseng, C. A. Meyer.

Araliaceae.

Ginseng is renowned among the Chinese as a drug of the highest value. The name Jen Shen or Man's Image is given to the plant because of the fancied resemblance of the root to the human form, and for this reason it is a panacea for all ills. It is collected from a plant about three feet high, twigs rayed, no branches, red near the root; it bears four to six leaves each with five ovoid divisions, pale green, reticulated, toothed, and serrate on the margin and having a petiole dilated at the base.

The best ginseng formerly came from the Kirin province of Manchuria, the cultivation and collection being a government monopoly, but the supply is now very rare. Korean ginseng is regarded as the best, but it is frequently adulterated with roots of other plants. In the wild state the plant reaches maturity in seven years, at this stage the roots are gathered and scraped with a bamboo knife, contact with iron being objectionable, they are then steeped in water, with or without sugar, and steamed, when they become transparent, and are dried. They have a yellowish or amber colour or are whitish and opaque. In the southern provinces the white root is preferred. In Kiangsu, Anhwei, and Hupeh, the red drug is favoured. The roots are from the thickness of a carrot to portions made up of the fibrous extremities. They have a sweetish taste like liquorice, while some samples are slightly bitter.

There are several sorts of ginseng recognized in the Chinese markets and in medical works. Three drugs in this category are in the Singapore collection.

280. 種粉先參: Chung fen hsien shen (ginseng): local name 'Fan kong sum'.

This is the root of the size of the little finger, light-brown, wrinkled longitudinally and transversely, lighter within, hard and woody in consistence. Taste mucilaginous. It agrees with samples of Korean Ginseng in the Kew and Pharmaceutical Society's Museums.

281. 麗參顏: Li shen (ginseng) hsü (beard): Lai ts'am so (Cant.): local name 'Lai sum soo'. Li an abbreviation of Kao li, i.e. Korea. Kao li shen, a medicine in the Customs List (Alpha. 554).

These are yellowish or amber-coloured rootlets, brittle, translucent, slightly bitter and mucilaginous to the taste. These are the fibrous or bearded extremities of the clarified root of Korean Ginseng, Br. iii. 3. They correspond with samples of Wild Chinese Ginseng from Peking (Yah shan shen, E. H. Wilson, *Ph. Journ.*, 8 July 1888), shown in the Ph. Soc. Mus.

282. 洋參: Yong (ocean or foreign) shen (ginseng): Yeung ts'aam (Cant.): local name 'Yong sum'.

This root has a similar appearance to Korean Ginseng. American ginseng is cultivated in the Appalachian Mountains in the Midland and Western States. According to Sir Alexander Hosie this foreign ginseng is imported in considerable quantities into Shanghai. In these consignments the roots are made to resemble the Chinese drug by freeing them from their epidermis, and making what is called in the Customs 'clarified ginseng'.

There are five shens mentioned in the Pen ts'ao, all of which hold a high place in Chinese pharmacology. Jen shen, *True Ginseng*, operates upon the spleen. Sha shen, white ginseng (*Adenophora polymorpha*) acts upon the lungs. Hsüan shen, black ginseng (*Scrophularia Oldhami*) acts upon the kidneys. Tan shen, red ginseng (*Salvia miltiorhiza*) operates upon the heart. Mou shen, purple ginseng (*Polygonum bistorta*) acts on the liver.

283. *Panax repens*, Max.: (*Aralia repens*, Max.). Araliaceae.

參葉: Shên (ginseng) yeh (leaves): called locally 'Sam yih', C.R. Alpha. 1130; Hosie, *Szechwan Plants*. Dr. Henry found the leaves of this plant being used as a drug in Szechwan where it is called San ch'i (meaning 'three seven'). In other parts of China this name is given to *Gynura pinnatifida*. The fragrant leaves of *Panax repens*, which came from Szechwan and Korea, are not unlike the leaves of true Ginseng (*P. ginseng*). Stuart remarks that the leaves of the latter are sold in bundles as a drug called Shên lu and are considered expectorant and emetic.

284 and 285. **Papaver somniferum**, Linn. Papaveraceae.

粟壳: Su k'ò; 應蘇壳: Ying (jar) su (millet) k'ò (capsule): called locally 'Yin soo hock'. K'ò and su k'ò are names of the capsules of the Opium Poppy (C.R. Alpha. 1539) Ying tzu su or 'Jar fruit millet', refers to the shape of the capsule and the millet-like seed, St.; B.E.R.

The plant was originally grown on account of its beautiful flowers, and both the young plants and seeds were used for food. Growing the poppy for the production of opium in the Central Provinces did not take place till about the middle of the nineteenth century, and in Szechwan it was introduced from India and Tibet about 1780 (Hosie). Poppy-heads are used for diarrhoea, dysentery, and all kinds of fluxes.

286. **Perilla nankinensis**, Decne.: (*P. arguta*, Benth.: *Ocimum crispum*, Thunb.). Labiatae.

紫蘇: Tsê su: tsz so (Cant.): local name 'Tse soo', Su, Br. ii. 14; iii. 67; Tatar.; P.S. under *Lophanthus* sp.; T. & M.; J.R.; Hosie; Henry; C.R. Alpha. 1203; St.; B.E.R.; Ph. Soc. Mus.

This labiate occurs in Szechwan, Kiangsu, Kiangsi, and Kwangtung, and is cultivated in gardens throughout China, Japan, Annam, and Tonkin. The stem, leaves, and seeds are used in medicine, and are exported from Amoy, Chinkiang, and Canton. The dried plant came from Canton, and consists of the stems and leaves of a purplish colour and peculiar fragrance. The whole plant is used as a condiment in cooking. The stalks and leaves are given in medicine to benefit the lungs and alleviate coughs, also to act as a stimulating tonic to the alimentary canal. Under the name of kwei jen the seeds are fed to ducks. Perilla seeds yield by expression a valuable drying oil which is used as a varnish by painters on porcelain.

287. 丹蘇子: Tan (red) su tzu (seeds): called locally 'Soo tsz'.

These are the seeds of the above and other species of Perilla, exported from Canton, Shanghai, and Ningpo. Pai (white) su tzu are the seeds of *P. ocimoides* of the Customs (C.R. Alpha. 1202). They are as large as mustard seeds with a reticulated surface and smooth scar at the lower end.

288. **Perilla** sp. Labiatae.

蘇更: Su keng: So kang (Cant.): local name 'Soo kang'.

This drug is obtained from Canton, and there is a local plant used as a substitute for it, which is not in the collection. It consists of sections, $\frac{1}{2}$ to $\frac{3}{4}$ in. across, of a woody stem, showing white wood, black bark, and distinct pith. The name of the drug refers to a Perilla, but the stem appears to be too thick and ligneous for an herbaceous plant.

289. **Peucedanum japonicum**, Thunb.: (*Ligusticum acutilobum*, Sieb. & Zucc.)
Umbelliferae.

川芎: Ch'uan (Szechwan) hsiung: local name 'Choon koong.'
Ch'uan kung, Br. iii. 47; Faber; Tatar. under *Rad. Levistici*;
P.S.; J.R.; T. & M.; C.R. Alpha. 247; Mat. Chin. Pl. 95; Chang
hoa me, Wilson; Hanb. Sci. pa. 260; Hosie; St.; B.E.R.; attrib-
uted to *Cnidium officinale*, Mak., *Conioselinum univittatum*,
Turcz.; Ph. Soc. Mus.; Ganti (Malay); Senkiu (Japan).

The plant grows in Assam, China, and Malay Islands, and is
much cultivated in Szechwan and Shansi for the fragrant drug.
Perhaps more than one plant yields the root. Hosie gives the
origin of Ch'uan hsiung as *Pleurospermum austriacum*, Hoff.,
but the root of this plant has a different odour. Siebold says its
growth is similar to celery of Europe (*Apium graveolens*), with
this difference that in China they develop the root, and in
England the leaves. The drug is exported from Hankow and
Canton. Nodular masses of the fragrant rootstock constitute
the drug. They are 1 to 2 in. or more in diameter, having
an irregular, rough brown outer surface and a pale yellowish-
brown interior. The Malayan sample is in thin slices, showing
the nodular structure of the rhizome, and with a strong persistent
fragrance similar to celery. Ordinarily it is a cooling medicine
for headache, but at times it is used in cases of difficult labour
and as an application for ulcers and wounds.

290. **Peucedanum medicum**, Dunn, and probably other
species.
Umbelliferae.

信前胡: Hsin (new) Ch'ien hu: Sun ts'in oo (Cant.): local
name 'Soon chin foo'. Ch'ien hu, ts'ien hu, Br. iii. 30; Pen ts'ao;
Tatar.; Debeaux; P.S.; T. & M.; C.R. Alpha. 118; Henry;
Hosie; St.; B.E.R.; Ph. Soc. Mus.

This is an important drug of the Pen ts'ao Herbal, similar to
Tu huo, obtained from plants growing in the Central and
Western Provinces of China. It has been referred to species of
Peucedanum and *Angelica* by previous writers, but from
material supplied by Dr. Henry, the probable source of Ch'ien
hu in the mountains of North and South Ichang in Hupeh and
in Szechwan is *P. medicum*, Dunn, a species related to *P. terebin-
thaceum*, Fisch. (*J. Linn. Soc. (Bot.)* xxxv. 496). The drug is
exported from Ningpo and Hankow, and Hosie valued it in
Szechwan at T. 2.5 to 3 a picul. The Malayan drug came from
Kwangsi and Foochow. It occurs in thin longitudinal slices of
a light coloured root, shorter and more irregular than Tu huo,
and with a less pungent and bitter taste. This drug, according
to Porter Smith, is often sold under the name of Tang tu p'an
or 'Number one artillery', for the successful attacking of disease.

291. **Peucedanum praeruptorum**, Dunn, and **P. terebinthaceum**, Fisch. Umbelliferae.

防風: Fang feng: local name 'Fong foong'. Br. iii. 31; C.R. Alpha. 292.

This root is an important Chinese drug, but there has been much confusion about its origin. Tatarinov and Porter Smith describe it under *Libanotis*. Bretschneider says that at Peking the name Fang feng is applied to *Siler divaricatum*, Benth. and Hook. f., and *P. rigidum*, Bunge. Regnault, following Loureiro, considers the root to be yielded by *Coreopsis leucorhiza*, a naturalized American plant. Dr. Henry says the officinal drug under this name, also called Ai feng, a contraction for Ai (cleft) fang feng, is obtained from *P. praeruptorum*, Dunn, a plant growing in Hupeh, Chang yang, and Szechwan. The proximity of this plant to rocks suggested the specific name (*J. Linn. Soc.* 35, 496-7). Hosie places Fang feng under *P. terebinthaceum*, an allied species. The botanical characters of these are so similar that Dr. H. Wolff, a specialist in the Umbelliferae, has renamed some sheets of *P. terebinthaceum* from China as *P. praeruptorum*. The roots are exported from Tientsin, Chefoo, and Newchwang.

The plant yielding this drug has been compared to fennel and is eaten as a pot-herb. The root is sold in long, brownish-yellow, irregularly branching pieces, having some of the stem attached to the rootstock. It is said to have a sweetish aromatic taste.

The drug from Singapore is in thin slices, 2 to 3 in. long by $\frac{1}{2}$ in. broad, the root having been cut obliquely. The bark is light brown, marked with longitudinal and transverse fissures. The inner woody portion is white, and soft and spongy in consistence, traversed by long wavy fibres. The taste is somewhat bitter and pungent without odour.

The root is given as an eliminative remedy in catarrh, rheumatism, and diseases in which chills or damp have been encountered. A decoction allays profuse sweatings and is helpful in cases of poisoning by roots of aconite.

292. **Peucedanum sp.** Umbelliferae.

獨活: Tu (self) huo (moving): Tuk oot (Cant.): locally pronounced 'Took wooi'. The name is given to represent a delicate plant, always in motion, even in apparently still air. Br. iii. 32; Tatar.; P.S.; S. & T.; T. & M.; C.R. Alpha. 1364; Henry; Hosie; Wilson; St.; B.E.R.; Ph. Soc. Mus. Figured in Chih wu ming 21.

This fragrant drug is obtained in Tibet, Kansu, Szechwan, Korea, and Japan, and is exported from Hankow and Newchwang. The origin of the drug has been referred with reservation to three umbelliferous plants: *Peucedanum decursivum*, Max.; *Angelica grosseserrata*, Max., and *A. inaequalis*, Max. But

the source is not satisfactorily determined. Further investigations are needed to prove the identity of Tu huo and K'iang huo.

The root is probably a long tap root. The Singapore sample came from Szechwan. It consists of the root in thin pieces, $\frac{1}{2}$ in. wide, sliced longitudinally; the outside is marked lengthwise and crosswise with ribs or striae, the interior is lighter, soft, and fibrous. It has a bitterish camphoraceous and pungent taste. It is prescribed as a stimulant, arthritic and antispasmodic; useful in fevers.

293. *Peucedanum* sp.

川姜活: Ch'uan ch'iang huo: Ch'uen keung oot (Cant.): called locally 'Keong woot'. K'iang huo, ch'iang huo, Br. iii. 32; C.R. Alpha. 81.

This is an important drug, allied to Tu huo, mentioned in the Pen ts'ao kang mu. Tu huo is produced in China, but Ch'iang huo, means a plant allied to Tu huo that is produced in the country called Si Kiang which is Kukonor in Tibet. Another name for this drug is Ch'uan ch'iang, meaning Ch'iang huo produced in or brought through Szechwan. Sir Alexander Hosie refers to the roots being used in medicine under the names of Ch'iang huo and Ch'uan huo, with a value of T. 7 a picul. He says the drug comes from Eastern Tibet and is imported into China via Szechwan. The origin of the drug has not been definitely established. Dr. Henry (Br. iii. p. 80) states with reservation that in the Ichang mountains *Peucedanum decursivum*, Max., may be the source of one of the above drugs, and Dr. Read quotes *Angelica sylvestris*, L., but this has not been confirmed. K'iang huo is exported from Hankow and Ichang. The root is said to be darker in colour than Tu huo and is marked off into short internodes. The sample from Singapore unfortunately had been attacked by insects and its character destroyed. Its action is stated to 'cause perspiration'. These umbelliferous roots are administered as stimulants and antispasmodics (Stuart).

294. *Phellodendron amurense*, Rupr.: (*P. chinense*; C. K. Schneider). Rutaceae.

黄栌: Huang (yellow) p'ò (Thuja): local name 'Wong-paik'. Br. iii. 315; Hanb. Sci. pa. 266; Tatar.; J.R.; C.R. Alpha. 518; Henry; Hosie; Wilson; St.; Ph. Soc. Mus.

A tree of Manchuria and North China cultivated for its bark which is used as a dye and in medicine. Exported from Newchwang and Ningpo.

In the early days this drug was referred by Loureiro and Hanbury to *Pterocarpus flavus*, and this name was adopted by Tatarinov and P. Smith. In 1888 P. W. Squire described the

bark and its microscopical characters and called the origin *Evodia glauca*, Miq. Credit is due, however, to Dr. Henry and Mr. E. M. Holmes for having established the identity of the drug. Perhaps more than one species is concerned since the drug comes from Manchuria and also from West China. The best kind of bark is that from Hupeh.

The bark occurs in thin, rectangular slices, 1 in. broad by about 4 in. long, yellow and smooth. It is bitter to the taste, and contains the alkaloid berberine. Loureiro was the first to record its properties as resolvent and vulnerary and as a yellow dye for silk. It is a universal domestic medicine. Wilson remarks that it is the 'poor man's cure-all' being employed externally and internally for almost every ailment.

295 and 296. **Phragmites communis**, Trin.: (*P. Roxburghii*, Kunth: *Arundo phragmites*, Linn.). Gramineae.

蘆荻根: Lu ti ken: Cantonese and local name 'Lootik kan'.

郎古根: Lang ku ken: Cantonese and local name 'Long koo kan'. Lu: common reed; lu ken: the root; lu sum: the sprouts, Br. iii. 94; P.S.; T. & M.; Henry, Chin. Pl. 253; C.R. Alpha. 768; St.; B.E.R.; Ph. Soc. Mus.

This reed is common in the north of China where it takes the place of the bamboo of the southern provinces. The root and sprouts are exported as medicines from Canton.

The Singapore samples were obtained locally and consist of the root and lower portion of the stem of the plant. The first specimen is as thick as a quill, light yellow, solid, in short pieces with nodes about 12 mm. from one another. The other is thicker broken up, and fibrous. There is no taste or aroma in either drug. It is probable that the second sample is a local substitute for the officinal drug, since the term lang is applied to a useless grass. The root of this reed is regarded as cooling and diuretic. The tender sprouts are slightly bitter and are used as a food and medicine.

297. **Phyllanthus sp.**

Euphorbiaceae.

黑面神: Hei (black) mien (face) ch'en (spirit): Hak min shan (Cant.): local name 'Haik mean san'.

This sample consists of sliced branches of a shrub with a few leaves. The leaves correspond with those of a *Phyllanthus* related to *reticulatus*. The Chinese name is that of a commercial article (C.R. Alpha. 366) which Matsumura identifies with *P. Emblica*. The same vernacular name is given to a drug (wood and bark) used in Annam. Debeaux and Stuart record the use of the leaves of *P. urinaria* among the Chinese as a diuretic and sudorific.

298. *Picrorhiza Kurroa*, Royle.

Scrophulariaceae.

胡王連: Hu wang lien: Oo wong lin (Cantonese and local name). Hu huang lien, P.S.; St. under *Barkhousia repens*; C.R. Alpha. 482; Henry; B.E.R.

This plant is distributed in the Alpine Himalayas eastwards. The root is a foreign drug introduced into China from the west. Wu is the old name for Kiangsu, the geographical source of Coptis root. Hu lien and Hu huang lien are names given to this drug because it resembles Coptis in appearance and bitterness. It reaches China by way of Thibet and Szechwan.

The rhizome is of the size of a goose quill or smaller, the lower portion covered by a shrivelled, greyish-brown, corky bark, and marked by scars, the remains of rootlets; towards the upper end it becomes larger ($\frac{1}{4}$ in. in diameter) thickly set with dark, greyish-brown scales. Generally broken in short pieces 1 to 2 in. long; fracture short, black internally, cross section resembling the eye of a bird; no odour, but very bitter in taste. The root contains a bitter glucoside wax and fatty matter (*Pharmacographia Indica*, iii, 10). The drug is a favourite remedy for bilious dyspepsia accompanied by fever.

299. *Pinella tuberifera*, Tenore, and other species. Araceae.

半夏: Pan (half) hsia (summer): Pun ha (Cant.): called locally 'Poon hai'. Br. iii. 150; Pen ts'ao; Tatar.; P.S. under 'Midsummer root'; Sang pwan hea (Sheng pan hsia), Hanb. Sci. pa., 262, Fig. 16; C.R. Alpha. 975; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus.

This aroid is widely distributed in China and Japan. It is found in the northern and central provinces, notably Szechwan, Shensi, Shantung, and Kiangsu.

The tubers are like small white balls, about 10 mm. in diameter, flattened on the top. On the flattened side is a depression around which are a number of pits. There are two kinds in the market. The crude or raw tuber (Sheng pan hsia) are white and brittle, the fracture showing a uniform mass of starchy cellular tissue. The starch is rounded or oval and associated with needle shaped raphides. Fah pan hsia is the name of the prepared tubers after they have been soaked in water and dried. These are brownish and translucent and somewhat irregular in shape. Sometimes they occur in the market in thin slices. In a fresh state the drug is diaphoretic and emetic, and poisonous in large quantity. The prepared tubers are given in fever and rheumatism and are considered active in removing phlegm.

Pinus sinensis, Lam.

Coniferae.

The Sung or Chinese Pine occurs in the mountains of Central and Western China, and at lower levels in Northern China and

Korea. Two drugs are obtained from the tree: the resin and pine knots.

300. 松香: Sung (pine) hsiang (fragrance): Ts'ung heung (Cant.): local name 'Choong heong'. Br. iii. 301; Hanb. Sci. pa. 270; Pen ts'ao; Cleyer; Tatar.; Parker; Debeaux; P.S.; C.R. Alpha. 1211; St.; B.E.R.

Bretschneider says the resin is produced in Shantung and is exported from Swatow and Amoy. Dr. Henry records its trade in the Hankow market. It is also a Japanese product. The resin is pale yellow, terebinthinate in odour, and has a vitreous fracture. It is used for skin eruptions, ulcers, and indolent wounds.

301. 松節: Sung (pine) chieh (knots): Ts'ung tsit (Cant.): local name 'Choong chih'. Br. iii. 301; C.R. Alpha. 1210; P.S.; St.; Sample from Singapore in Ph. Soc. Mus.

These excrescences or hardened woody knots or joints of the pine branches are exported from Amoy and Canton. The local supply, brought from China, is in the form of yellowish shavings of close-grained wood with the odour of pine. Stuart says they are used in decoction for colds, rheumatism, toothache, and vomiting.

302. **Piper longum**, Linn.: (*Chavica Roxburghii*, Miq.).

Piperaceae.

萹茂: Pi po: local name 'Pit poot'. Pen ts'ao; Tatar.; P.S.; Debeaux; J.R.; T. & M.; St.; B.E.R.; C.R. Alpha. 1008. Pi po li, from Sanskrit pippala.

Long pepper of the Indian Archipelago is principally imported from India. The spice consists of the spiked fruits about an inch long, cylindrical, pedicellated, dark grey or black. The taste is hot, pungent, and aromatic.

Long pepper is a stimulant and tonic; it relieves flatulence and arrests vomiting and dissipates phlegm.

Pi p'o mu is another product of the plant. The name is an imitation of the Hindustan word, Peepla mul. This is the root of a pepper with weaker qualities than those of the fruit.

303. **Piper nigrum**, Linn.

Piperaceae.

胡椒: Hu chiao. Tatar.; Debeaux; P.S.; St.; B.E.R.

Black pepper or Lada hitam; white pepper or Lada puteh (Malay).

The Chinese import considerable quantities of pepper from the Indian Archipelago. Zanthoxylum fruits and capsicum are so plentiful and less expensive than black pepper that they are more generally used as a spice. Pepper is considered an energetic stimulant, diaphoretic and carminative.

304. *Piper* sp.

Piperaceae.

魯子: Lu tzü (seed): local name 'Loo chee'. In the Customs Report (Alpha. 782) there is a drug with a similar name, but the word Lu has the character of the common reed (*Arundo*) (Br. iii. 94). The fruit is that of a species of pepper imported from Canton. It is used as a remedy for gonorrhoea. A similar specimen is in the Pharmaceutical Society's Museum.

305. *Pistia stratiotes*, Linn.

Araceae.

浮萍: Fou (floating) p'ing (water plant): local name 'Fow phing'. Br. iii. 198; Pen ts'ao; Lour.; Tatar.; Debeaux; P.S.; J.R.; C.R. Alpha. 327; Henry; St.; B.E.R.; Ph. Soc. Mus.

Two or three water plants are confused under the names of Fou p'ing and Shui (water) p'ing in the Chinese Herbals. Dr. Henry found the sample of fou p'ing from Hong-Kong in the Pharmaceutical Society's Museum to be *Pistia stratiotes*. This is Loureiro's identification, and it is confirmed in this sample from the Malay Peninsula. Shui p'ing. Dr. Read, Regnault, and Tatarinov refer this to the small *Lemna minor*, and an intermediate sort is a *Limnanthemum*.

The Water Soldier is cosmopolitan in the tropics. The dried plant is an article of export from Canton and Amoy and is available in shops in South China, Malaya, and Cochin China.

The whole plant has long been employed in ancient prescriptions. It is applied to boils, syphilitic eruptions, and in many skin complaints.

306 and 307. *Plantago major*, Linn.

Plantaginaceae.

車前草: Ch'e (cart) ch'ien (track) ts'ao (plant): called locally 'Chea chean chor'. Ch'e ts'ien, Br. ii. 439; iii. 115; Pen ts'ao; Lour.; Tatar.; Debeaux; P.S.; T. & M.; J.R.; Henry; Hosie; St.; B.E.R.; C.R. Alpha. 35.

The Greater Plantain or Ribwort is widely distributed as a common weed by the wayside and in fields. It is eaten as a pot-herb, and the expressed juice is taken as a medicine. The plant was considered a styptic and vulnerary by ancient writers, and is still an article of commerce in Chinese ports and drug shops.

(307) **車前子**: Ch'e ch'ien tzü: Ch'e ts'in tsz (Cant.).

The seeds are exported from Newchwang, Hankow, and Kiu kiang. They are minute, black, oval, or oblong, compressed, with a whitish scar in the centre of one side. They are insipid and have an oily smell when crushed. Soaked in water they become coated with a translucent mucilage.

The seeds are a remedy for diarrhoea and dysentery; they are pectoral and demulcent and are thought to be favourable to child-bearing. The seeds enter into the composition of liang fen, a jelly used in the summer (Dr. Henry).

308. *Platycodon grandiflorum*, DC. Campanulaceae.

吉更: Chieh (luck) keng (change): Cantonese and local name 'Kat kang'. Kie keng, Br. iii. 6; Tatar.; P.S.; C.R. Alpha. 9; Henry; Hosie; St.; B.E.R.

This is a common plant in mid-China; it grows to a height of a foot or more and bears small blue flowers. In *A naturalist in Western China*, by E. H. Wilson, a photograph is given of a field of these plants under cultivation. The root is collected for the market in Anhwei, Chili, Hunan, Hupeh, and Szechwan, and is exported from Chinkiang, Chefoo, Wuhu, and Tientsin. The root is said to be as thick as a finger, of a yellowish-white colour. The drug has been described as dark brown pieces of the root, shrivelled and wrinkled. The specimen from Singapore is in thin longitudinal slices of a light brown, parsnip-like root, 7 in. long, 1 in. at the top, tapering down to a $\frac{1}{4}$ in. It has no special odour or taste, and appears to be simply mucilaginous. Saponin has been separated from the Japanese root. The drug is said to be tonic and carminative, and is sometimes fraudulently substituted for ginseng. An extract obtained by boiling the rootstock is a common remedy for coughs and chill in the stomach.

Plumeria acutifolia, Poir.: (*P. obtusa*, Lour.).

Apocynaceae.

This delightfully scented flowering tree is cultivated in India, Siam, Java, Seychelles, and the Philippine Islands. In China it grows in Hong-Kong, Yunnan, and Formosa. Dr. Hance suggested some years ago that this milky, fragrant plant is of American origin, since there is an absence of any mention of the plant in Chinese works. It appears to have been introduced into India by the Portuguese from Brazil, as it is usually planted in the churchyards by native Christians in order that it may deck the graves with its white deciduous flowers which are produced almost all the year round.

The tree is known as the Jasmine Tree, also 'Frangipani', from Frangipanier of the French. It is the 'Flos Convolvulus' of Rumphius (vi. 43) and is called 'Champa' in Bombay.

Three samples of the dried flowers of this tree were sent under the following names:

309. 鷄蛋花: Chi tan hua: Cantonese and local name 'Kai tan fah'.

310. 靈消花: Ling hsiao hua: local name 'Leen seiw fah'.

311. 毛菇: Mao ku: local name 'Moo koo'.

Chi tan hua is the name given by Tatarinov, Porter Smith, and Parker to the flowers of *Plumeria*. The meaning is 'Fowl egg flower'. The corollas are red coloured and salver shaped, with the lobes overlapping to the left. The tube is 1 cm. long and the obovate lobes are 3 cm. long by 1.5 cm. broad. In India the flower buds are eaten with Betel leaves as a febrifuge. The medicinal use of the flowers in China is not recorded, but the drastic, purgative, and even poisonous nature of the juice of the bark has been observed by several writers.

The other vernacular names refer to different plants.

The second name corresponds with Ling siao hua of Bretschneider (iii. 170) and others, who identify the drug with the flowers of *Tecoma* (*Bignonia*) *grandiflora* (See *Campsis grandiflora*).

Mao ku is another mistaken identification. It is the name of *Amaryllis* (C.R. Alpha. 826) the flowers of which are said to be efficacious in urinary complaints. The Chinese name, meaning 'hairy tuber', refers to the roots being surrounded by a mass of tangled hairy rootlets. The dried flowers of *Plumeria* have a superficial resemblance to the flowers of *Gardenia* which are also used in medicine (Br. iii. 335).

312. *Polycarpaea corymbosa*, Lam. Caryophyllaceae.

白頭翁: Pai (white) t'ou (head) weng: local name 'Pak thow yoong'.

This drug is mentioned by Bretschneider (iii. 24) and Debeaux, who identifies it with *Anemone japonica*, S. & Z. Dr. Read also refers it to a *Pulsatilla* growing in Honan and Manchuria, and names it *A. cernua*, Thunb. The drug has also been referred to a *Eupatorium*. The fruit of the *Pulsatilla* with the long feathery tails of the seeds, and the fruits of *Polycarpaea* covered with soft down, both resemble the grey head of an old man, hence the name. *Polycarpaea corymbosa* is a small plant found in many parts of China and throughout India from the Himalayas to Ceylon. In India it is a drug administered externally and internally as a remedy for bites of venomous reptiles. It is found in the shops as flowering heads, arising from silvery cymes, with portions of the stem and tomentose leaves, and is used as demulcent and astringent. The herb with the roots of *P. arenaria*, Gagnep., is a drug of Indo-China (Ph. Soc. Mus.).

313. *Polygala Reinii*, Franch. & Sav. Polygalaceae.

巴吉: Pa (Szechwan) chi (luck): Pa kat (Cant.): local name 'Pai kit'. Pa chi t'ien, Br. iii. 15; C.R. Alpha. 926; B.E.R. under *Bacopa Monnieri*, Hay.; St.

This drug is mentioned in Pen ts'ao, but the description is not clear. Loureiro called the mother plant *Septas repens*, and Bentham *Herpestis Monnieri*. The plant grows in E. Szechwan, Hupeh, and Kiangsi, and in Japan. The drug is exported from Canton, and Swatow. It is in small, hard, curved pieces of root-bark, with the heart taken out, dark reddish coloured, and wrinkled outside and black within.

The root is considered warming and tonic. It strengthens the bones and sinews, quiets the five viscera, is tonic to the centres, increasing the will power and benefits the breath. In Malaya it is a kidney remedy.

314. *Polygala tenuifolia*, Willd. and *P. sibirica*, Linn.

Polygalaceae.

遠支: Yüan chih: Uen chi (Cant.): local name 'Yoan chee'.

Br. iii. 16; Pen ts'ao; Tatar.; P.S.; J.R.; C.R. Alpha. 1557; Hosie; St.; B.E.R.; Ph. Soc. Mus.

These plants grow chiefly in Northern China and Japan; *P. tenuifolia* is sometimes called siao ts'ao (small herb) because it has smaller leaves than *P. sibirica*. The root, which is called Japanese Senega, is collected for the market principally in Shensi and Honan, and exported from Hankow and Tientsin. The Singapore samples came from Yunnan. The roots are somewhat larger than a writing quill, light brown, contorted and marked transversely. Sometimes they are quite tubular, the central woody portion having been removed, for this reason they are known as 'roots without pith'. The taste is sweetish and somewhat acid. The roots are valued at T. 11 a picul. The drug is given as a substitute for senega in colds and coughs. It appears in the Taoist prescriptions for procuring long life, and is accordingly considered beneficial in all affections of the vital organ, the heart.

315. *Polygonatum falcatum*, A. Gray, and other species.

Liliaceae.

王精: Wang (royal) ching (essence): Wong tseng (Cant.): local name 'Vong ching'. In Malaya the Chinese name wang (royal) is sometimes changed into huang (yellow). Huang tsing (yellow ethereal essence), Br. iii. 7; Tatar.; P.S. under *Caragana*; St.; B.E.R.; C.R. Alpha. 514; Ph. Soc. Mus. sample from Singapore.

This is a mountain plant in China and Japan with leaves like a bamboo which with the flowers and fruit are edible. The root is highly valued by the Taoists who call it 'Food for the immortals'. Another name for the drug is 'Poor man's relief'. The root is prepared by steaming and drying, and is exported from Canton, Wenchow, and Ningpo. It is met with in shops in flat

pieces from 1 to 1½ in. long, having a greenish-yellow colour, with a varying degree of translucency and flexibility. The outer surface is marked with small circular cicatrices, tubercles, and transverse lines. The Singapore sample is reddish-black, soft, sweet, and mucilaginous to the taste. The drug is chiefly tonic and constructive in its properties.

316. *Polygonatum officinale*, All., and other species.

Liliaceae.

玉竹: Yü (jade) chu (bamboo): Yuk chuk (Cant.): local name 'Yook chook'. Br. iii. 8; Hanb. Sci. pa. 255, under *Bambusa arundo*, Nees; C.R. Alpha. 1547; Pen ts'ao; Lour.; P.S.; Henry; St.; B.E.R.; Ph. Soc. Mus.

This drug, on account of its Chinese name, has been confused with the roots of the bamboo. Bretschneider, however, suggested the root of a *Polygonatum* as the source, and this has been confirmed by Dr. Henry, who places it as the root of *P. officinale*, 'Solomon's Seal'. Jade bamboo is common in the mountains of North China, and the root is exported as a medicine from Chefoo and Hankow.

The drug is pale yellow or brown, in semitranslucent, twisted pieces, pretty evenly jointed, and varying in size, length, and hygrometric condition. The taste is sweetish and mucilaginous, and odour like that of newly-baked bread. In water the roots swell up to their original dimensions, three or four times as thick as in the dry state. Frequently they are sliced longitudinally in thin strips.

The drug has cooling, demulcent, tonic, and antiperiodic properties.

317. *Polygonum aviculare*, Linn.

Polygonaceae.

扁速: Pien (plate) hsü (beard): local name 'Pin chook'. Pien chu, Br. ii. 54; iii. 127; C.R. Alpha. 1022; Tatar.; P.S.; St.; B.E.R.; This name is sometimes given to *P. hydropiper*, Linn.

A plant of N. Asia and Europe. This small knot grass or goose grass with red stems and joints, often covers the ground. The stems are numerous, branching in every direction, generally prostrate, round, striate, leafy at the knots or joints. Leaves hardly an inch long.

The whole plant is used in medicine and is exported from Swatow.

It is demulcent, pectoral, astringent, tonic, and diuretic. It is used in Malaya for gonorrhoea. Stuart says this knot grass is used for itching affections of the skin and for piles.

318. *Polygonum multiflorum*, Thunb. Polygonaceae.

首烏: Shou (head) wu (crow): Shau oo (Cant.): local name 'Sow voo'. Ho shou wu, Pen ts'ao; Tatar.; P.S.; where the drug is referred to *Tylophora ovata*, Hook. (*Apocynum juvenas*, Lour.); St.; B.E.R.; A.H.; C.R. Alpha. 376, 1166; Hosie; Ph. Soc. Mus.

A creeper with small white flowers and reddish stems. The root is collected in Kiangsu, Kwangtung, Hupeh, Szechwan, and Fukien.

The drug occurs in reddish-brown slices, about 2 in. across, of a tuberous root, showing a crenated outline, with black wrinkled edges. The interior has a rufous tint, and is hard and woody, with a slightly astringent taste. It is labelled 'Earth nut from Szechwan'.

Fabulous stories are told in the Pen ts'ao of the powers of this root: to give long life, increase vigour, and promote fertility. It has tonic, vulnerary, and antiscorbutic properties. In Malaya it is administered to women after confinement.

319. *Polygonum* sp. Polygonaceae.

蓼刀竹: Liao (smart weed) tao (knife) chu (bamboo): Liu to chuk (Cant.): local name 'Liew kow chook', St. Small knotted roots with brush-like rootlets.

320. *Polypodium* sp. Filices—Polypodiaceae.

千年貝: Ch'ien (1,000) nien (years) chien (to see): Ts'ien nin kin (Cant.): called locally 'Chin nin keen'. C.R. Alpha. 899; Br. iii. 203; P.S.; A.H.; St. 346; B.E.R.; Ph. Soc. Mus.

The drug consists of transverse slices of a fern rhizome, about $\frac{3}{4}$ in. in diameter, reddish-brown in colour, showing the light coloured vascular bundles. It is not easy to define its correct botanical source.

Read mentions a root called Chin hsing ts'ao, and refers it to *P. hastatum*, Th., a fern of Southern and Western China. Stuart identifies the drug as the root of the sporulating form of *P. lingua*, Sw. The fronds are 2 to 3 ft. long, with star-shaped spore cases on the back arranged in pairs. The fronds and the root are used to reduce carbuncles and scrofulous glands. 'Nien chien' is stated by Porter Smith to be an anti-rheumatic remedy (See *Cyclophorus*).

321. *Polystictus sanguineus*, Fries. Fungus—Polyporaceae.

紅菇: Hung (red) ku (fungus): local name 'Foon koo'.

Bretschneider gives Ling chi (divine chi) another name for this agaric. Chi is a plant of immortality. There are six kinds enumerated, according to their colour, including ch'i (red) chi;

tan (cinnabar) chi, which grows in Hunan. The taste is bitter, non-poisonous. Br. ii. 41; iii. 266. (See Murrill, *Trop. Polyp.* p. 51.)

Many sorts of fungi exhibiting various colours at different stages of growth are described at great length in the Pen ts'ao. They are said to be magical in their effects in certain diseases and confer longevity. Porter Smith refers to the drug under *Polyporus ignarius*; it passes the Customs (C.R. Alpha. 731) as a medicinal fungus.

Hosie notices Ch'a ku, a rare kind of fungus used in medicine for its exceptionally nourishing and delicate qualities. It is said to grow only in the province of Kiangsi and costs as much as TIS. 5 a catty.

322 and 323. **Poncirus trifoliata**, Rafinesque: (*Citrus trifoliata*, Linn.: *C. fusca*, Lour.: *Aegle sepiaria*, DC.).

Rutaceae.

枳實: Chih (orange) shih: local name 'Tsee sat'.

枳殼: Chih (orange) ko (peel): local name 'Tze hoch'. Chi; Chi shi (the fruit), Br. ii. 488; iii. 334; Chi shi (unripe fruit) Chi koh (ripe fruit) P.S.; Chih shih (small fruit), Chih k'ao (large fruit), Hosie; Hanb. Sci. pa. 238; C.R. Alpha. 133, 137; Pen ts'ao; Lour.; T. & M.; J.R.; S. & T.; St.; B.E.R.; Hosie; Ph. Soc. Mus.

This very thorny species of orange has been removed by Swingle from the genera *Citrus* and *Aegle* (*Plantae Wilsonianae*, ii. 149). It is cultivated for hedges; and its small fruit varying from the size of a cherry to that of a walnut, is characterized by its thick, firm, almost woody skin. It grows in Szechwan, Shansi, and Kwangtung, and is widely distributed in Cochin-China. The unripe fruit is cut in half or sliced and sun dried. The drug is exported from Foochow and Hankow.

The above two drugs came from Szechwan and both occur in thin transverse slices. That called Tsee sat is about $\frac{3}{4}$ in. in diameter, including the thick skin, pulp, and seeds; the other called Tze hock is about 2 in. in diameter with thick skin and no central portion. The fruit dried before maturity is said to be more active. The drug is bitter and aromatic and is used in making stimulating cordials.

324. **Potentilla cryptotaenia**, Max.

Rosaceae.

仙孝草: Hsien hsiao ts'ao: local name 'Sin hock choo'.

This probably is the same as an unidentified drug in the Customs Alphabetical List 451, where it is called Hsien hao ts'ao, 'Fairy Crane herb'. *P. cryptotaenia* is a plant growing in the provinces north of the Yangtse. It is 1 to 2 ft. in height, taller than most species of *Potentilla*, and has brownish stems

and ovate serrate leaflets, more or less hairy. The drug consists of the broken stems and leaves. Stuart says the root of this plant is officinal, and is called Lang ya, because it resembles the tooth of a wolf or other animal. It is prescribed in Feng diseases, for foul ulcers and intestinal worms.

325. **Potentilla sericea**, Linn.: (*P. multicaulis*, Bunge).

Rosaceae.

柴草: Ch'ai ts'ao (herb): local and probably Cantonese name 'Tse chow'.

This is a variable species of *Potentilla* widely distributed in temperate Asia and North America. The drug is made up of the roots of this small plant with portions of the stem attached, and the leaves covered with silvery hairs. Debeaux alludes to a drug called Fan pe ts'ao as a species of *Potentilla*, and says the entire plant is used as an astringent. Dr. Read and Stuart refer Han pai ts'ao to *P. discolor*, Bge. and give *P. cryptotaenia*, Max., (Lang ya, 'Wolf's tooth') and *P. Kleiniana*, Wight (She han) as sources of allied drugs. According to Regnault *P. reptans*, L. is known in Annam for its astringent root.

326. **Prunella vulgaris**, Linn.

Labiatae.

洛吟草: Lo han ts'ao (herb): local name 'Look ham chow'. Hia ku ts'ao (plant withering in the summer); T'ie ts'ao (iron coloured plant, as it soon loses its freshness), Br. iii. 80; Lour.; Debeaux; Tatar.; J.R.; P.S. under *Lophanthus*; Cavalerie; A.H.; St.; B.E.R.

The Self Heal, Heal All, or Carpenter Weed is a common plant of Europe and America. About a foot high, it has square stems, stalked ovate leaves, and dense spiked heads of purple flowers. The drug consists of the flowering tops and parts of the stems, and is exported from Ningpo and Canton.

The Self Heal is used for fevers and cough in China, and is antirheumatic, alterative, and tonic. It was highly commended in old herbals for its vulnerary properties, but it is not now held in much repute.

327. **Prunus armeniaca**, Linn.: (*Armeniaca vulgaris*, Lam.).

Rosaceae.

淨北杏: Ching (pure) pei (north) hsing (apricot): local name 'Pak hang'. Br. ii. 471; iii. 271; C.R. Alpha. 466; T. & M.; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The apricot is regarded as indigenous in Mongolia, Manchuria, and Northern China; many cultivated varieties are found in the northern, central, and western provinces. The fruit, kernels, leaves, twigs, and roots are all officinal. The dried fruits are eaten to quench thirst and allay fever. Between 2,000 and 3,000

tons are exported a year, valued at T. 20 a picul, Germany being the chief consumer. Apricot and peach kernels are used in China instead of almonds; Tientsin, Chefoo, and Kiang being the main centres of the trade.

328. **Prunus japonica**, Thunb.: (*Cerasus japonica*, Loisel.).

Rosaceae.

郁李仁: Yü (elegant) li (plum) jen (kernel): local name 'Yow lee yan'. Yü li, Br. ii. 474; iii. 340; Tatar.; P.S.; C.R. Alpha. 1551; Henry; Hosie; St.; B.E.R.

This is a small tree, six or seven feet in height, cultivated in many parts of China. The flowers are rose coloured, and the fruit is small and red, like a cherry, taste harsh and sour, edible, but not much used. The kernels are exported from Newchwang and Hankow, either dried or put up in some form of confection. They are small, oval, about 5 mm. long, light-brown, with the taste of bitter almonds. They are used in medicine as a demulcent and diuretic and in rheumatism and dropsy.

329. **Prunus Mume**, Sieb. & Zucc.

Rosaceae.

烏梅: Wu (black) mei (plum): local name 'Voo moo'. Br. ii. 473; iii. 272; P.S.; Henry; Hosie; St.; B.E.R.

Bretschneider identifies mei of the classics with the above species. The tree is found in mountain valleys in most provinces in China and is cultivated in Japan as an ornamental shrub as well as for its fruit. There are many varieties both wild and cultivated.

The drug from Singapore consists of the small, dried, dark coloured, acid fruits resembling plums. These are the fruits gathered half ripe and dried in the sun or smoked. Pai mei or white plums are the green ones pickled in brine and dried. The white, or salted plums, under the name of Ching mei are relished as a savory pickle, and are served at most Chinese feasts. They are exported chiefly from Canton. An infusion of the black plums is given in typhoid fever to relieve thirst. They are carminative, antifebrile, and antispasmodic. A decoction obtained by boiling dried plums in water is an ingredient in green dyeing (Hosie).

330. **Prunus persica**, Sieb. & Zucc.: (*Amygdalus persica*, Linn.).

Rosaceae.

汀桃仁: Tao (peach) jen (kernels): local name 'Thow yan'. Br. iii. 273; Tatar.; Debeaux; P.S.; J.R.; T. & M.; C.R. Alpha. 1257; Hosie; St.; B.E.R.

The Peach is found wild and cultivated throughout China, which is believed to be its original home. There are many varieties. The flowers, bark, gum, and wood are used in medi-

cine, but the kernels are the chief commercial product, exported from Cheefow and Hankow. The kernels sold in Singapore are from a variety of peach called T'ing, probably named after T'ing chow, a prefecture in the south-west of Fukien. They are smaller than ordinary sweet almonds, oval in shape, the average size being 13 mm. by 9 mm. Peach kernels are used largely in confectionery. In medicine they are given for coughs, blood diseases, rheumatism, and ague.

331. *Prunus* sp.

Rosaceae.

淨肉仁: Ching (pure) nei (inside) jen (kernel): locally called 'Cheng noo yan' and 'Looi yan'. Jui ho, jui jen, sui jen, Br. iii. 338; Nei jen, C.R. Alpha. 896; Sui jen, C.R. Alpha. 1206; Fig. in Ch. xxxiii. 29; Tatar.; P.S.; St.; Kew and Ph. Soc. Mus.

These are the seeds of a small plum, with brown, corrugated, hard shell, pointed at one end, containing a kernel tasting of oil of bitter almonds. They are exported from Hankow and Ichang.

Stuart places this among 'Unclassified drugs found in the Pen ts'ao', where it is referred to as the fruit of a thorny shrub with drooping flowers. The kernel is nourishing, cooling, and sedative, and is used in the treatment of eye diseases, nose-bleeding, and constipation.

332. *Psoralea corylifolia*, Linn.

Leguminosae.

骨子: Ku (tuber) tzü (seed): local name 'Khoo chee'. Pu ku chih; Pen ts'ao; Hanb. Sci. pa. 237; P.S.; J.R.; Hosie; C.R. Alpha. 1042; St.; B.E.R.; Bauchee seeds (India).

The plant is a native of India, and is met with in the south and west of China.

The small fruits may readily be mistaken for seeds. They are flat, oval or reniform, black, one-seeded legumes, 3-4 mm. long, and sometimes surrounded by the persistent 5-lobed calyx. They have an aromatic flavour. Their market value in China is from T. 8 to 10 a picul.

The drug is regarded as tonic and aphrodisiac, and is used in certain cutaneous diseases.

333. *Pteridium aquilinum*, Kuhn: (*Pteris aquilina*, Linn.).

Filices—Polypodiaceae.

正决粉: Chên (pure) chüeh (fern) fen (flour): Ching k'uet fan (Cant.): local name 'Chen keat fang'. P.S.; Kûe, Br. ii. 185; 377; Henry; Siebold; St.; B.E.R.; Shui chüeh is *Ceratopteris thalictroides*, Brongn.

The Brake or Bracken, as in Europe, is a common mountain plant, and grows all over China and Japan. In the Pen ts'ao several kinds of fern, not easily distinguished, are referred to as medicinal. Siebold in *Economic plants of Japan* speaks of the

ligneous root of *Pteris* being contused, washed in water, and the separated starch being cooked and eaten by the poorer classes in Japan. Dr. Henry observed that in Hupeh the mountaineers prepared a regular article of diet from the roots of this fern. In other parts of Central China the starch is eaten in times of scarcity in spite of its bitterness; the rootstocks are used in medicine. The specimen of starch sent under the above name is clean and white, and consists of rounded granules or with a triangular outline, and no hilum.

334. *Pueraria hirsuta*, Schneider (1907): (*Dolichos hirsuta*, Thunb. (1794): *Pachyrhizus Thunbergianus*, Sieb. & Zucc. (1846): *Pueraria Thunbergiana*, Benth. (1867): Sargent, *Plantae Wilsonianae*, ii. p. 118.

The Ko creeper is a plant much cultivated in China and Japan for its textile fibre and for its edible root. Wilson notices its cultivation by the Chinese in Pehang. This large climber is trained on trellis work and produces a tuberous root of a fusiform shape which attains 1 ft. or 18 in. in length and 5 or 6 in. in diameter. This is cooked and eaten, and when dried it is esteemed as a drug (Dr. Henry). The stems yield a fibre from which ko pu (ko cloth) is made, a so-called grass-cloth. The plant affords two drugs in this collection—flowers and root.

Ko flowers. 干葛花: Kan ko hua: local name 'Kon kot fah'. Ko hua, flowers of the Ko creeper, Br. iii. 174; C.R. Alpha. 599. The dried flowers or flower buds are of a light red colour and 1 cm. in length. They are exported from Ningpo and Canton. The Malayan sample came from Canton. The flowers are used as a diaphoretic and febrifuge.

335. Ko root. 干葛: Kan ko: local and Cantonese name 'Kon kot'. Ko ken, Br. iii. 174; Tatar.; P.S.; T. & M.; Henry (*Econ. Pl. of China*); St.; B.E.R.

From Canton and Foochoo and Ningpo are exported large tubers (Kan ko, C.R. Alpha. 600) and smaller tubers (Ko tou or ko ken, C.R. Alpha. 601). In Kiangsi and Hupeh a kind of arrowroot (Ko fen) is made from the root (see *Kew Bulletin*, 1889, 621; 1895, 47; 1896, 68). The Singapore sample is in the form of thin longitudinal sections of the fusiform root, 10 cm. long and 3 cm. broad at the centre. It is white and starchy. The starch grains are muller-shaped, or angular at one end and rounded at the other. They are destitute of marked hilum, and resemble the starch of *Colchicum* root (*Gard. Chron.*, Feb. 14, 1891, 211). The starchy roots are used in medicine; they are said to be thirst relieving, antifebrile, antiemetic, and counter-poisonous.

336. *Punica granatum*, Linn.

Lythraceae.

石榴皮: Shih (stone) liu (pomegranate) p'i (peel): local name 'Shak liu phee'. An shih liu, Br. iii. 280; Pen ts'ao; Tatar.; P.S.; J.R.; Debeaux; T. & M.; C.R. Alpha. 1155; St.; B.E.R.

The pomegranate is cultivated throughout India and China. Bretschneider says the tree is not indigenous to China but was introduced from the west by the famous General Chang chien about 120 B.C. The fruit has a smooth, hard, coriaceous skin which, when the fruit is ripe, is of a soft yellow tint with shades of red. The reddish fruit, bursting open and revealing its numerous seeds, is compared to a grinning mouth showing the teeth. The drug consists of the dried pericarp or rind of the fruit. It contains tannin and the alkaloid pelletierine. The peel is exported from Canton, Amoy, and Shanghai. In medicine it is an astringent tonic and anthelmintic, especially for tape worms. The flowers and root are also used in medicine.

337. *Pyrola media*, Sw.

Pyrolaceae.

鹿含草: Lu han ts'ao: local name 'Look khan chor'. Matsumura, *Chinese names of Plants*, 296; Henry; C.R. Alpha. 764; St. under *P. rotundifolia*; Lu t'i ts'ao is *P. elliptica*, Nutt., in *Flora Sinensis* of B.E.R.; Ph. Soc. Mus.

Wintergreen is found in similar localities in China to those occupied by it in America. The leaves and fruit stalks in this collection are those of *P. media*. They are said to be used as an expectorant and in pulmonary complaints. Stuart, referring to an allied species, *P. rotundifolia*, remarks that the plant is bruised and applied to wounds to staunch haemorrhage, it is also applied to bites of serpents, dogs, and insects.

338. *Pyrus cathayensis*, Hemsl.: (*Cydonia sinensis*, Thouin:*Chaenomeles sinensis*, Koehn.).

Rosaceae.

木瓜: Mu (wood) kua (melon): local name 'Mook kwa'. Br. iii. 277; Pen ts'ao; Tatar.; P.S.; T. & M.; C.R. Alpha. 868; Hosie; Wilson; St.; B.E.R.; Ph. Soc. Mus.

The Quince is a native of Central Asia, and is cultivated in all temperate countries. The Chinese Quince is a distinct species and grows chiefly in the Yangtse provinces and in Japan. Mu kua kan, the sliced and dried fruit is exported from Szechwan and Hankow.

The drug, as it appears in commerce, is in dried, thick slices, the ripe fruit having been cut transversely, showing the seeds embedded in reddish, acid, and astringent pulp.

It is a popular remedy for all bowel complaints, also for nervous affections.

339. *Pyrus sinensis*, Lindl.

Rosaceae.

雪梨: Hsueh (snow) li (pear): local name 'Soot lee'. Li kan (dried pears), li p'i (peel), Br. iii. 276; J.R.; Norman Shaw; P.S.; B.E.R.; Ph. Soc. Mus.

The pear has been known in China from very ancient times and is probably indigenous. Numerous varieties of the fruit are now cultivated; Manchuria, Shantung, and Shensi furnish the best kinds. In Peking there is a small roundish, light-coloured pear called pai li which is very pleasant, it is probably the 'snow pear' of this collection which came from Tientsin. The dried fruit and peel of Chinese pears are exported from Amoy and Canton, probably brought from North China, and are sent to Japan and Annam.

The Malay drug consists of the dried peel with portions of the pulp attached. The dried fruit and peel are used in dysentery.

340. *Quercus infectoria*, Oliver.

Capuliferae.

沒石子: Mu (without) shih (stone) tzü (seed): Mut shek tsz (Cant.): local name 'Mook siak chee'. C.R. Alpha. 874; Hanb. Sci. pa. 267; Pen ts'ao; Tatar.; P.S. under 'Galls'; St.; B.E.R.; Laufer, *Sino-Iranica*, 367; Ph. Soc. Mus.

Galls are the globular excrescences caused by the gall wasp (*Cynips quercus-folii*) puncturing the twigs, leaves, and buds and depositing its ova in several species of oak in Asia Minor, Armenia, Syria, and Persia. The greater part of galls found in Indian and Chinese bazaars come from Persia brought by Arab merchants. The Sanskrit name majuphala comes from the Persian mazu, and the older Middle Persian form of the word occurs in the Chinese transliterations. The Persian name can be traced in the names for galls found in the Pen ts'ao, illustrating the foreign origin of the drug at that time. Hanbury speaking of Chinese galls says, 'They do not differ from the galls of *Q. infectoria*, Oliv., the common Aleppo galls of Europe mentioned as an import into China in 1514'.

Oak galls are spherical with a diameter of 1 to 2 cm., they have a smooth surface marked by small protuberances, and are of a dark olive-green to a yellowish-brown colour. They contain 50 to 60 per cent. of gallotannic acid. They are given in dysentery and chronic diarrhoea, and used as a mouthwash for children. (They must be distinguished from *Galla sinensis*, Wu pei tzu, the galls of *Rhus semialata*.)

341. *Quisqualis indica*, Linn.

Combretaceae.

水君子: Shui chün tzü: local name 'Sooi kwan chee'. Hanb. Sci. pa. 232, Fig. 3; Pen ts'ao; Rumph.; Lour.; Tatar.; P.S.; J.R.; C.R. Alpha. 1145; Hosie; St.; B.E.R.

Burma Creeper; Liane vermifuge (Mauritius); Belimbing hutan (Malay).

The creeper is abundant in Malaya, Annam, India, and Burma, and in the provinces of Canton, Fukien, and Szechwan.

It is said that a famous physician Kuo shih chun made a speciality of treating children's diseases and extensively used this drug for the purpose; therefore it was given his name. In the Moluccas the seeds have long been held in repute as an anthelmintic. In 1833 Dr. Oxley and Mr. Gordon of Singapore (*Calcutta Med. and Phys. Trans.*, vii. 488) recommended these seeds as useful in cases of lumbrici.

The fruits are about 1 in. in length, oval or oblong, pointed at either extremity, and sharply pentagonal. The woody pericarp is thin, fragile, and of deep mahogany colour, and encloses an oily seed. The seeds are still given in medicine chiefly in cases of lumbrici in children, when four or five seeds, bruised and given with honey or jam are sufficient to expel the worm.

342. **Raphanus sativus**, Linn.

Cruciferae.

菜 菔 子: Lai fu tzü: local name 'Loh fook tsz'. Lai fu; lo po, Merat; P.S.; Debeaux; Lour.; C.R. Alpha. 688; St.; B.E.R.; Br. ii. 39; Lobac (Annam); La phug (Tibet).

The Mongols call it Laopang, lobin, and turma. The latter name is derived from the Persian turup, whence turnip and other napiform roots.

The Radish is generally cultivated and is often found in a wild state. It is sometimes called 'a cabbage with violet flowers and long root'. The seeds are used in medicine in India and China. They are greyish-red in colour, irregularly oval with pitted surfaces. Radish seeds are considered to be expectorant, peptic, diuretic, carminative, and corrective.

343. **Rehmannia chinensis**, Libosch., and **R. glutinosa**, Steud.

Scrophulariaceae.

生 地: Sheng-ti: Shang ti (Cant.): local name 'Sang tee'. A contraction of Sheng (fresh) ti (earth) huang (yellow); Kan (dry) ti huang, Br. iii. 100; Tatar.; Gauger; P.S.; T. & M.; C.R. Alpha. 1264; J.R.; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The plant is common in North China. It is probable that more than one species of the plant yields the drug. *R. lutea*, Max., is depicted in So moko as a Japanese medicinal plant. The root is the part collected for the market, and is sold either in a fresh state or specially prepared. In the latter case the root is washed and cleaned in boiling water and allowed to dry in the sun. It is dark coloured, soft, wrinkled, more or less flattened, 2 to 5 in. long, having a sweetish, fruity taste. It is exported chiefly from Tientsin and Hankow. The sample from Malaya is in slices.

Earth yellow is a cooling and purifying drug, acting directly in the blood as an alterative and tonic. The fresh drug is naturally more active than the soaked and dried root.

344. **Rheum officinale**, Baill., and **R. palmatum**, Linn.

Polygonaceae.

大黃: Ta (great) huang (yellow): Cantonese and local name 'Tai wong'. Huang liang (yellow excellency) Ch'iang ch'ün (captain general), Br. iii. 130; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 1225; Debeaux; St.; B.E.R.; Hosie; Ph. Soc. Mus.

The Chinese appear to have been acquainted with the properties of rhubarb from a period long anterior to the Christian era, for the drug is treated in the Herbal Peking which is attributed to the Emperor Shennung, the father of Chinese agriculture and medicine, who reigned about 2700 B.C.

R. officinale grows at 7,000 ft. over the mountain ranges between the Han and Yangtse rivers. This furnishes the rhubarb of Shensi, Hupeh, and Szechwan (Henry). The drug is exported from Hankow.

The root from Kansu, south of Mongolia, derived from *R. palmatum* is exported from Tientsin (Br.; Hosie.) The root is dug up from plants six or seven years old, in the spring, when the plant is in bud. It is peeled or trimmed, cut in slices, bored in the middle, and hung up to dry. The root is in firm, thick yellow slices, variegated or mottled. The Singapore drug came from Szechwan.

The root is a general eliminant and tonic. Stuart says purgative properties of rhubarb are not made so much of by the Chinese as they are in the west.

345. **Rheum sp.**

Polygonaceae.

生單片: Sheng (raw) chün p'ien (slices): Shang kwan p'in (Cant.): local name 'Sang kun pin'.

This drug consists of slices of a root apparently of a kind of rhubarb. The colour is reddish-brown with streaks of a yellowish colour, and the odour and taste are those of rhubarb. Bretschneider, Smith, and Stuart refer to local or native sources of this drug, but the above vernacular name does not help in classifying it.

346. **Rheum sp.**

Polygonaceae.

水葵: Shui (water) k'uei (mallow): local name 'Sooi kwai'.

The Chinese name has been given to the leaves of *Althaea rosea* and *Hibiscus esculentus* (T. & M.), to *Limnanthemum nymphoides* and *Brasenia peltata* (St.).

The leaves from Canton resemble those of a Rheum. They are vivid red in colour, with pinkish hairs on both surfaces. They appear to secrete some acrid volatile body as the paper envelope in which they were kept was in a rotten condition.

347. **Rhus semialata**, Murray: (*R. javanica*, Linn.: *R. chinensis*, Mill.). Anacardiaceae.

五子: Wu tzü: Ng tsz (Cant.): local name 'Ng phoo chee'. Wu pei tzü, the galls, Hanb. Sci. pa. 266; C.R. Alpha. 1466; Pen ts'ao; Cleyer; P.S.; St.; B.E.R.; Henry; Hosie; Wilson.

The red gall tree (Fu mu) grows in China, Japan, and the Himalaya and Khasia mountains. The galls are formed by the punctures and deposited ova of *Aphis chinensis* on the leaves and leaf stalks of this tree. Probably other species are concerned since Hosie refers to *R. hypoleuca*, Champ., as a gall tree of Szechwan, and *R. punjabensis* also supplies galls.

These Chinese galls are hard, oblong, hollow, contorted bodies, about $1\frac{1}{2}$ in. long, irregularly shaped, and tubercled; the outer surface is velvety and light brown in colour, the thin wall is translucent and the interior smooth. They contain from 70 to 80 per cent. of gallotannic acid.

They are largely exported for dyeing and tanning purposes, in recent years the demand has been greater than the supply. The Chinese use them medicinally as an expectorant and astringent, and they are applied topically to swellings and wounds.

348. **Rhus vernicifera**, DC.: (*R. vernix*, Thunb.)

Anacardiaceae.

淨乾漆: Chen (pure) kan (dry) ch'i (lacquer): Tsing kon ts'at (Cant.): local name 'Chin kon chut'. Kan ts'i (dried varnish) Br. iii. 318; C.R. Alpha. 62; Henry; Wilson; St.; B.E.R.

The Chinese or Japanese lacquer or varnish tree grows in mountainous districts in Shensi, Hupeh, and Szechwan, and in Japan. The crude varnish is obtained by incisions of the stem, and is coloured with various pigments and used to fabricate those works of art so well known and esteemed in European countries. The pure dried varnish is exported from Canton. It is found in the shops in hard, black, shining, resinous pieces, insoluble in water. When used for medicinal purposes it is pulverized and given as a tonic for coughs and intestinal worms.

349. **Ricinus communis**, Linn.

Euphorbiaceae.

蓖麻子: Pi (louse) ma (hemp) tzü (seed): local name 'Pee mah chee', C.R. Alpha. 990; Pen ts'ao; Tatar.; Debeaux; P.S.; T. & M.; E. Watson; St.; B.E.R.

The castor oil plant is cultivated in China for its shade, as an ornamental plant, and for its seed and leaves which are used in medicine. It is regarded as of foreign origin, having been introduced from Tartary where it is extensively grown.

The seeds are compared to, and named after, a species of tick which infests cattle in China. They are oval, curved, or com-

pressed, grey, shining, and striped or mottled with blackish or reddish-brown stripes or spots on the outside. Castor seeds are obtained locally in Singapore. They contain about 40 per cent. of the acrid and purgative oil upon which their properties depend. The Chinese use the crushed seeds as medicine more frequently than they do the oil, the paste is applied to relieve scrofulous sores.

Rosa laevigata, Mich.: (*R. hystrix*, Lindl.). Rosaceae.

Bretschneider mentions several species of rose, the fruits, flowers, leaves, and roots of which are used in medicine. The above species is found all over Central and Southern China and affords two of the drugs received from Singapore; the fruits and roots.

350. 金英子: Chin (gold) ying (water pot) tzü (seed): Kam ying tsz (Cant.): called locally 'Kim ying chee'. Ying shi, Br. iii. 171; P.S.; T. & M.; J.R.; Hosie; C.R. Alpha. 166; St.; B.E.R.; Ph. Soc. Mus.

The fruits (from Kwangsi) are about 1 in. in length, oval, red, and hairy. They are shaped like a water-bottle, hence the name. Within the capsule are small hairy seeds somewhat aromatic. The seeds are carminative, astringent, and diuretic.

351. 英根: Ying (jar) ken (root): Ying kan (Cant.): local name 'Kim ying keen'. The root is an article of commerce, C.R. Alpha. 169. Hosie says the drug is worth about T. 2 a picul. The root occurs in thin slices about 1 in. in diameter, with a dark reddish-brown bark. Mr. Boodle, upon an examination of the sections, suggests that it is not the root of a rose, but rather that of a *Tetracera* (Dilleniaceae). Rose root is bitter and astringent and is used in the preparation of wine; it is regarded as a tonic and anthelmintic. The leaves are considered a good vulnerary.

352. **Rosa multiflora**, Thunb. Rosaceae.

千金子: Ch'ien (1,000) chin (gold) tzü (seed): Ts'in kam tsz (Cant.): local name 'Chin kam chee'. Ts'iang wei, Br. iii. 171; Ch'iang mi (wall rose), Fo ch'ien hsiao (Buddha sees it and smiles) are names given for the above and the allied species, *R. indica*; St.; Wilson; B.E.R.; Ph. Soc. Mus.

This species of rose grows throughout China, especially in Kwangtung and Hupeh, and is distributed in Japan and the Philippine Islands.

The fruits are globular berries, dark brown to black, 8 mm. in diameter, with the rounded scar of the calyx above, and each

berry with a thin pedicel attached; within are a few seeds imbedded in yellowish hairs.

The fruits are used as an application to wounds, sprains, injuries, and foul ulcers.

353. *Rubia cordifolia*, Linn.

Rubiaceae.

茜根: Ch'ien (madder) ken (root): Sai kan (Cant.): local name 'Sai kin'. Ts'ien ts'ao; ti hsüeh (earthblood), Br. iii. 182; Tatar.; Debeaux; P.S.; C.R. Alpha. 126; J.R.; T. & M.; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus. Munjit (India), Manduchaka (Sanskrit), Akam (Japan).

The Indian madder plant is found in India, Ceylon, Malacca, and Japan to Tropical Africa. In China it grows in shady mountain valleys in the northern, central, and western provinces. The root is exported from Hankow, and is valued at T. 5 a picul.

Indian madder is a red coloured root about the thickness of the little finger and tapering to a point. In the drug shops it is sold in thin longitudinal slices. It is chiefly used in China and Japan for dyeing a dark red colour, but its place is now being taken by artificial dyes. In medicine it has a certain reputation for its tonic, alterative, and astringent properties.

354. *Rubia* sp.

Rubiaceae.

人骨丹: Jên (man, human) ku (bone) tan (red, elixir): local name 'Yin khoot tan'.

These are pieces of thin stems with loose white, translucent epidermis. This is a characteristic of the stems of species of *Rubia*. Botanical specimens of Chinese plants show a resemblance to this drug. No information is given as to the use of these stems in medicine, nor is any reference found regarding a vegetable substance being called 'Elixir of or for human bones'.

355. *Rubus* sp.

Rosaceae.

福盆子: Fu (turns over) p'ên (bowl) tzü (seed): Fuk p'un tsz (Cant.): local name 'Fook phoon chee'. Pen ts'ao; Tatar.; P.S.; J.R.; C.R. Alpha. 335; T. & M.; St.; B.E.R.

The Chinese raspberry is found in the uplands of the central and western provinces, where there are about sixty species. These plants are found in Japan, where also the dried unripe fruits are collected for medicinal use. The Singapore sample came from Yunnan. An 'overturned basin', the meaning of the Chinese name, describes the appearance of the small fruits. Dried raspberries are supposed to benefit respiration, give vigour to the body, and prevent the hair from falling off. They have tonic, restorative, and aphrodisiac properties.

356. *Salvia miltiorhiza*, Bunge.

Labiatae.

丹參: Tan (red) shen (ginseng): Taan ts'am (Cant.): local name 'Tan seng'. Br. iii. 20; Pen ts'ao; Tatar.; P.S.; J.R.; C.R. Alpha. 1246; Hosie; St.; B.E.R.

This plant is common in Mid China and the Peking mountains. It is a hairy plant with square stems, three to five foliate leaves, and bears spikes of violet flowers.

The root is one of the five astral remedies (Wu shen) which are thought to correspond to the five colours—yellow, white, black, purple, and red, and to the five principal viscera: spleen, lungs, kidneys, liver, and heart. This particular one belongs to the heart, and its red colour suggests blood. It is credited with alterative, antispasmodic, tonic, and vulnerary properties. Tan shen is exported from Hankow, Chefoo, and Tientsin. The Singapore sample came from Anhwei. The root is in short shrivelled pieces of a light brick-red colour, sometimes branched or twisted and with a few radicles. The interior is soft and has a sweetish taste.

357. *Sanguisorba officinalis*, Linn.: (*Poterium officinale*, Benth. & Hook. f.). Rosaceae.

地榆: Ti (earth) yü (elm): Ti yue (Cant.): local name 'Tee yee'. Ti yü (ground elm), Br. iii. 19; Tatar.; P.S. under *Hedysarum*; C.R. Alpha. 1273; J.R.; A.H.; St.; B.E.R.; Specimen from Singapore in Pharm. Soc. Mus.

The Lesser Burnet is a British plant, and grows in Honan, Hupeh, Kiangsi, Manchuria, and the Korean Archipelago. The root is officinal and is exported from Canton.

The drug is sold in thin slices, oval or oblong in shape, 1 in. or more in diameter, with a dense texture, reddish-brown colour, and an astringent and bitter taste.

The root is used in promoting the fermentation of liquors. In medicine it is employed as a styptic and vulnerary remedy. The mountain people substitute the leaves for tea.

358. *Sapindus mukorossi*, Gaertn.: (*S. abruptus*, Lour.).

Sapindaceae.

木思子: Mu huan tzü: Muk wan che (Cant.): local name 'Mook wan chee'. Wu huan tzu, P.S.; J.R.; C.R. Alpha. 865; Henry; Wilson; Shaw; St.; B.E.R.

This soap-nut tree is plentiful in Central China, Northern India, and has been introduced into Japan.

The berries are soft, of a greenish-brown colour, the size of a cherry, reniform, with a heart-shaped scar on one side. The fruits are used as soap and contain about 10 per cent. of saponin. The round, hard, brown seeds are called 'Bodhi seeds'. They

are made into necklaces, and Buddhists wear them as rosaries. Soap nuts are employed by goldsmiths for cleaning jewellery. They are supposed to remove tan and freckles from the skin, and a solution of the fruits is a remedy for cutaneous diseases.

359. **Sargassum siliquastrum**, Agardh. Algae—Fucaceae.

海草: Hai ts'ao: Hoi ts'o (Cant.): local name 'Hoi chow'. Hai ts'ao (seaweed or sea vegetable). Br. iii. 200; Tatar.; P.S.; St.; B.E.R. Sample from Singapore in Ph. Soc. Mus.

The above name is also used for other seaweeds and their preparations, limited to marine algae. The Malayan specimen came from Tientsin; it is dark brown or dark red in colour and consists of stalks with oval fronds about 1 in. in length and minute air bladders. It is probably one of the forms of sea vegetable exported largely from Ningpo and Canton. One is a *Sargassum* with fine capillary leaves like horse-hair, called ma wei (horse tail) ts'ao; the other has large leaves and is probably a *Laminaria*. In Singapore the fronds of the latter are called Hai tai (Sea ribbon) (See *Laminaria*).

360. **Saussurea Lappa**, C.B.Cl.: (*Aucklandia Costus*, Falc.: *Aplotaxis Lappa*, Dec.). Compositae.

木香: Mu (wood) hsiang (fragrance): Muk heung (Cant.): local name 'Mook heong'. Br. iii. 54; Hanb. Sci. pa. 257; Cleyer; Tatar.; P.S.; J.R.; T. & M.; C.R. Alpha. 860; Henry; St. under *Aplotaxis auriculata*, DC.; B.E.R. under *Rosa Banksia*. Kew and Ph. Soc. Mus. Kushta (Sanskrit); Kust (Arabic and Persian); Putchuk (Bengal).

This fragrant root has been known in China for several centuries, and writers have usually alluded to it as coming from foreign countries. Arabian *Costus* is a root gathered in the mountains of Kashmir and exported to the Punjab whence the larger portion goes to Bombay and is shipped to ports on the Red Sea, Persian Gulf, and China. It is also brought to Calcutta and bought up with avidity, under the designation of Putchuk, for the China market. The Singapore drug came from Canton. The drug has a pungent, aromatic taste and an odour resembling that of orris root or violets. It occurs in dry, brown, broken pieces. It is used as a perfume, and incense, and to preserve clothes from the attack of insects. As a medicine it is carminative and stimulant. There is a native Putchuk called Ts'ing mu hsiang in Ningpo referred to *Aristolochia recurvilabra*, Hance. Dr. Henry states (in Hooker's *Icones. Plant. t. 1975*) that *Inula racemosa*, Hook. fil., is cultivated in the mountains of Hupeh as a substitute for Putchuk.

361. *Schizandra chinensis*, Baill: (*Kadsura chinensis*, Turcz.).
Magnoliaceae.

五味子: Wu (five) wei (taste) tzü (seed): local name 'Ng mee tse'. Br. iii. 164; Pen ts'ao; Tatar.; Siebold; P.S.; C.R. Alpha. 1477; Hosie; St.; B.E.R.; Ph. Soc. Mus.

The above species of *Schizandra* is very common in the Peking mountains and produces the drug in the north of China. *Kadsura chinensis*, Hance, seems to afford it in the southern provinces. In Japan the same Chinese name is given to *K. japonica*. These plants are climbers with yellowish-white flowers, and fruits, red or black when ripe.

The fruits are called 'the drug with five tastes or flavours'. The skin and pulp are sweet and sour, the kernels are pungent and bitter, the whole drug has a saltish taste. They are exported from Newchwang, Ningpo, and Tientsin. The fruits or berries are small, wrinkled, red, and reniform; imbedded in the dark-coloured acidulous pulp are two yellowish-brown, curved seeds, acrid and bitter. The fruit contains a viscid material with which Japanese women dress their hair. Tonic, aphrodisiac, pectoral, and lenitive properties are ascribed to the drug. The plant is believed to contain the quintessence of the five elements as the basis of its properties.

362. *Scrophularia Oldhami*, Oliver. Scrophulariaceae.

元參: Yüan (black) shen (ginseng): local name 'Joon sam'. Yüan or huan shen (dark ginseng), Br. iii. 18; Cleyer; Tatar.; Hanb. Sci. pa. 255; P.S.; T. & M.; C.R. Alpha. 1563; J.R.; St.; B.E.R.

This plant grows in Anhwei and the north and north-western provinces. The root is greenish-white and succulent; when dried it becomes purplish black and sweetish to the taste. It is exported from Ningpo and Hankow. The drug from the Malay shop is like the black skin of the root, removed by scraping 'the adherent brown cuticle' noticed by Hanbury'. It was at first supposed to be ginseng refuse (Shen sui, C.R. Alpha. 554), but true ginseng root is light coloured, and besides the Chinese characters are those of the drug called 'Black ginseng'. Like the true ginseng root it is considered a potent restorative; preparations of this root specially acting on the kidneys.

363. *Scutellaria macrantha*, Fisch., and other species.

Labiatae.

黃琴: Huang (yellow) ch'in: local name 'Wong sam'. Huang k'in, Br. iii. 27; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 513; J.R.; T. & M.; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus.

Chinese Scullcap is a common plant in China, Japan, Korea, Mongolia, and Siberia. The Japanese root is said to be supplied

by *S. lanceolaria*, Miq. The drug is exported in considerable quantities from Tientsin, Chefoo, and Hankow.

The root is pale yellow, spongy, slightly bitter, and mucilaginous. It usually occurs in bundles of thin longitudinal slices, showing thick wavy fibres.

The drug is a tonic for the bladder, quieting the pregnant uterus, and stimulating the respiratory organs. A famous tonic is made by combining this root with rhubarb and coptis root; it is called San huang wan (Three-yellow-pill).

364. *Selaginella involvens*, Spring: (*Lycopodium circinale*, Thunb.).
Selaginellaceae.

卷栢: Chüan (scroll) pai (cypress): local name 'Koon phaik'. Chüan po, küan po (curled inward *Thuja*), Br. iii. 211; Tatar., under *L. hygrometricum*; P.S. under *Lycopodon*; C.R. Alpha. 1438; Henry; St.; B.E.R.; Ph. Soc. Mus.

This curious plant is common on the Peking mountains and in Mid-China, where it grows in damp places among stones. The young fronds are curved inwards like the toes of a bird or like a miniature *Thuja* or *Cypress* tree. The fronds are contracted when dry, and are of a yellowish-brown colour, but expand and assume a fresh green colour when placed in water. The Malayan drug comes from China, and a substitute is collected locally. The drug is prescribed in coughs, prolapsus of the rectum, gravel, and old peoples' complaints. As the plant never seems to die it is considered to have the property of prolonging life.

365. *Sisymbrium Sophia*, Linn. Cruciferae.

亭蔴仁: T'ing li yen (kernel): local name 'Tien theng yan'. T'ing li, Br. ii. 78; iii. 114; Lour.; Tatar.; P.S.; J.R.; C.R. Alpha. 1307; St.; B.E.R.; Ph. Soc. Mus.

The name T'ing li is given to various cruciferous seeds belong to the genera *Sisymbrium*, *Draba*, and *Lepidium*. The Tim li of Loureiro is referred to the watercress (*Nasturtium palustre*, DC.). Regnault says Lie is the name for seeds of *S. atrovirens* used by the Annamites. Japanese sources of the drug have been identified as the seeds of *Arabis perfoliata*, L. and *Draba nemoralis*, L. Bitter and sweet varieties of the seeds are exported from Shanghai and Hankow. The seeds from Singapore, small, yellow, pungent, were examined microscopically by Mr. Boodle and were found to be similar to those of *S. Sophia*, and differed from those of *Draba*, *Nasturtium*, and *Capsella*. The drug is regarded as demulcent, laxative, and febrifuge. It is interesting to find in China a remedy of repute mentioned in British Herbals. Parkinson (1640) Dodoneus, Lobel, Gerard, and Hill (1756) speak of 'Sophia Chirurgorum' (*Wisdom of the Surgeons*), the Flixweed or Fluxweed, and extol its virtues in the treatment of 'divers disorders and accidents'.

366. *Solanum dulcamara*, Linn., and other species.

Solanaceae.

茄根: Ch'ieh (*Solanum*) ken (root): K'e kan (Cant.): local name 'Khea kan'. Ch'ieh chih, C.R. Alpha. 100, 101; Tatar.; P.S.; J.R.; Br. ii. 79; St.; B.E.R.; Ph. Soc. Mus.

This sample of woody stems in transverse sections is said to be obtained locally in Singapore and also imported from China; the drug has no distinct odour or taste. It is difficult to identify the mother plant from this sample. Ch'ieh is a name for *S. melongena*, the egg plant or brinjal. Ku ch'ieh is a name given to *S. dulcamara*, the Bitter-sweet. *S. nigrum* is used in medicine; and the stems and roots of all three species have been recorded among the drugs of China.

The stems are regarded as antirheumatic and are applied in the form of decoction for carbuncles and boils. In Annam the root is considered good for skin diseases. The whole plant of *S. dulcamara*, according to Stuart, is a counter poison.

367. *Solidago virga-aurea*, Linn.

Compositae.

寄奴: Chi (to lodge) nu (servant): local name 'Chee noo'. Lui chi nu, Br. iii. 86; Pen ts'ao; Tatar.; P.S.; C.R. Alpha. 739; St.; B.E.R.; Ph. Soc. Mus.

A native of Europe, America, temperate Himalaya, China, and Japan. It is the Golden Rod of the British flora. The generic name is a derivative of *solidare*, to unite, because of the vulnerary qualities of the plant. It is exported through the Customs at Canton, Ningpo, and Amoy, often mixed with other composites. The Chinese name has also been applied to *Senecio palmatus*, Pall., and, inappropriately, to *Siphonostegia sinensis*, Benth. The Malayan sample came from Canton, and consists of the dried stem and leaves of the plant.

368. *Sophora flavescens*, Ait.: (*Robinia flava*, Lour.; *R. amara*, Lour.; *S. angustifolia*, Sieb. & Zucc.).

Leguminosae.

苦參: K'u (bitter) shên (ginseng): local or Cantonese name 'Foo sam'. Br. iii. 34; Tatar.; Debeaux; P.S. under *Robinia*; C.R. Alpha. 635; T. & M.; A.H.; St.; B.E.R.

This tree is more dwarfed and herbaceous compared with *S. japonica*; it is fairly common in Mid-China and plentiful in Honan and Szechwan. Dr. Henry found the root being collected in Hupeh from a tree identified as *S. Kronei*, Hance, a species now reduced to *S. flavescens*.

The drug is one of the five shên of China, and is an article of export from Canton. The Singapore sample came from Yunnan and is labelled 'Bitter Seng roots'.

The root occurs in thin slices cut transversely or obliquely,

less than 1 in. in diameter, of a yellow colour and an exceedingly bitter taste.

The drug is considered good for fever, jaundice, dysentery, and scrofula; it is a bitter tonic and stomachic, considered by some to be better than the true ginseng.

369. **Sophora japonica**, Linn.: (*Mimosa corniculata*, Lour.).

Leguminosae.

The Huai or Sophora of China and Japan is an ornamental tree of very common occurrence, and not unfrequently is met with in gardens of Europe.

It affords two commercial products; the flowers and pods.

Flowers. 槐花: Huai (Sophora) hua (flowers): local and Cantonese name 'Wai fah'. Hwai shu, Br. iii. 322; Tatar.; Debeaux; Hanb. Sci. pa. 237; T. & M.; J.R.; P.S.; A.H.; C.R. Alpha. 502; St.; Wilson; Shaw; B.E.R.

The greenish-yellow, unopened flowers are exported from Shanghai and Ningpo and used for dyeing cloth Imperial Yellow, or for rendering blue cloth green. In medicine they are astringent and styptic.

370. Pods. 槐子: Huai (Sophora) tzü (seed): local name 'Wai kok tsz'. Huai kio (pods), huai tsz (seeds), Br. iii. 322; A.H.; Huai cheao tze. C.R. Alpha. 501; Hosie, under *S. tomentosa*; Ph. Soc. Mus.

The legumes are exported from Canton. In a dried state they are from 1 to 4 in. long by $\frac{3}{10}$ to $\frac{4}{10}$ of an in. wide, wrinkled, fleshy, semi-transparent, more or less contracted between the seeds, which usually do not number more than six. The pods are used as a yellow dye, and in medicine as a tonic and astringent.

371. **Sterculia platanifolia**, Hook. f.

Sterculiaceae.

梧桐子: Wu t'ung (Point tree) tzü (seeds): local and Cantonese name 'Ng thoong chee'. Hanb. Sci. pa. 246; A.H.; P.S.; Br. ii. 516; Debeaux; C.R. Alpha. 1475; Shaw; St.; B.E.R.

This is one of the many T'ung trees of Central and South China. It is planted as an ornamental tree in courtyards of Chinese temples and houses, its large leaves affording an excellent shade. It grows also in Japan and the Shan Hills.

The wood is used for making musical instruments and coffins. The fibrous inner bark is manufactured into cloth and ropes. The seeds, which are about the size of peas, and externally covered with a pale brown, shrivelled, shining skin, are oily. The crushed seeds are said to restore grey hair to black. A preparation is applied in aphthous sore mouth in children. They enter into the composition of 'Moon cakes' eaten by Chinese at the Autumn festival of the eighth moon.

372. **Sterculia scaphigera**, Wall.: (*Scaphium scaphigerum*).
Sterculiaceae.

大海子: Ta (great) hai (sea) tzü (seed): local name 'Tai hoi chee'. Hanb. Sci. pa. 235, 290. Fig. 4; C.R. Alpha. 1223; P.S.; P'ang tai hai, St.; Bungtalai (Siamese); Kembang (expand), semangkok (cup full) (Malay).

A tree of Cambodia, Siam, and India. The drug comes chiefly from the Tatung mountains of Annam. The seeds are brought to India by Mohammedan merchants from Java and Singapore, and there is a trade in the article between Singapore and Canton.

The seeds are from $\frac{3}{4}$ to 1 in. long, ovoid, somewhat elongated at the lower end which terminates with an oblique cicatrix. Externally dark brown and deeply wrinkled. When the fruit is macerated in water the outer shell or pericarp increases enormously in volume, forming a large gelatinous mass.

The jelly is sweetened and eaten as a delicacy, and is said to be a specific in diarrhoea and dysentery.

373. **Tamarix chinensis**, Lour.: (*T. gallica*, var. *chinensis*, Ehrenb.).
Tamaricaceae.

垂柳: Ch'ui (droop) liu (willow): local and Cantonese name 'Sooi see lou': 'weeping willow'. Ch'êng liu; Tatar.; San ch'un liu, Br. ii. 250, 527; P.S.; C.R. Alpha. 270; St.; B.E.R.

The above is the most common species of tamarisk found all over China. It is probably a variety of the widely spread *T. gallica*. It is a tree of medium size with minute acute imbricate leaves, and resembles a willow in habit. The twigs are glabrous and of a reddish-brown colour. The twigs and leaves are imported from Canton, and are used as a vulnerary, carminative, and diuretic.

374. **Terminalia chebula**, Roxb. Combretaceae.

柯子: K'ò (axe handle) tzü (seed): local name 'Oh chee'. Ho tsze, Ko lih le, Hanb. Sci. pa. 232; P.I.; St.; B.E.R.; Tatar.; P.S.; T. & M.; J.R.; C.R. Alpha. 379.

Chebolic myrobalans are imported from India. They are hard, oval, or oblong fruits, about an inch or more in length, somewhat pentagonal, and with a yellowish-brown or greenish colour, and bitter astringent taste. They contain 25-30 per cent. tannin. They are well known for their tanning and dyeing properties. In medicine they are esteemed not only for their astringency but also for their purgative action; they are also used for coughs and dysentery.

Hair dyes, diet drinks, and charms to drive away diseases are spoken of as being made from these nuts.

Thuja orientalis, Linn.: (*Biota orientalis*, Endl.). Coniferae.

The Po tree is a native of Northern and Western China and is cultivated in many other asiatic countries. It is the Cypress of South China and the Arbor vitae of the North. It yields the cypress wood much used in making furniture, and the Chinese and Japanese delight to dwarf the trees into all sort of shapes. The tree yields two well-known drugs: the kernels and leaves.

375. Kernels. 栝子仁: Po (cypress) tzü (seed) yen (kernel): local name 'Pak chee yan'. Br. ii. 505; iii. 300; C.R. Alpha. 968; T. & M.; P.S.; Pen ts'ao; Tatar.; Hosie; St.; B.E.R.; Ph. Soc. Mus.

These are small, oval, pointed seeds 3 to 5 mm. long, brownish-yellow, with oily kernels smelling of pine. They are exported from Shensi, Hankow, and Tientsin, and according to Hosie, from Szechwan. They are nutritive and fattening; they benefit the respiratory organs and check profuse perspiration.

376. Leaves. 扁栝: Pien (tablet) po (cypress): local name 'Pin phaik'. C.R. Alpha. 1019; P.S.; Henry; St.; B.E.R.; Ph. Soc. Mus.

Po or peh is applied to the Cypresses as trees having their leaves in the same plane, like a table or tablet, as distinguished from the junipers whose leaves are spreading. The green twigs with imbricate leaves are an ingredient in incense, and are exported from Canton. The Singapore sample came from China and is also collected locally. The leaves are used in haemorrhage, and for colds.

377. **Tinospora cordifolia**, Miers. Menispermaceae.

寶拒行: K'uan chu hsing: Fun khu hang (Cant.): local name 'Foon kan thang'.

The stem of this creeper is not a usual Chinese drug. A specimen called K'uan chin t'eng in the Ph. Soc. Mus. is referred to this plant and is said to be antispasmodic and sedative. Dr. Henry mentions the root of *Tinospora sagittata*, Gagnep. (*Limacia sagittata*, Oliver), known as a medicinal simple in West Hupeh and West Szechwan, as Ch'ing niu tan. In Formosa he met with the root of *Limacia sp.*, used as a drug named Chin shêng; exported from Shanghai (C.R. Alpha. 158). *T. cordifolia* is a well-known medicinal plant in India, and has Sanskrit names meaning 'Bile destroying' and 'Dear to physicians'. In native practice it is much valued as a tonic and antiperiodic in fevers. The dried stem is seen in every drug shop, and from it is prepared a kind of starch known in Hindustani as Gilau kâ sat and Palo.

The Malayan sample came from China and is obtained locally, probably imported. It occurs in transverse slices in which the

light brown papery epidermis is separated in flakes. The wood is dull, light yellowish-brown, consisting of a number of wedge-shaped bundles; the taste is very bitter and without odour. It agrees in its characters with the stem of authentic botanical specimens of the plant.

378. **Torreya nucifera**, Sieb. & Zucc.: (*Taxus nucifera*, Linn.).
Taxaceae.

榧子: Fei tzu: Fi tsz (Cant.): local name 'Fee tsee'. Fei shih, Br. iii. 286; Pen ts'ao; Kaempfer; Tatar.; Hanb. Sci. pa. 233; C.R. Alpha. 297; P.S.; J.R.; Henry; St.; B.E.R.

Torreya nucifera is a Japanese tree which occurs in the Hupeh mountains and in Western Yunnan. It resembles in habit the allied tree *Cunninghamia sinensis*. The nuts are exported from Shanghai and Canton, and the Singapore supply comes from China. Dr. Henry remarks that the drug from Chekiang consists of seeds of *T. grandis* Fortune.

The seeds are from 1 to 1½ in. long, ovoid or oblong, cylindrical, pointed at the upper extremity. The testa is of a cinnamon-brown colour, woody, and fragile, marked longitudinally with broad, shallow striae, and having a smooth scar at the base. The nucleus, which is deeply corrugated, is covered by a thin brown membrane; its base is marked by a conspicuous scar. The seeds are eaten like hazel nuts, and are considered wholesome. They are regarded by some to be laxative and anthelmintic.

379. **Trichosanthes kirilowii**, Max., and **T. multiloba**, Miq.
Cucurbitaceae.

瓜 棗 仁: Kua (gourd) lou jên (kernel): local name 'Kwa low yin'. Other names, t'ien kua (heavenly gourd), huang (yellow) kua, Br. ii. 385, iii. 172; Lour.; Tatar.; P.S.; T. & M.; J.R.; C.R. Alpha. 640; Henry, *Chin. Pl.* 193; Hosie; St.; B.E.R.; Ph. Soc. Mus., sample from Singapore.

This is a climbing plant, having yellow fruit, found in most parts of China. It is evident that the vernacular name is applied to other species as *T. palmata*, *T. japonica*, Regel., and *T. curcumerina*, Miq., are used in medicine, and Dr. Henry observed that the name was applied to two species in Hupeh. The skin of the fruit and seeds are exported from Hankow, Chinkiang, and Canton.

The seeds are oval, somewhat triangular, flattened, light brown or blackish, 13 mm. long by 9 mm. broad, with sweet, oily kernels. They are regarded as nutritious, tonic, and astringent. The white root contains a starch, t'ien hua fen (Alpha. 1292), which is extracted, exported, and used medicinally.

380. *Triticum vulgare*, Linn.

Gramineae.

浮小麥: Fu (floating) hsiao (small) mai (grain): Fau siu mak (Cant.): local name 'Fow siew mak'. Br. ii. 339; iii. 218; T. & M.; C.R. Alpha. 326; St.; B.E.R.

Hsiao mai is the Chinese name for wheat, and Ta mai or great mai is the Chinese name for barley, but Dr. Read says in many parts of the country these names are used indiscriminately. Fu mai refers to grains of wheat which have not filled out and therefore float on water. They are roasted and are considered useful in colliquative sweating, especially in tuberculosis in women.

381. *Tussilago farfara*, Linn.

Compositae.

冬花: Tung (winter) hua (flowers): local name 'Toong fah'. K'uan tung hua (flowers which like the winter), Br. iii. 109; Lour.; J.R.; C.R. Alpha. 650; P.S.; Henry; St.; B.E.R.; Hosie identifies this drug as *Petasites japonica*, Miq.

The coltsfoot is a plant which flowers in the early spring in North China. Loureiro noticed this plant in Cochin-China in 1790 and referred to its medicinal properties. Regnault speaks of its use in Annam. The dried flowering scapes with purplish stems are exported from Tientsin, Hankow, and Ichang. The plant was found by Dr. Henry in Hupeh where it was collected by natives and sent by way of the Hui river to Hankow. The flowers of the Loquat (*Eriobotrya japonica*) are sometimes used as a substitute. Porter Smith and Stuart speak of the coltsfoot as an expectorant in cough, asthma, apoplexy, and phthisis.

382. *Tylophora* sp.

Asclepiadaceae.

甜老: T'ien (sweet) lao: local name 'Tim lou'.

These are leaves of a creeping asclepiad, ovate, pointed, with heart-shaped base, clothed with grey hairs, petioles curved, stem twining. The use of these leaves, which are not a usual medicine in China, is not indicated. Lao is a name given in the Customs (Alpha. 695) for Betel leaves (*Piper Belle*), used as a masticatory with Areca nut.

383. *Typha orientalis*, Presl, and other species.

Typhaceae.

蒲香: P'u hsiang: P'o heung (Cant.): P'u (rush) wang (royal), local name 'Phoo wong' where wong is used in place of huang (yellow). P'u huang (yellow) is the name for the stamens and pollen of the mace reed, hsiang (fragrant) p'u. Br. ii. 375; iii. 196; C.R. Alpha. 1045; Pen ts'ao; Tatar.; P.S.; Debeaux; Henry; Hosie; St.; B.E.R.; Ph. Soc. Mus.

Several species of mace reed or bulrush grow on the margins of pools in China and Japan. *T. angustifolia*, L., *T. latifolia*, L., *T. japonica*, Miq., and *T. Laxmanni*, Lepech., are cited by the above authors as plants affording the above drug.

The Malayan sample came from Canton, and agrees with the stamens of *T. orientalis*, a bulrush found in the south of China. It consists, however, of only the stamens, left after removing the pollen by sifting. Stuart calls this preparation P'u o, and says it is used as an astringent in dysentery and haemorrhage of the bowels. The p'u huang, consisting of the stamens and the golden yellow pollen, is an astringent and styptic. It is also mixed with honey and sold as a sweetmeat.

384. *Valeriana* sp.

Valerianaceae.

甘 木 公: Kan sung (sweet pine): Kom ts'ung (Cant.): Singapore name 'Kam choong'. Kan sung hsiang; Kao sung, P.S.; T. & M.; J.R.; A.H.; St.; B.E.R.; Ph. Soc. Mus.

Valerian root is a drug used throughout China and India. The Singapore drug came from Szechwan and consists of rootstocks, reddish-brown in colour, about 10-12 mm. in diameter, covered with dry scales furnished with radicles, and at the upper part the remains of dead leaf-stalks. The taste is bitter, and the odour of valerian distinctly marked. The root resembles that of the botanical specimens of *V. Wallichii*, DC., an Indian plant, but found also in Yunnan, Western, and Northern China. Dr. Henry observed the root of *V. officinalis*, DC., being collected as a drug in Ichang, where it is called Pa ti ma.

The true Spikenard of the East, as shown by Sir William Jones, (*As. Research.*, ii. 405) is the product of *Nardostachys Jata-mansi*, DC., another plant of the Valerian family, growing in the Alpine Himalayas from 11,000 to 17,000 feet, and in the mountains of Yunnan and East Szechwan. It is a Tibetan drug as noticed by the botanists of the recent Everest Expedition. The root is distinguished by the matted remains of the leaf stalks being more abundant than in the root of the Valerian. These roots are used as a carminative, tonic, and cordial remedy for nervous affections.

The name Kan sung hsiang appears to be applied to *Nardostachys*, while Kan sung is used for Valerian root.

385. *Vigna catiang*, Walp.: (*V. sinensis*, Endl.).

Leguminosae.

This kidney bean or 'Cowpea' of America is cultivated throughout China, India, Cochin-China, and in the tropics generally. Tau stands for various forms of beans or pulse, and according to Bretschneider Ta tou (great bean) is the name given to Soy (*Glycine Soja*, S. & Z.), and Siao tou (small bean) is applied to species of *Phaseolus*.

There are two drugs yielded by *Vigna catiang*; seeds and pod refuse.

赤小豆: Ch'ih (naked) hsiao (small) tou (bean): Ch'ik siu tau (Cant.): local name 'Chit sew tow'. Br. ii. 355, 356; Tatar.; Lour.; P.S.; T. & M.; B.E.R. under Chiang tou.

The Singapore seeds are obtained locally as well as from China. They are oblong in shape 6-7 mm. long by 3 mm. wide; they are red brown to black in colour, with a white hilum.

386. **白豆殼**: Pai (white) tou (bean) koh (husk): Pak tau hok (Cant.): local name 'Pak tow hock'. This is the Chinese name for the Round Cardamom.

This drug consists of the dry stalks and fibrous remains of the pods, from which the pulpy portion has been removed by soaking and kneading. Crevost and Lemarié describe the fabrication in Indo-China of a kind of vermicelli or bean curd from these pods. It would appear that this drug is the factory refuse.

387. **Viola sp.**

Violaceae.

集膝主: Chi hsi wang: local name 'Chok see wong'.

The drug is composed of dried, broken leaves, stalks, and fruits of a violet, resembling *V. Patrinii*, DC., a plant very common in North China, India, Manchuria, and Japan.

But the name does not correspond with the usual vernacular names for violets. Chin is the name for violet in Bretschneider (ii. 371). Matsumura, Stuart, and Read give Tzu hua ti ting (purple-flowered ground thing) for *V. Patrinii*. Ti ting is a contraction of this name used for dried violet plants in the Customs (Alpha. 1272, 1411). There is a specimen of the plant under this name in the Pharmaceutical Society's Museum. Wild violets are used as pot-herbs and are said to purify the blood; they are also bruised and applied to ulcers and foul sores.

388. **Vitex negundo**, Linn.: (*V. incisa*, Lam.). Verbenaceae.

京子: Ching tzü (seeds): King tsz (Cant): local name 'Kheng chee'. Man (creeping) ching, Huang ching. Br. iii. 349; Lour.; Tatar.; P.S.; Debeaux; J.R.; C.R. Alpha. 819; Wu chi (5-finger) ching, Canton name, Parker; Henry; St.; B.E.R.; Ph. Soc. Mus.

This shrub is found plentifully in North China. The branches are slender and weak, somewhat resembling a vine, hence the Chinese name. The berries of this and perhaps other species of *Vitex* are the part used in medicine; they are exported from Wenchow, Amoy, and Hankow. The Singapore samples came from Canton.

The berries are globular, black, like a nut, 2.3 lines in diameter, partly covered with the remains of the calyx, white

and ligneous within, made up of four adhering carpels. They have little taste or smell.

The fruits are given for headache, catarrh, and watery eyes. They are extensively used in Indian medicine.

389. *Vitis serianifolia*, Max.: (*Ampelopsis serianifolia*, Bunge).
Vitaceae.

白斂: Pai (white) lien (to collect): Cantonese and local name 'Pak lim'. Br. ii. 453; iii. 180; S. & T.; C.R. Alpha. 954; Henry; St.; B.E.R.; Ph. Soc. Mus.

A common climbing plant, with digitate leaves, found in Mid China and Japan. The root, which is the part used in medicine, consists of several tubers with reddish-black skin and white flesh, collected together like a nest of ducks' eggs. One Chinese name of the plant means 'Goose sitting on eggs'.

The dried roots are exported from Canton and Amoy. The Singapore sample came from Yunnan.

The drug consists of dried slices of the tubers, ovoid, about 2 in. by 1 in., hard and starchy in consistence, with a dark skin.

The root is used as an anodyne and is a cooling application for inflammatory swellings.

390 and 391. **Wood Fungus.**

龍鬚: Lung hsue hua: Lung so fatt: Cantonese name.

汀香仁: T'ing hsing jen: Ting hang yan: Cantonese name.

These two samples, although differing in name, are very similar in appearance. They are brown masses of broken down or decayed woody material, held together by web-like strands, like the cocoon of some insect. The microscope shows the filaments to be mycelium proceeding from the woody particles which appear to have been disintegrated by the action of a fungus. The only reference to such a peculiar drug is one given by Stuart under Ch'eng tung fu mu'. This is the name for rotten wood from the east of the city of Shanghai. 'It is considered to be astringent and carminative, and a decoction in spirits is applied to centipede bites and to numbness and pricking of the extremities.'

392. *Xanthium strumarium*, Linn.: (*X. indicum*, König).
Compositae.

倉耳子: Ts'ang (green) erh (ear) tzü (seed): Ts'ang yee tsz (Cant.): local name 'Chong yee chee'. Br. iii. 92; Pen ts'ao; Cleyer; Tatar.; Hanb. Sci. pa. 233; P.S.; Debeaux; A.H.; C.R. Alpha. 1328; Parker; St.; B.E.R.

This is an almost ubiquitous weed in warm and temperate climates and is found throughout China and Japan. A Chinese

name of the plant Yang fu lai (sheep carried it here) conveys the popular impression that it was brought into China from the north by the prickly fruits adhering to the fleeces of the sheep. The fruits are exported as a drug from Canton and Amoy. They are probably the Xanthion of Dioscorides.

The burs are armed with uncinatè bristles, 2-celled, each cell containing one ovule enveloped in an anterior tunic. They are used in medicine as a tonic, diuretic, diaphoretic, and sedative.

The leaves, under the name of *Herba Lappae Minoris* were formerly official in Europe, and were administered internally in scrofula and herpes.

393. *Zanthoxylum Bungei*, Planch.: *Z. alatum*, Roxb., and other species. Rutaceae.

花 椒: Hua (flower) chiao (pepper): Fa tsiu (Cant.): local name 'Fah chew'. Br. ii. 497; iii. 288; Pen ts'ao; Tatar.; Hanb. Sci. pa. 228. Fig. 1; C.R. Alpha. 492; P.S.; A.H.; Wilson; St.; Hosie; B.E.R.; Ph. Soc. Mus.

The Fagara of ancient authors. The Chinese regard these fruits as a pepper, as distinguished from black pepper (hu chiao) and chillies or Cayenne pepper (ta chiao). The plants are wild and cultivated in different parts, especially Chihli, Hupeh, Shensi, and Szechwan. Wilson remarks that *Z. Bungei* is the only cultivated species in China. The fruits are an article of commerce in all the treaty ports.

The 'pepper flowers' consist of small red carpels usually dehiscent and empty, or sometimes enclosing small, oval, black, pitted, shining seeds. By abortion, the carpels, normally four in number, are reduced to two; they are oval, bright, reddish-brown, brittle, covered with tubercles, having an aromatic odour and a peculiar pungent and terebinthinate flavour, with a numbing acrid after-taste. Broken peduncles are generally mixed with the drug. The active oleo-resin resides in the tubercles. For this reason the seeds are discarded when preparing the fruit for medicine and for seasoning food. The drug is regarded as an excellent stimulant, carminative and sudorific.

394. *Zanthoxylum piperitum*, DC. Rutaceae.

川 椒: Ch'uan (Szechwan) chiao (pepper): local name 'Choon kow'. Shu (Szechwan) tsiao, Br. ii. 259, 497; iii. 289; Lour.; Tatar.; P.S.; St.; B.E.R.; C.R. Alpha. 241. The seeds, tsiao mu (pepper eyes).

The Szechwan pepper plant has been identified as *Z. piperitum*, the carpels of which are used as a condiment and medicine. The leaves and root are also used in medicine. The drug sent under the above name, is the root of a plant in thin slices, yellowish-brown in colour with a bitter taste. It is used as a purgative in kidney and bladder difficulties.

395. *Zanthoxylum* sp.

Rutaceae.

開 祁 蛇: K'ai ch'i she: Hoi k'i she (Cant.): local name 'Hoi kee sa'.

Under this peculiar name the fruits of a species of *Zanthoxylum* are sold in Singapore. They are not readily distinguished from those of *Z. Bungei* except that the carpels are older and nearly black, and the shining surface of the seed is removed, showing pitted markings.

396. *Zanthoxylum* sp.

Rutaceae.

烏 不 宿: Niao pu su: Niu pat suk (Cant.): local name 'Liew pak shook'.

This drug consists of pieces of stem with greyish spines having elongated woody bases similar to those seen in some species of *Zanthoxylum*.

397. *Zingiber officinale*, Roxb.

Zingiberaceae.

于 薑: Kan (dry) Chiang (ginger): Kon keung (Cantonese and local name). Pen ts'ao; Tatar.; P.S.; Debeaux; Br. iii. 249; C.R. Alpha. 574; T. & M.; J.R.; St.; B.E.R.

The ginger plant is largely cultivated in the central and southern provinces. The rhizome is prepared for the market by removing the skin, after maceration in water, and drying the root in the sun. It is branched, wrinkled, and furrowed, of a light brown or yellowish colour, horny consistence, and characteristic pungent taste. Ginger is largely used as a condiment and in domestic medicine. It is prescribed as an adjunct to many tonic and stimulating remedies. In Perak thin dry slices of the root are sold as a well-known vermifuge.

薑 皮: Chiang (ginger) p'i (peel): keung p'i (Cant.): local name 'Keong phee'.

Sheng (raw or fresh) ginger rind is mentioned in various works: J.R.; St.; B.E.R. It is an article of commerce (C.R. Alpha. 77). The specimen of old ginger skin is the peel taken from the fresh rhizomes, specially grown in sandy soil, dried, and exported from Canton to the Straits. Ginger root skin is used as a carminative and is said to be a remedy for opacity of the cornea.

UNIDENTIFIED

399.

救 必 應: Chin pi ying: local name 'Kow peet ying'.

The bark of a root in thin transverse slices. It is bitterish and astringent to the taste. It is probably the drug noted in the Customs (C.R. Alpha. 207). There is no clue to its origin.

400.

金鎖匙: Chin (gold) so (lock) shih (key): Kam so shi (Cantonese and local name).

A root in thin oblique sections, about 10 mm. in diameter, light brown bark, wood whitish with medullary rays; slightly bitter to the taste. Probably a local drug of Canton.

401.

川竹黍: Ch'uan (Szechwan) chu (bamboo) ch'i (seven): Ch'uen chuk ts'at (Cant.): local name 'Yee cheok chut'.

A root or rhizome about the size of the little finger with a hard and horny fracture. The cuticle is grey brown, and wrinkled, showing the scars of numerous rootlets; brownish and translucent within; with a warm, aromatic, and bitter taste.

402.

穿破石: Ch'uan p'ò (break) shi (rock): local name 'Phoh siak'.

Sections of a light coloured woody stem, with yellowish-brown bark, 1 in. in diameter, with no taste or odour. This is the name of an unidentified root (C.R. Alpha. 256) exported from Canton and Kwangtung. The break rock refers to a plant with roots piercing cliffs and stones, like a Saxifrage. The wood, however, is similar to that of the Moraceae. A sample of the drug is in the Pharmaceutical Society's Museum, where it is referred to as a blood stimulant and tonic.

403.

想思草: Hsiang ssu ts'ao: local name 'Seong see chow'.

This is a local Foochoo or Cantonese drug mentioned in the Customs List, Alpha. 422, and not there identified. It occurs as pieces of stem of the size of a quill, with smooth reddish-brown exterior, and white and pithy within. It does not appear to be an officinal drug.

404.

血方行: Hsueh fang hsing: Huet fong hang (Cant.): local name 'Hoot foong theeng'.

Slices of woody stem, 1 in. across, dark brown bark, wood with pitted vessels, brown pith. Obtained locally and from China. Probably a Canton drug, Hsüeh t'eng (C.R. Alpha. 479). A creeper mentioned in the Pen ts'ao, yellow coloured, used as a blood remedy (St.).

405.

— 一条根: I t'iao ken: local name 'Yet teau kan'.

Sliced root or stem, wood whitish, dense, radiating medulla, bark thin, brown, tasteless. Probably the same as T'iao ken, (C.R. Alpha. 1278) an unidentified drug exported in small quantities from Amoy to the Straits Settlements.

406.

人中黄: Jen (human) chung (heart, centre) huang (yellow): local name 'Yan cheong wong'.

The Chinese name is that given to human excrement (Soubeiran, 1874, p. 44, Dr. B. E. Read) which is included in local materia medica as a remedy for hydrophobia. The drug from Singapore is apparently a part of a cylindrical mass of light coloured vegetable matter, as if made by pressing broken portions of plants into a hollow bamboo and drying. It consists mainly of starchy material mixed with fibrous stalks. The starch has similar appearance to that of the sweet potato (*Ipomoea Batatas*).

407.

過和草: Ko chih ts'ao: local name 'Ko chee choo'.

Pieces of stem, as thick as a quill, an inch or more long, with hairy buds, light brown coloured bark, white pith.

408.

狼獨斗: Lang (wolf) tu (poison) teo: local name 'Long took tau'. Br. iii. 132; P.S.; St.; B.E.R.

Wolfsbane is a very ancient drug in China as it is mentioned in the Shennung Pen ts'ao (xxvii century B.C.) as one of the five chief poisons: the others being Croton seeds, Veratrum root, Aconite, and Cantharides. Lang tu has been referred to Aconitum, Ranunculus, and Mandragora. The Malayan specimen consists of sliced tubers about 1 in. in diameter of a tough consistence and whitish colour. Under the microscope there is an abundance of starch with bundles of needle-shaped raphides, and cluster crystals, characteristic of an aroid.

409.

勒菜强: Leh ts'ai (vegetable) ch'iang: Leh ts'ai ch'iang (Cant.): local name 'Lut chai kang'.

Thin transverse sections of a stem, $\frac{1}{2}$ to 1 in. in diameter, light coloured, and tasteless. The meaning of the name and the origin of the drug cannot be traced.

410.

地風: Ti (earth) feng: local name 'Tee foong'.

Obtained locally and from China. This is a thick, reddish-brown bark, with the odour and taste of cloves or cassia. It is probably a local Canton drug, described as a root-bark, mentioned by Dr. Henry in the list of Chinese medicines (C.R. Alpha. 1262).

411.

田刀木: T'ien (field) tao (knife) mu (wood, tree): local name 'Ap keo moot'.

Slices of bark cut into match-like sticks. They have some resemblance to the bark of a magnolia.

412.

定馬胎: Tsou ma (horse) t'ai (womb): Tsau ma t'oi (Cant.): local name 'Chow mar thoy'.

Stem of shrub or tree in slices. Imported from China and available locally. Ma t'ai (C.R. Alpha. 809) is a root from Foochow and Canton. Tsao ma t'ai, a root in Ph. Soc. Mus. labelled *Daphnidium* sp. (Lauraceae). Stimulant and tonic. Ma t'ai in Parker's *Canton Plants* is referred to *Scirpus tuberosus*, Roxb. 'Water chestnut'.

413.

茨茹: T'zu ku (tuber): Ts'zkoo (Cant.): local name 'Seekoo'.

Drug from Canton. Rhizome with long pliable rootlets, pungent and camphoraceous, probably belonging to Scitamineae Use 'For a leg broken by a fracture'.

414.

武沙分: Wu sha fen: Mo sha fan (Cant.): local name 'Mow sa fun'.

A rhizome, black externally with transverse wrinkles, whitish within. It resembles the root of *Veratrum nigrum*.

415.

武靴行: Wu hsüeh hsing: local name 'Woo hay hung'.

Oblique slices of woody stem, 1 in. across, bark greyish-brown with dark brown lenticels; wood hard, light coloured. Wu hsüeh (C.R. Alpha. 1456) is a local drug of the Foochow province, classified as 'twigs and leaves'.

ANIMAL SUBSTANCES

416. **Tigers' Bones.**

虎骨: Hu ku: Fu kwat (Cant.): local name 'Foo kwat'. Pen ts'ao; Tatar.; P.S.; Hosie; C.R. Alpha. 483.

The bones of tigers, leopards, and lynxes are brought from Manchuria, Formosa, Yunnan, and Szechwan, and sold at high prices as ingredients in tonic preparations. Their administration is supposed to impart bravery and strength.

417. Buffalo Hide.

西牛皮: Hsi (west) niu (ox) p'i (skin): Sai ngau p'i (Cant.): local name 'Sai ngow phee'.

The western ox is one of the names of the buffalo; other names are huang niu (yellow cow) and shui niu (water cow). The hides pass through the customs as New pe (Niu p'i). The drug is in ribbon-like shavings of a thick skin of an animal, $\frac{3}{8}$ of an in. broad, whitish, opaque, hard, and tough. This material is probably a convenient source of glue or gelatine so much appreciated in Chinese medicine.

418. Ox Glue (*Bos taurus*).

牛皮膠: Niu (Ox) p'i (skin) chiao (glue): Ngau p'i kaa (Cant.): local name 'Ngow phee kow'.

The common glue made from the parings and cuttings of the cow hide has a great reputation in Chinese materia medica, and is frequently used to adulterate asses' glue. Hosie says this glue is made in large quantities in Szechwan and is called P'i chiao or skin glue. A specially good quality is made in Shantung province. The Singapore sample occurs in thick square sticks about 2 in. in length. Medicinal glue is also made from tortoise-shell (Kuei chiao), tigers' bones (Hu chiao), and deer horns (Lo chiao). They are all used as stimulating tonics. Niu p'i chiao of the Customs (Alpha. 907) is said to be a preparation of sesamum seed cake from Chihli, used in adulterating opium.

419. Asses' Glue.

阿膠珠: O (prefix) chiao (glue) chu (bead or pearl): O kaa chue (Cant.): local name 'Oh kow'. O chiao, lu p'i chiao, P.S.; J.R.; Hosie; Williams.

In some parts of China, notably in Shantung, Hupeh, and Szechwan, and in Manchuria, the skins of asses are boiled down into a medicinal glue which is run into cakes or tablets and then wrapped in red paper. The glue passes through the Customs (C.R. Alpha. 917) prepared in various forms. In Malaya the drug occurs in hard, translucent, disk-shaped pieces, 10-12 mm. in diameter, of a light yellowish-brown colour. In Annam asses' glue is made by boiling asses' skins in a special well water. By the Chinese it is regarded as a perfect medicine; it is said to have tonic and aperient properties and to be a specific in dysmenor-

rhoea. It is priced at T. 16 a picul. There is an imitation asses' glue called 'Chiao o chiao' which is also made into tablets valued at HT. 12 a picul.

420. Sheeps' Excrement.

羊月砂: Yang yueh sha: Yeung uet sha (Cant.): local name 'Mown yit sa'.

Yueh sha in the Customs Report (Alpha. 1567) is referred to rabbits' dung collected at Fukien and Kwangtung. The specimen from Singapore consists of rounded bodies of the size, shape, and appearance of sheeps' droppings. Debeaux in his list of animal substances used in Chinese medicine mentions Houang tsee chee, the excrement of the mountain goat. He adds 'Its properties are purely imaginary'.

421. Hartshorn (*Cervus Sika*, Temm.).

明鹿根: Ming (clear) lu (deer) ken (root): Ming luk kan, Cantonese and local name.

The Kwangtung province supplies the market with the horns of the Sika deer of Northern Asia, which are used in shavings or a jelly or as burnt hartshorn. Lu chiao is the name for old horns, Lu jung the name for young horns. The latter and horns 'in the velvet' are most esteemed, and extraordinary prices are paid for them (C.R. Alpha. 767). The specimen from Singapore is cartilaginous and fibrous as if taken from the base or root of the horn. The jelly made from it is used for spermatorrhoea, haematuria, and incontinence of urine.

422. Burnt Hartshorn.

鹿角霜: Lu (deer) chiao (horn) shuang (burnt): Luk kok seung: local and Cantonese name.

The name shuang refers also to frost and the white efflorescence on certain salts. The specimen is that of white, light, friable pieces of burnt bone. The same name is used in the Customs List (Alpha. 760) for deerhorn glue refuse from Kwangtung. The bones, left after extracting the gelatine with water, are dried and burnt, leaving impure calcium phosphate. Burnt hartshorn is a stimulant and tonic, and holds an important place in Chinese medicine, as it once did in all old European Pharmacopoeias.

423. Edible Birds' Nests.

燕窩: Yen (swallow) wo (nest): In wo (Cant.): local name 'Yin woh'.

This is the gelatinous nest of the swallow (*Collocalia brevirostris*) elaborated by the bird from species of *Gelidium* and other seaweeds. It is found in Java, Borneo, Ceylon, and the

Indian Archipelago. It is a pale brown substance, occurring in irregular fragments, weighing quarter to half ounce, brittle and wrinkled, softening in hot water. There is a large trade in the article at Fukien. It is a tonic and invigorating medicine. It is very expensive and takes rank after ginseng.

424. Magpie Excrement.

靈芝: Ling (bird) chi: local name 'Lin chee'.

These are black, oblong, bodies, pointed at the ends, $\frac{1}{2}$ in. long, light in texture, and disintegrating in water. Bretschneider (iii. 266) discussing *chi*, the name applied to various mushrooms, states that *ling chi* is imported into Ningpo from Hankow, and imported to Amoy, and is identified with birds' excrement.' In the Customs Report (Alpha. 731) Ling chi (Wu ling chi) is called 'Dung of Magpie'. Porter Smith refers it to a *Honiculus* or *Coturnix*. Soubeiran and de Thiersant apply the name to the excrement of the bat. It is unnecessary to specify the numerous qualities attributed to such a drug.

425. White Pigeon Excrement.

白鴿屎: Pai (white) ko (pigeon) shih (excrement): Paak kop shi, Cantonese and local name.

The uro-faecal excretion of this bird occurs in the shops in small, dark-coloured fragments, made up of vegetable debris which disintegrates in hot water. Porter Smith says the drug is used as a veterinary medicine and is credited with antiscorbutic and vulnerary properties. It was a famine food in Samaria 893 B.C. (II Kings vi. 25).

426. Fowls' Egg-shells.

蛋殼: Tan (egg) k'ò (shell): Taan hok (Cant.): local name 'Tan hock'.

The drug consists of the familiar broken shells of fowls' eggs with the white membrane attached. The shells are called 'Phoenix skins' (Feng huang t'ai Alpha. 305) and are exported from Fukien. The white skin is given in cases of jaundice. The shells are burnt and pulverized and the powder is administered in dysuria.

427. Fowls' Gizzards.

內金: Nei (inside) chin (gold): Noi kam, Cantonese and local name.

The lining membrane of the gizzard of the common fowl is carefully peeled off and dried to produce this drug, which is also called Chi nei chin or Chi chun p'i. It represents a wrinkled or plicate surface, yellow or dirty-white in colour. It is a commercial article in the Chinese Customs (C.R. Alpha. 45 and 55)

and comes from Kiangsu, Kwangtung, and Szechwan. It is valued at HT. 6 a picul (Hosie). It is prepared locally in Singapore, where it is prescribed for dyspepsia and other disorders. It is interesting to note that this drug, under the name of *Pelliculae stomachi gallinae interiores*, appeared in the *London Pharmacopoeia* for 1721.

428. Fowls' Blood.

鷄血膠: Chi hsüeh chiao. The coagulated blood of the common fowl made into a paste or glue is used in medicine. It is moulded into briquettes measuring roughly $6 \times 3 \times 1$ in., and each briquette is usually packed for transport in a small box of bamboo ware. It is valued at HT. 20 per picul (Hosie).

429. *Pholidotus manis*. *Aurita edentata*.

The scales of this, the Chinese pangolin or scaly ant-eater, which is also known as *Manis dalmanni*, are used in medicine. Variouslly called 'Ch'uan shan chia p'ien, shan chia, shan chia p'ien and chia p'ien', they are valued at T. 20 to 50 a picul, the tail scales being considered the best. The scales of the Malay Pangolin, *Pholidotus manis javanica*, which ranges from Bhamo through Burma, Cochin-China, and Cambodia, the Malay Peninsula, Sumatra, Java, and Borneo to the Celebes, are also imported into China for the same purpose. Travelling in Yunnan one frequently meets loads of the dried scaly skins being carried north into Szechwan for further distribution by water (Hosie). Porter Smith informs us that the principal use of the scales is to scratch itching surfaces, for which purpose they are fixed upon a length of bamboo as a kind of curry-comb.

430. Snake Skins.

Ch'i she. The skin of this snake which derives its name from the Department of Ch'i chou on the left bank of the Yangtze, between Hankow and Kinkiang, where it is specially abundant, are pounded into medicine. A good specimen of the skin is valued at HT. 3 to 4 (Hosie). Medicinal snake sloughs (She p'i) come from Kwangtung (C.R. Alpha. 1118).

431. Turtle Shell.

龜甲: Pieh (turtle) chia (scale): Pit kaap, Cantonese and local name.

沙 龜甲: Ch'ao (roast) pieh chia: Ch'aau pit kaap, Cantonese and local name. C.R. Alpha. 1015; P.S. under Emys.

The carapace of a species of freshwater turtle found throughout the Yangtze Valley, and collected in Hupeh and Honan. The empty carapaces found on the ground are reputed to make an excellent medicine. The ordinary shell sold

in the shops is about 5 in. square, marked on the concave internal surface by eight ribs. The external convex surface is darker, closely reticulated and marked by lines. The shell is heated with vinegar and water and made into a jelly which is in much repute in fevers, debility, and acute rheumatism.

The second sample from Malaya is roasted. Porter Smith records that the shell is sometimes burnt, reduced to powder and used as a remedy in ague.

433. Lower Carapace of Tortoise.

龜板: Kuei (tortoise) pan (board, block): Kwai paan, Cantonese and local name. P.S. under Terrapin.

The land and freshwater tortoise is called Wu kuei from the dark colour of the skin and of the particoloured shell. Several species are enumerated in the Pen ts'ao; they are sacred in the eyes of Buddhists. The aquatic species are officinal. The under-shell, breastplate, or plastron from Kwangtung and Hupeh is an article of commerce (C.R. Alpha. 666); as well as the glue made from it (Kuei chiao, C.R. Alpha. 656). The powdered shell is made into pills, and its jelly enters into nostrums for debility and fevers.

434. Burnt Carapace.

豈叩霜: Tou k'ou shuang; Tau k'au seung, Cantonese and local name.

This strange name, indicating nutmeg or cardamom, is given to a sample of burnt particles of a shell. Submitted to an expert it was reported to consist of 'Spherulites with chitin, a preparation of one of the lower animals, belonging to a carapace or siliceous skeleton'. It is evidently a portion of a partly burnt tortoise shell. The ashes of these shells are given to parturient women, and are used as a dusting powder for sores and wounds.

435. Cuttle Fish Bone (*Sepia officinalis*, Linn.).

海螵蛸: Hai (sea) p'iao hsiao: Hoi piu siu, Cantonese and local name. C.R. Alpha. 352; Pen ts'ao; Tatar.; P.S.; Wu t'sih yü (Black pirate fish); Wu tseh ku (Black thief bones). The bone of the cuttle fish is boat-shaped, 3 to 4 in. long, 1½ in. wide and 5-7 lines thick, light, and porous. The bone is used as an abradant. The pounce or powdered bone is considered astringent and alterative, and is a domestic remedy for stopping the flow of blood from wounds.

436. Dried Scorpions.

金蠍花: Chin (gold) hsiai (scorpion) hua (flower): Cantonese and local name 'Kam sim fa'.

Ch'uan hsiai, scorpions from Chihli (C.R. Alpha. 264).

Ch'uan i, scorpions from Kiangsu (C.R. Alpha. 266). Hosie calls the dried scorpions of Szechwan, Ch'uang chung, and gives the price at one tael per catty. They are from 1 to 2 in. in length, with a tail of six joints. They are dried by heat, the antennae being usually removed. The dried arachnids are an ingredient in a celebrated tincture used as a diaphoretic in certain serious diseases.

437. Cicads.

蟬衣: Ch'an i, ch'an t'ui are the names of the brown yellow skins of a beetle used in medicine. They come from the provinces of Chekiang, Hunan, Hupeh, and Szechwan. They are valued at T. 6 a picul (Hosie). Tatarinov gives the above name to a kind of cricket used as the base of a special medicament. The exuviae of cicads is recorded as Alpha. 20 in the Customs List of Chinese Medicines.

438. Silkworms, dried.

蠶 蠶: Chiang chung, Chiang ts'an.

In the silk-producing provinces of China such of the larvae of *Bombyx mori* as die owing to the inclemency of the weather and to malnutrition, are collected and sold for medicinal use. They are valued at HT. 3.5 a picul (Hosie). C.R. Alpha. 74, from Kiangsu and Chekiang.

439. Silkworm Cocoons.

蠶衣: Ts'an (silkworm) i (garments): Ts'aam i (Cant.): local name 'Choon yee'.

Ts'an keen and ts'an i (C.R. Alpha. 1325) are the names in the Customs Report for the cocoons of wild silkworms grown on the mulberry trees. Fukien is a market for this commodity. The white cocoons are of the ordinary shape, about an inch in length, enclosing the dead chrysalis.

440. Silkworm Excrement.

蛾 蠶 砂: Ngo ts'an (silkworm moth) sha (sand or sediment): Ngo ts'aan sha (Cant.): local name 'Ngo chaun sa'.

Ts'an sha (ch'ung shih; Yüan ts'an sha) are names in the Customs Reports (Alpha. 1326) for silkworm excreta imported from Fukien and Kwangtung. It is known by the above name in Annam where it is used medicinally. Liu sha is the sandy exuviae of silkworms collected in Szechwan (Hosie). Three samples of this drug were received from Singapore. They are small, black, corrugated bodies of the size of pins' heads. Superficially they resemble seeds, but they disintegrate in boiling water.

441. A Bug.

九香虫 or 久香虫: Chiu hsiang. This tree-bug, credited by the Customs (Alpha. 197) to the provinces of Kwangtung and Szechwan, is included in the materia medica. There are two different ways of writing Chiu, and the name may be translated 'Bug with Nine Smells' or 'Bug with Enduring Smells' according to the character used. When fresh it has a very strong disagreeable odour. It is valued at T. 17 a picul (Hosie.)

442 and 443. Stick Lac (*Tachardia Lacca*, Kerr.).

子更: Tzü (seed) keng (to change): Tsz kang (Cant.): local name 'Chee karn'.

紫草茸: Tzu ts'ao jung: Tsz ts'o yung: Cantonese and local name.

Tsze kang and tsze ts'ao jung are trade names of stick lac in the Customs Reports (Alpha. 1344). In the seventeenth century the Dutch bought gum lac in India for export to Persia and other countries (*Sino-Iranica*, by B. Laufer, pp. 476-8). Gum lac or stick lac appears to be still imported into China from India, where it is produced by the lac insect on species of *Erythrina*, *Acacia*, *Butea*, and *Zizyphus*. Although lac resin is mostly used for varnishing and polishing, it is noticed as a medicinal substance by Tatarinov, Tsudsioka, Murai, and Porter Smith. The latter states that it is used as an astringent and alterative internally, and as a plaster for unhealthy sores.

444. Insect Excrement.

油虫珠: Yu ch'ung (insect) chu (bead): Yau ch'ung chue (Cant.): Yan choong choo, local name.

These objects are undoubtedly the frass of some insect, but the identification is difficult. It has been suggested, but not confirmed, that they are the excrement of a small Stick Insect (order Orthoptera). Cockroach dung (Ch'ung sha) is an article of commerce in Fukien (C.R. Alpha. 284). The minute objects are hexagonal in shape and consist mostly of sandy matter. The insect is partly carnivorous since fragments of chitin as well as vegetable matter are present.

MINERAL

445. Sodium Sulphate.

元明粉: Yuan meng fen: Uen ming fan: Cantonese and local name. Tatar.; Hanb. Sci. pa. 217; P.S.; Debeaux; C.R. Alpha. 1562.

Glauber salt is sometimes in China called Liu hiuen chin, the name of a scientific saint who lived 200 B.C. and recommended sodium sulphate as a cure for a number of diseases. It is mentioned in all works of Chinese alchemy. The salt is obtained in a natural state in the northern and central provinces. It is used in medicine throughout the country, as well as in Cochinchina, Mongolia, and Tibet.

446. Borax, Biborate of Sodium.

月石: Yueh (moon) shih (stone): Yuet shek (Cant.): local name 'Yoot seak'. Pang sha. Pen ts'ao; Tatar.; Hanb. Sci. pa. 217; P.S.; C.R. Alpha. 1568.

Borax is obtained on the shores of lakes north of China, but that in use is generally imported from abroad. It is extensively used by silversmiths and coppersmiths. Its medicinal action is resolvent, expectorant, deobstruent, and stomachic.

447. Gypsum, Fibrous Calcium Sulphate.

石膏: Shih kau. Pen ts'ao; Tatar.; Merat.; Cleyer.; P.S.; Hanb. Sci. pa. 218; C.R. Alpha. 1151. Medang Sila (Malay).

Gypsum or hydrous calcium sulphate is met with in Hupeh and other districts often associated with mineral springs. It is used as an ingredient in bean curd and for facing rice. Plaster of Paris or heated gypsum, Shuh shih kan, is a desiccating application to sores and hepatic eruptions. It is also used for making splints for surgical purposes.

448. Limonite, Hydrous Oxide of Iron.

無名二: Wu ming erh: Mo ming i (Cant.): 'Woo min yee', local name. Pen ts'ao; Hanb. Sci. pa. 223; P.S.; T. & M.; C.R. Alpha. 1465.

Two specimens under this name came from the Singapore drug shops. They are dark brown, rounded nodules of the size of peas. The Customs Report refers to the drug as pisiform mangiferous limonite. Hanbury calls the mineral hydrous peroxide of iron in grains, and gives an analysis showing that it contains 63 per cent. of iron oxide and 3.5 per cent. of manganese oxide. It is found in the provinces of Szechwan and Kwangtung.

449. Ochre.

赭石頭: Che shih t'ou. This is a red hydrated oxide of iron from the provinces of Hunan and Hupeh. It is easily powdered and used in medicine. It costs about T. 1.50 a picul (Hosie).

450. **Iron Sulphate.**

青礬: Ch'ing fan, in the Customs List (Alpha. 183) is a name for impure sulphate of iron, Tan fan is the name for the pure salt, quoted by Hanbury (Sci. pa. 224). The Singapore sample is in small green crystals partly oxidized. The Pen ts'ao sets this down as a useful drug, but it is seldom administered at the present time as an internal remedy. It is used in making ink, hair washes, and as a disinfectant.

451. **Cupric Sulphate.**

胆凡: Tan fan: Taam faan: local Cantonese name.

Tan fan is sulphate of copper or blue vitriol (C.R. Alpha. 1239), sometimes used for sulphate of iron. Porter Smith says 'no sample of blue copperas or copper sulphate is met with, sulphate of iron highly purified, being always furnished and described as tan fan.' Things have improved since this was written. The sample from Singapore is in fine blue crystals and is undoubtedly pure copper sulphate. Emetic, vulnerary, escharotic, and alexipharmic properties are attributed to the salt.

452. **Calomel, Mercurous chloride.**

輕粉: Ch'ing fen (C.R. Alpha. 184), Shin yin fen, Hung fen. This medicinal salt is extensively manufactured in China, principally in the provinces of Hupeh and Fukien, by subliming common salt, mercury, and alum in certain fixed proportions. The sublimate is collected and packed in small chip or bamboo boxes for the market. The port of Hankow on the Yangtsze is one of the chief centres of the manufacture. It is valued at from T. 20 to 40 a picul (Hosie).

453. **Mica, White.**

雲母石: Yuen (clouds) mu (mother) shih (stone): Wan mo shek, local and Cantonese name. Common mica, C.R. Alpha. 1572; T. & M.; Hanb. Sci. pa. 219; P.S.

The name 'Mother of clouds' refers to the hazy colour associated with clouds in opaque mica and talc. Willbourn says Muscovite, or white mica, silicate of aluminium and potassium, is found in fairly large flakes in pegmatite veins in Kedah Peak and in other parts of the Malay States. The sample occurs in small, opaque, broken flakes.

454. **Phlogopite.**

金蒙石: Chin (gold) meng (to cover) shih (stone): Kam mung shek (Cant.): local name 'Kam moong siak'.

Chin sing shih (stone of golden stars) and 'Golden mica' of

Porter Smith. 'Bronze flaky mineral' of the Customs (Alpha. 182). 'Brown mica' from Szechwan and Hupeh of Hosie. 'Micaceous earth' of Hanbury. Phlogopite or bronze mica comes from Kweichow and other places in China. It is mentioned in the Pen ts'ao, and small flakes of it are kept in all druggists' shops as a medicinal agent. In a powdered form it is given in haemorrhage and other diseases of the lungs, and has the reputation of prolonging life. The price is T. 1 a picul (Hosie).

455. **Red Agate.**

山湖: Shan (mountain) hu (lake): Shaan oo (Cant.): San foo, local name.

This substance consists of red and white splinters of a glass-like mineral from China. It was identified by the Geological Survey. Agate is a crypo-crystalline variety of quartz; it is calcedony with colours arranged in curved parallel bands. It has not been found in Perak (Willbourn).

456. **Pills from Szechwan.**

川粒花: Ch'uan li hua: Ch'uen nap fa (Cant.).

川粉花: Ch'uan fen hua: Ch'uen fan fa (Cant.).

These are red pellets of the size of garden peas, made up of ochreous, brown clay, covered with vermilion. No information can be gathered about these Szechwan clay pills which are probably a proprietary article.

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Notice

Volume VI will consist of three parts. Parts 2 and 3 will be upon the Medicine of the Malays.

It is being published concurrently with Volume V.

The
Gardens' Bulletin
STRAITS SETTLEMENTS

VOL. VI

Issued April 1930

Part 2

Contents

MALAY VILLAGE MEDICINE

PRESCRIPTIONS COLLECTED

BY

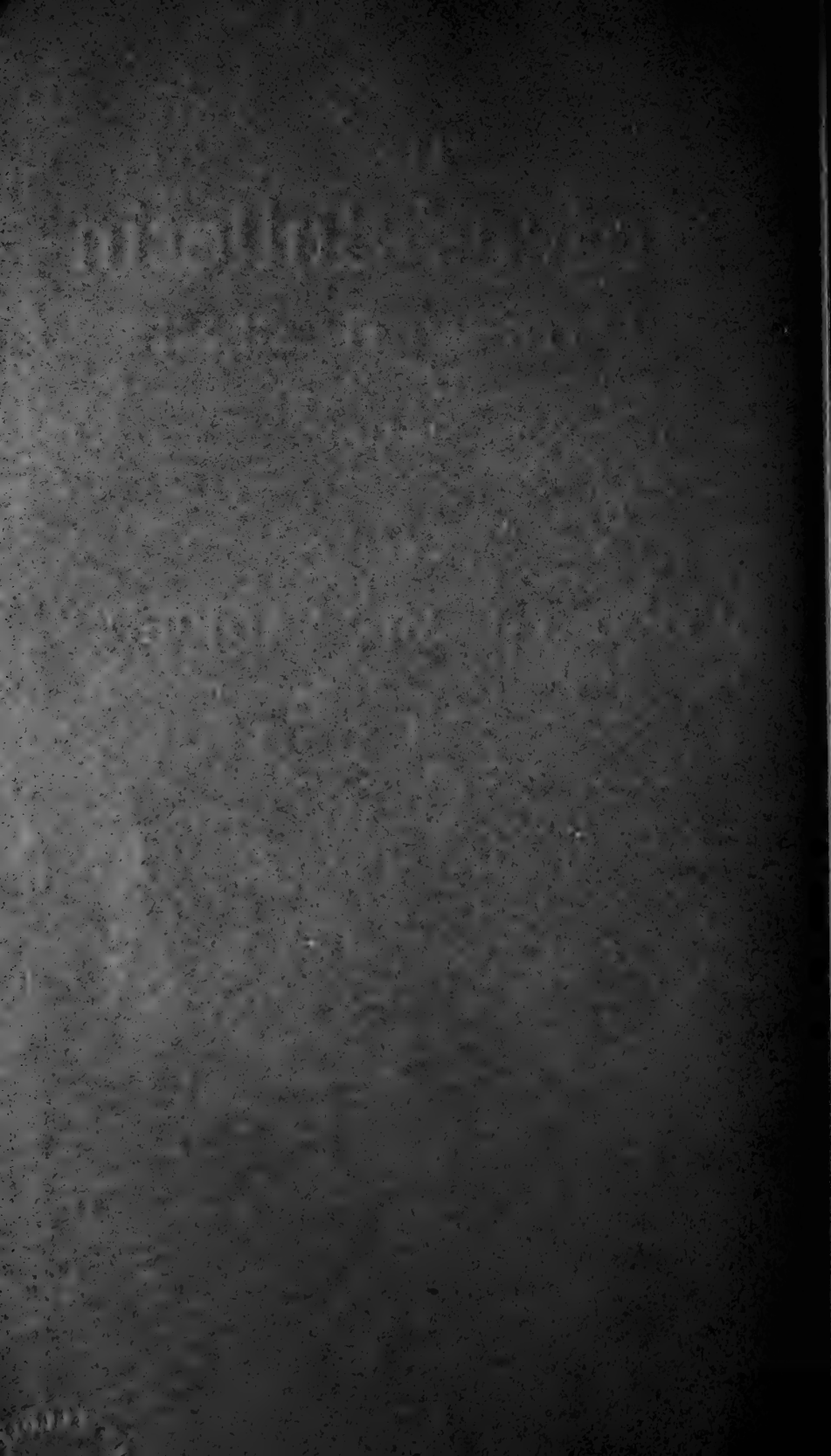
I. H. BURKILL

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MOHAMED HANIFF

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The Gardens' Bulletin

STRAITS SETTLEMENTS

VOL. VI

Issued April 1930

Nos. 6-10

MALAY VILLAGE MEDICINE

Prescriptions collected by I. H. Burkill and Mohamed Haniff

INTRODUCTION

WHEN sickness comes in a Malay village the advice of a *bomor*, or physician of the native school, is sought: when child-birth occurs, a *bidan* or midwife is called in.

From competent persons of those two classes we obtained information in the following way. We toured through the Peninsula, and by the kind help of administrative officers, to whom we return our sincere thanks, were put into touch with those whom we wished to meet. They were asked to give us as much information as they could and to bring specimens in illustration of their simples. At a second meeting the information was taken down, and the specimens ticketed. Subsequently the specimens, which are preserved in the herbarium of the Botanic Gardens, Singapore, were determined and the information worked up.

We tried to avoid unexpected questions, for they beget gusts of fancy and incorrect assertions. We asked one very competent *bomor* to give his information in his own handwriting, for a man must think as he writes; but the information got was meagre. In all other cases we took down the information ourselves, and sometimes may have got the vernacular names mis-written. One of us (M.H.) spent a short time at Jor in contact with the trading Sakai who live there, and we obtained other information from the Malay-speaking Sakai of the Selangor-side of Pahang. The rest of the information was from Malays. We examined the shops of Chinese herbalists, and recorded the plants in them, but do not dare to record the unchecked Chinese names which were taken down.

The information thus got together is set down here without any comments upon the efficacy of the simples. It is given for each record in the following order:

- (1) the botanical name;
- (2) the Malay name as the informant used it;

- (3) the name of the most important place in the neighbourhood of the informant's dwelling;
- (4) the number which we gave to the specimen which the informant brought, and which remains attached to it in the herbarium of the Botanic Gardens, Singapore;
- (5) the complaint for which it is used, and
- (6) the way in which it is used.

After this information, an index and glossary of the vernacular names follow. The glossary has been added because so many of the names are determined by a plant's uses and not by its appearance; and as a consequence of this, plants most diverse to the eye, if capable of the same use, get the same name, to the surprise of botanists and others who, knowing the plants but not the Malays, impute inaccuracy to the latter.

An explanation must be given of the term *ubat meroyan*, which we are forced to use frequently. The Malays are apt to consider all sicknesses following child-birth as originating at that time of exposure of the mother to the attacks of evil spirits, and to place them in a category called *sakit meroyan* (*mereyan* in some parts): for instance, diarrhoea at any time within many months is *sakit meroyan tahi*; a discharge of blood is *sakit meroyan darah*, and rheumatism *sakit meroyan angin*. To ward against such sicknesses, they administer over the first three days after child-birth—this period being one during which evil spirits possess the most power—preparations called *ubat meroyan*; and the word *meroyan* enters into the name of the plant used (perhaps often only when so used), sometimes in an exceedingly fanciful expression. This is particularly the case in Pahang. An *ubat meroyan* may not be intended to have any immediate effect, and many of the plants in the class possess the medicinal value of sympathy, but none chemico-physiologically.

DILLENACEAE

Delima sarmentosa, Linn.

1. Mempelas. Kuala Kangsar, 16020.—Child-birth. A decoction of the roots as an *ubat meroyan*.

2. Mempelas. Budu, Pahang, 15807.—Boils in the groin. Pound the leaves with turmeric and rice, and poultice.

3. Mempelas. Kuala Tembeling, 16066.—Boils. Apply the young leaves cold to boils that have not burst.

4. Mempelas. Bentong, 16582.—Dysentery. Boil the leaves with those of *Melastoma decemfidum*, *Ardisia sp.* and another undetermined plant, and drink the decoction.

5. Mempelas. Bentong, 16483.—Pains in the bones. Take the twigs of this and of *Micromelum hirsutum*, *Alstonia angusti-*

loba, *Fagraea racemosa*, *Peronema canescens*, *Zingiber ? cassumunar* and *Areca catechu*; and exorcise the disease by beating the body with the bunch.

Tetracera assa, DC.

6. Ampelas (mempelas) lichin. Alor Sta, 10415.—Itch. Poultice with its leaves.

7. Mempelas. Beserah, 17569.—Itch. Pound the root with roots of *Otophora resecta*, *Eugenia malaccensis* and *E. pendens*, and also with benzoin; poultice.

Tetracera fragrans, Ridl.

8. Mempelas. Alor Sta, 10410.—Itch. Poultice with the leaves.

Acrotrema costatum, Jack

9. Punai tanah. Bentong, 16662.—Child-birth. A decoction as an ubat meroyan.

MAGNOLIACEAE

Michelia Champaca, Linn.

10. Chempaka. Beserah, 17617.—Child-birth. The bark is boiled and the decoction administered as an ubat meroyan.

11. Chempaka. Beserah, 17648.—Child-birth. The leaves are pounded, and smeared over the body after child-birth.

ANONACEAE

Uvaria purpurea, Blume

12. Medang salak. Pekan, 17236.—Stomach ache. Boil leaves and roots: drink.

13. Meroyan otak. Pekan, 17246.—Child-birth. Boil the root and take the decoction as an ubat meroyan, by itself or mixed with others.

Uvaria ?purpurea, Blume

14. Medang se-nanah. Batu Gajah, 13418.—Intestinal pains. A decoction of the leaf taken, and the leaf made into a poultice.

15. Daun esek nanah. Grik, 13738.—Flatulence. Eat the leaf with rice.

Uvaria micrantha, Hook. f. & Thoms.

16. Daun ekor bukit kampong. Kuala Kangsar, 16010.—Child-birth. The leaves are made into a decoction, taken as an ubat meroyan.

17. Daun larak. Kuala Tembeling, 15840.—Child-birth. The root is boiled with that of *Psychotria stipulacea*, and taken as an ubat meroyan.

Uvaria sp.

18. Pisang-pisang keruing. Raub, 16225.—Child-birth. The root is made into a decoction, and this is taken as an ubat meroyan.

Uvaria sp.

19. Medang ubat bisul. Kuala Lipis, 15772.—Boils. Poultice with the crushed leaves.

Uvaria sp.

20. Sekinchut (elsewhere sekenchong). Pekan, 17226.—Child-birth. A decoction of the root as an ubat meroyan, and continued as long as fancied.

Anona muricata, Linn.

21. Durian bengala. Batu Gajah, 13383.—Skin diseases in children. Pound the leaves and apply.

22. Durian makah. Telok Anson, 15919.—Stomach ache.

23. Durian makah. Telok Anson, 15919.—Coughs and colds. Lotion made from the leaves applied to the throat.

24. Durian makah. Telok Anson, 16161.—Rheumatism. A lotion from the leaves, with seed of *Nigella sativa*, onion and asafoetida.

Anona reticulata, Linn.

25. Nona kapri. Alor Sta, 10457.—Epilepsy or convulsions. Way of using not recorded.

26. Nona kapri. Kuala Kangsar, 15958.—Toothache. Scrape the bark from the root and apply it to the gums.

27. Lonang. Beserah, 17593.—Fever. Pound the root and administer internally.

Anona sp.

28. Lawang besar, for lonang besar. Kuala Kangsar, 16029.—Child-birth. A decoction of the leaves is administered as an ubat meroyan.

29. Daun selimbut. Raub, 16218.—Child-birth. The same.

Canangium odoratum, Baill.

30. Neriah. Grik, 12502.—Itch. A poultice of the leaves.

Canangium?

31. Leniyah (variation of neriah). Grik, 13797.—Itch. The same.

Desmos sp.

32. Pagar anak. Pekan, 17302.—Child-birth. Boil the root and take the decoction as an ubat meroyan.

Desmos chinensis, Lour.

33. Pagar anak. Beserah, 17622.—Child-birth. The same.

34. Tepang. Beserah, 17626.—Child-birth. The same.

Polyalthia Beccarii, King

35. Mengala hutan. Kuala Kangsar, 16046.—Skin diseases. Pound the leaf and poultice.

Polyalthia hypoleuca, Hook. f.

36. Larak hutan. Kuala Kangsar, 16041.—Child-birth. A decoction of the roots is used as an ubat meroyan.

Polyalthia sp.

37. Punai bintang. Bentong, 16742.—Child-birth. A decoction is prepared by boiling and used as an ubat meroyan.

Anaxagorea Scortechinii, King

38. Sekobang kechil. Raub, 16221.—Child-birth. A decoction of the root is used as an ubat meroyan.

Goniothalamus macrophyllus, Hook. f.

39. Akar beranak gajah. Kuala Kangsar, 16035.—Child-birth. A decoction of the roots as an ubat meroyan.

40. Lada hutan. Manchis, 16776.—Fever. Boil the leaves and steam the patient. Swellings. Heat the leaves and apply them.

Goniothalamus Scortechinii, King

41. Akar gajah beranak. Grik, 12349, 13753, 13764.—Child-birth. A decoction is apparently much used, of it alone or in compounds, as with *Paramignya*, see no. 240.

42. Daun pelah besar (? for pelangas besar). Grik, 12536.—Child-birth. The same.

Goniothalamus sp.

43. Kayu bukit. Kuala Kangsar, 15552.—Child-birth. The same.

Oxymitra ?affinis, Hook. f.

44. Keremanah. Alor Sta, 10417.—Ringworm.

Oxymitra latifolia, Hook. f.

45. Larak kuching. Raub, 16224.—Child-birth. A decoction of the root as an ubat meroyan.

Melodorum ?fulgens, Hook. f.

46. Medang salah hutan. Taiping, 13261.—Child-birth. The leaves in a decoction for use as an ubat meroyan.

Melodorum cylindricum, Hook. f.

47. Tepak. Grik, 12339.—Diarrhoea. A decoction of the root is drunk.

48. Tepak. Grik, 12339.—Snake-bite. The same treatment.

Melodorum lanuginosum, Hook. f.

49. Selusoh semang. Kuala Kangsar, 16034.—Child-birth. A decoction of the roots is administered as an ubat meroyan.

Melodorum ?lanuginosum, Hook. f.

50. Larak api. Pekan, 17298.—Child-birth. A decoction of the roots is administered as an ubat meroyan.

51. Larak api. Pekan, 17298.—Stomach ache. The same.

?Xylophia malayana, Hook. f.

52. Meroyan angin. Pekan, 17247.—Child-birth. The roots are boiled and the decoction used as an ubat meroyan.

Xylopiia ferruginea, Hook. f.

53. Jangkak. Tapah, 14152.—Vomiting. A decoction of the leaves and bark is taken to stop vomiting.

Anonaceae incertae

54. Akar bukit. Kuala Kangsar, 16043.—Fever. A decoction of the root is administered.

55. Meroyan ungu. Pekan, 17249.—Child-birth. A decoction of the roots is administered.

56. Sitam. Pekan, 17293.—Child-birth. The same.

57. Gehar. Raub, 16246.—Child-birth. The same.

58. Akar larak. Kuala Kangsar, 15546.—Child-birth. The same.

59. Lelimau. Karak, 16630.—Nervous complaints. A preparation of it and *Bauhinia ?bidentata* is given internally.

60. Kabut. Manchis, 16762.—Sprains. Boil and foment with the decoction.

MENISPERMACEAE

Tinospora crispa, Miers

61. Bertangwali (elsewhere petawali). Grik, 12334.—Cholera. A decoction from any part of the plant taken internally.

62. Bertangwali. Grik, 12334.—Ague. The same.

63. Patau wali. Batu Gajah, 13415.—Worms in children. Make a decoction and foment the body. Then exorcise and drive downward the worms by tying the stem round the neck. The charm also keeps stinging insects away.

64. Petawali. Kuala Kangsar, 10349.—Intestinal worms. Administer a decoction.

65. Petawali. Telok Anson, 15869.—Small pox. The same.

Fibraurea chloroleuca, Miers

66. Kekunyet. Pekan, 17296.—Child-birth. A decoction of the root as an ubat meroyan.

67. Kekunyet. Pekan, 17296.—Ulcerated noses. Inhale the smoke of chips of the wood.

Coscinium Blumeinum, Miers

68. Kayu berduri. Grik, 13754.—Child-birth. Administer with *Goniothalamus Scortechinii* as an ubat meroyan.

69. Kekunyit. Raub, 17011.—Prickly heat. Rub the skin with the stem or root.

70. Daun balik angin (this name really belongs to *Macaranga*, &c.). Kuala Kangsar, 16012.—Medicinally used; but way of using not recorded.

Tiliacora?

71. Berkunyit. Grik, 13755.—Cuts. Apply as a poultice.

Pericampylus incanus, Miers

72. Minyak pinyang. Raub, 16822.—High fever. Infuse its leaves with those of *Merremia vitifolia*, *Bridelia tomentosa*, *Gleichenia linearis* and *Selaginella Willdenowii* in cold water for a night, and give the infusion to drink morning by morning or evening by evening, making it afresh for each day.

Stephania rotunda, Lour.

73. Daun nasi betina (for nasi-nasi betina). Kuala Kangsar, 15576.—Headache. Bruise the leaves and poultice.

Cyclea laxiflora, Miers

74. Daun metimun tikus. Kuala Kangsar, 15600.—Worms in children. Bruise the leaves in cold water and foment.

75. Daun nerong keman (?for terong kemang). Kuala Kangsar, 15549.—Piles. Boil the root and stem, and drink the decoction.

76. Terong kemang. Batu Gajah, 13420.—Child-birth. Administer a decoction of the root after child-birth.

77. Akar pahit. Raub, 16970.—Asthma. Make a decoction and drink it.

Menispermaceae

78. Ubat setong (elsewhere ubat restong). Bentong, 16477.—Ulceration of the nose. Burn the root and inhale the smoke of it.

CAPPARIDACEAE

Cleome viscosa, Linn.

79. Maman puteh or maman pantai. Grik, 12315.—Rheumatism. Pound and smear over the part affected.

80. Maman puteh or maman pantai. Grik, 12548.—Rheumatism. Pound it with *Selaginella atroviridis* and smear over the part affected.

81. Maman puteh or maman pantai. Grik, 13642.—Blood in the stools. Drink a decoction.

82. Mahmud pantai (for maman pantai). Batu Gajah, 13407.—Headache. Pound and poultice the head.

83. Maman pantai. Telok Anson, 15624.—Headache. The same.

Gynandropsis pentaphylla, DC.

84. Maman. Telok Anson, 15641.—Headache. The same.

85. Maman. Telok Anson, 16271.—Headache. Pound with the seed of *Nigella sativa*, and poultice the head.

Capparis micracantha, DC.

86. Melada. Alor Sta, 10470, 10449.—Swellings. Pound the leaves and fruit with salt and turmeric, and poultice.

VIOLACEAE

Rinorea Kunstleriana (Alsodeia Kunstleriana, *King*).

87. Gemotan pachat. Grik, 13765.—Ulceration of the nose. Burn the root and inhale the smoke.

88. Lumbor. Raub, 16965.—Ulceration of the nose. Make a poultice of it; also make a decoction and drink it.

Rinorea echinocarpa (Alsodeia echinocarpa, *Korth*).

89. Rengkoh. Raub, 16245.—Child-birth. A decoction of the roots is used as an ubat meroyan.

Rinorea sp.

90. Nadoh. Bentong, 16651.—Ulceration of the nose. Pound with *Eugenia oblata*, and poultice.

91. Setong pachal. Manchis, 16758.—Ulceration of the nose. Burn the plant and inhale the smoke.

PITTOSPORACEAE

Pittosporum ferrugineum, Ait.

92. Belalang puak (or belalai puak). Beserah, 17580.—Fever. Pound the thick root and poultice.

POLYGALACEAE

Xanthophyllum sp.

93. Minyak berok. Raub, 16982.—Pain in region of the heart. Poultice the chest with the leaves.

PORTULACACEAE

Portulaca oleracea, Linn.

94. Gelang. Tanjong Malim, 14047.—Constipation in children. Pound the plant with a little salt and administer.

It is stocked in Chinese herbalists' shops in Penang.

Portulaca pilosa, Linn.

95. Penawar. Bentong, 16595.—Boils in the groin. Make a poultice of it along with *Monochoria vaginalis* and turmeric.

It is stocked in Chinese herbalists' shops in Penang (13604).

HYPERICACEAE

Cratoxylon polyanthum, Korth.

96. Akar serapat. Kuala Kangsar, 15548.—Child-birth. A decoction of the root as an ubat meroyan.

Cratoxylon formosum, Benth.

97. Geronggang betina. Tanjong Malim, 14043.—Skin-diseases. Pound the leaves and the bark with coconut oil and poultice.

Cratoxylon sp.

98. Mempat. Pekan, 17297.—Stomach ache. Boil the root and the leaves, and drink the decoction.

FLACOURTIACEAE

Flacourtia Rukam, Zoll. & Moritz.

99. Rukam. Tanjong Malim, 13499.—Inflammation of eyelids. Squeeze the leaves and apply the juice.

Flacourtia Jangomas, Raeuschel (F. *Cataphracta*, Roxb.).

100. Kerekup. Alor Sta, 10409.—Herpes. Roots are crushed and juice applied.

101. Akar pulasan. Grik, 13737, 12340.—Distension of stomach. A decoction of leaves or roots is administered.

102. Ekor serangot (? serangga). Kuala Kangsar, 15968.—Diarrhoea. Boil the leaves and drink the decoction.

103. Akar temberak. Kuala Kangsar, 15579.—Child-birth. The leaves are boiled and the decoction used as an ubat meroyan.

104. Kerekoh. Beserah, 17612.—Wounds and sores. Pound the roots and apply.

105. Bebuas akar. Kuala Tembeling, 16056.—Sore throat. Crush the roots and hold the paste in the mouth.

Pangium edule, Reinw.

106. Kepayang. Tanjong Malim, 14071.—Boils. Pound the seeds and poultice incipient boils to arrest them.

GUTTIFERAE

Garcinia Hombroniana, Pierre

107. Manggis hutan. Raub, 16244.—Child-birth. A decoction of the roots as an ubat meroyan.

Garcinia Mangostana, Linn.

108. Manggis. Telok Anson, 15649.—Circumcision and other like wounds. Infuse the leaves and unripe bananas, thicken with benzoin and apply.

Garcinia atroviridis, Griff.

109. Gelugor. Telok Anson, 15868.—Child-birth. Pound the leaves and use the juice as an ubat meroyan.

110. Asam gelugor. Tanjong Malim, 14045.—Ear-ache. A decoction of the leaf and the root is dropped into the ear.

Garcinia Gaudichaudii, Planch. & Triana

111. Kandis. Manchis, 16779.—Cuts. Rub the root on to the cuts.

Garcinia sp.

112. Tampang manggis. Telok Anson, 16178. Stomach ache.

Calophyllum ? Kunstleri, King

113. Panas belukar. Bentong, 16731.—Child-birth. Boil the plant and use the decoction as an ubat meroyan.

Calophyllum sp.

114. Sedawai puteh. Raub, 16220.—Child-birth. Boil the root and use as an ubat meroyan.

TERNSTROEMACEAE

Eurya acuminata, DC.

115. Jerok puteh and jerok merah. Bentong, 16605, 16606.—Skin disease appearing as pustules. Pound and use as a poultice.

Archytaea Vahlii, Choisy

116. Nyolang padang. Pekan, 17283.—Stomach ache. Boil the leaves or root, and drink the decoction.

117. Kuat. Beserah, 17599.—Child-birth. The root used as an ubat meroyan.

MALVACEAE

Gossypium brasiliense, Macfad.

118. Kapas. Alor Sta, 10439. High fever. The way of using is unrecorded.

119. Kapas. Telok Anson, 15270.—Headache. Bruise the leaves along with rice-water and poultice the head.

120. Kapas. Pekan, 17214.—Fever. Take the leaves, along with the leaves of *Hibiscus rosa-sinensis*, shoots of *Gardenia florida*, and leaves of *Gleichenia linearis*; make a decoction and drink sparingly, cold, for high fever.

121. Kapas. Beserah, 17570. Fever. Pound the root with the roots of *Nephelium lappaceum*, *Albizzia myriophylla*, and *Eugenia?urceolata*, the ferns *Stenochlaena palustris* and *Lygodium flexuosum*; and give this juice internally.

122. Kapuah. Singapore. Against possession by spirits. Burn the cotton fibre and smoke an infant to keep evil spirits away.

Eriodendron anfractuosum, DC.

123. Kekabu. Alor Sta, 10436.—High Fever. Way of using not recorded.

124. Kekabu. Grik, 12373.—Syphilis. Boil the leaves and drink the decoction.

125. Kekabu. Kuala Kangsar, 15981.—Labour. Bruise the leaves in cold water and give to drink.

126. Kekabu. Telok Anson, 16171.—Labour. The same.

127. Kekabau. Beserah, 17561.—Difficult breathing in children, due to colds or asthma. Pound the bark with benzoin and administer internally.

Sida rhombifolia, Linn.

128. Jerun. Alor Sta, 10432.—Blood in faeces. The way of using not recorded.

129. Senanguri and getangguri. Grik, 12343, 13621.—Fever. Boil the root, and give the decoction for high fever.

130. Senanguri. Grik, 12366.—Irregular menses. Boil the whole plant, and drink the decoction.

131. Senanguri. Grik, 13709.—Ulcers. Pound and poultice with it.

132. Akar leguni. Grik, 12466.—Fever in small children. A decoction of the leaves may be used.

133. Jerun. Kuala Kangsar, 16018.—Against possession by spirits. After a death take the plant, dip it in water, and sprinkle the house for the purpose of keeping the spirit of the departed from it.

134. Jerun. Kuala Kangsar, 15539.—Fever. Rub the root upon a stone, and give the juice internally.

135. Jerun. Telok Anson, 14346.—Swellings. Pound the leaves with rice and poultice.

136. Jerun. Telok Anson, 15857, 16186.—Boils. Pound the leaves and poultice.

137. Jerun. Telok Anson, 16165.—Abdominal pain such as appendicitis. Infuse it with seed of *Cuminum cyminum* and asafoetida, and give to drink; with the lees poultice the abdomen.

138. Patiyang and pah liman (? for peliman). Tapah, 13962, 13970.—Eyes that water. Apply.

139. Pekan. Tanjong Malim, 13494.—Toothache. Rub the leaves on the gums.

140. Seliguri. Tanjong Malim, 14058.—Headache. Pound the plant with leaves of *Blumea balsamifera*, and poultice.

141. Senguri. Kuala Lipis, 15756.—Constipation. Make a decoction of the root and drink cold, morning by morning.

142. Senduri. Kuala Tembeling, 16060.—Herpes about the loins. Pound the root and poultice.

143. Senguri. Raub, Pahang, 16971.—Chicken-pox. Pound the plant and poultice with it.

144. Sapu leman. Singapore.—Boils. Pound the leaves and rub them gently over the boil.

Sida carpinifolia, Linn. f.

145. Medang melukut. Telok Anson, 15948.—Cuts. Pound the leaves: poultice.

Sida sp.

146. Kuku gerda. Prov. Wellesley.—Colic. Pound the leaves and poultice. At the same time boil some, and drink the decoction.

147. Seliguri. Singapore.—Toothache. Pound a leaf and pack a hollow tooth with it.

Abutilon indicum, Don

148. Pokok kembang lohor. Alor Sta, 10465.—Ear-ache. Make a decoction and drop it hot into the ear.

Urena lobata, Linn.

149. Pulut, pulut-pulut and pepulut. Alor Sta, 10434.—Blood in stools. The way of using not recorded.

150. Pepulut. Grik, 12343, 12531.—Fever, long-established. The juice of the root, with salt and eggs, taken internally.

151. Pepulut. Telok Anson, 16190.—Aches resulting from fatigue. A decoction of the leaves and root administered internally.

152. Pulut lembu. Tapah, 13990.—Yaws. Boil and poultice.

153. Pulut. Beserah, 17579.—Snake-bite. Chew the root of the plant with prepared betel, or if not available a bit of atap, and spit on to the wound.

154. Pulut. Beserah, 17636.—Headache. Pound it, along with leaves of *Mussaenda glabra*, of *Antidesma ghaesembilla*, and of *Mallotus cochinchinensis*; and poultice.

Hibiscus Sabdariffa, Linn.

155. Asam susor. Telok Anson, 15913.—Use not recorded.

Hibiscus esculentus, Linn.

156. Kachang bendi. Alor Sta, 10451.—Syphilis. Take an infusion of the root.

Hibiscus rosa-sinensis, Linn.

157. Bunga raya puteh. Prov. Wellesley. High fever. Boil the leaves and use the decoction as a lotion.

158. Bunga raya. Grik, 12528.—High fever. The same.

159. Bunga raya. Telok Anson, 15614.—Venereal disease. Pound the root in water, and drink. The white-flowered plant is recommended.

160. Bunga raya. Tapah, 13985.—? Swollen glands in neck. Shred the root into water, boil, and use as a lotion on the neck.

161. Bunga raya. Tanjong Malim, 13496.—Headache. Pound the leaves with leaves of *Averrhoa Carambola*, *Gardenia florida* and a *Crinum*, and poultice.

162. Bunga raya. Telok Anson, 16267.—Headache. Infuse the leaves and bathe the head.

163. Bunga raya. Bentong, 16471.—Sore eyes. Boil the root with leaves of *Curculigo latifolia*, and drop the decoction into the eyes. (The specimen supplied with this information happened to be a hybrid of *H. rosa-sinensis* with *H. lasiopetalus*.)

164. Bunga raya. Pekan, 17215.—Fever. With *Gossypium*, &c.; see no. 120, above.

165. Bunga raya. Pekan, 17273.—Fever. Boil its root with roots of *Durio zibethinus*, of *Nephelium lappaceum*, of *Nephelium ? mutabile*, and of *Artocarpus integrifolia*; and drink the decoction. Boil the leaves of all these and poultice with the mixture.

Hibiscus Abelmoschus, Linn.

166. Kapas hantu. Telok Anson, 15889.—Headache. Pound the root, and poultice.

167. Kapas hantu. Telok Anson, 15292.—Rheumatic pains around the abdomen. The same poultice.

168. Kapas hantu. Telok Anson, 16180.—Varicose veins. Pound the root along with seed of *Cuminum cyminum*, and poultice.

169. Kapas hantu. Beserah, 17614.—Fever in children. Pound the root, and poultice the head.

Hibiscus tiliaceus, Linn.

170. Bebaru. Alor Sta, 10430.—High fever. Take the shoots and the flowers.

171. Baru. Beserah, 17621.—Fever. Boil the root and drink the infusion.

Durio zibethinus, Linn.

172. Durian. Batu Gajah, 13378.—Jaundice. Boil the leaves and bathe in the water.

173. Durian. Pekan, 17270.—Fever. In a mixture with *Hibiscus rosa-sinensis*, &c. See no. 165. Leaves and root, separately.

?Boschia Griffithii, Mast.

174. Hahu-hahu. Telok Anson, 16282.—Ophthalmia. Take the tender new leaves and apply them: upon the first day use 7, upon the second 5, upon the third 3, and on the fourth day 1.

STERCULIACEAE

Pterospermum Blumeinum, Korth.

175. Bayor. Batu Gajah, 13379.—Enlarged spleen. Pound the bark and apply as a poultice.

Pterospermum ? Blumeinum, Korth.

176. Bayor. Raub, 17017.—Abdominal complaints. Poultice in the same way.

Pterospermum sp.

177. Bayor. Tapah, 13977.—Fever. Poultice over the spleen.

178. Bayor rimba. Raub, 16230.—Child-birth. A decoction of the roots as an ubat meroyan.

Melochia corchorifolia, Linn.

179. Lemak ketam. Telok Anson, 15637.—Vomiting. The leaves are administered to stop vomiting.

180. Lemak ketam. Telok Anson, 10309.—Swellings about the abdomen. Pound the leaves and poultice.

181. Lemak ketam. Telok Anson, 16166.—Heart, pain at. Pound the leaves and apply as a poultice.

182. Lemak ketam. Tapah, 13548.—The same.

183. Bayam rusa. Raub, 16846.—Stomach-pains. The same treatment.

184. Bayam rusa. Bentong, 16460.—Urinary trouble. Boil the leaves, with leaves of *Millettia sericea* and *Celosia argentea*; and drink the decoction.

Abroma augusta, Linn. f.

185. Kayu singa. Raub, 17012.—Headache. Pound the root, and poultice with it.

?**Abroma augusta**, Linn. f.

186. Kuku singa. Telok Anson, 16298.—Headache. Pound the leaves, and poultice with them.

Leptonychia glabra, Turcz.

187. Selusoh semang. Taiping, 10559.—Child-birth. The roots are made into a decoction taken in labour.

188. Penawar demum panas. Kuala Kangsar, 16014.—Fever. Pound the leaves in cold water and use as a lotion.

189. Jarum. Beserah, 17564.—Ulcerated noses. Pound the leaves with the leaves of *Clausena excavata*, onions and seed of *Nigella sativa*, and apply as a poultice.

190. Sekinchah. Pekan, 17220.—Fever. Pound the root, and swallow, for severe fever.

TILIACEAE

Grewia paniculata, Roxb.

191. Chenderai. Grik, 13789.—Child-birth. A decoction in fever following child-birth.

192. Chenderai. Grik, 13789.—Itch. A poultice of pounded leaves.

193. Chenderai. Sungei Raya, 13398.—Itch. The same.

194. Ara lumut. Telok Anson, 16170.—Fever. An infusion of the leaves as a lotion.

195. Chenderai. Raub, 16958.—Abdominal pains of any kind. Drink an infusion made with cold water.

196. Chinerai. Beserah, 17592. Fever. A decoction of the root taken internally.

197. Chenderai. Beserah, 17545.—Fractured bones. Pound leaves with bark of *Lepisanthes Kunstleri*, leaves of ?*Spatholobus*, and plants of *Hedyotis capitellata*, and poultice.

198. Ara dani. Karak, 16631.—Fever, continued, diagnosed as kepalu. Pound the leaves, and poultice.

Corchorus capsularis, Linn.

199. Jelita. Kuala Kangsar, 15556.—Dysentery. Make a decoction of the leaves and drink it.

200. Ubat batok kering. Tapah, 13529.—Cough. The leaves, in the form of a decoction, administered for a consumptive cough, and also given as a bitter tonic to children.

Corchorus ?capsularis, Linn.

201. Jelita. Telok Anson, 16289.—Dysentery. A decoction of the roots is given internally.

Elaeocarpus ?obtusus, Blume

202. Chempa. Telok Anson, 10314.—Stings. Pound the leaves with salt and poultice.

GONOSTYLACEAE

Gonostylus Maingayi, Hook. f.

203. Gelugor tawar. Raub, 16238.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

OXALIDACEAE

Biophytum adiantoides, Wight

204. Daun payong. Grik, 12321. Stomach ache in very small children. Pound the whole plant with *Hedyotis glabra*, *Hedyotis hispida*, *Borreria hispida* and *Piper porphyrophyllum*, and use as a poultice.

205. Daun payong. Grik, 12539.—For the same. Burn to ashes and pound the ashes with *Hedyotis hispida*, and poultice.

Averrhoa Bilimbi, Linn.

206. Belimbing or belimbing buloh. Grik, 12506, 13650.—Syphilis. Pound the leaves with the fruit into a paste; swallow it fresh, or let it ferment and then swallow it.

207. Belimbing besi. Kuala Kangsar, 15983.—Child-birth. Boil the leaves and use the infusion as an ubat meroyan.

208. Belimbing buloh. Tapah, 13953.—Itch. Pound and heat the leaves, and apply as a hot fomentation.

209. Belimbing. Bentong, 16458.—Coughs. Take the leaves with leaves of *Carallia suffruticosa* and *Lygodium scandens*; pour over them coconut milk, infuse and drink cold.

Averrhoa Carambola, Linn.

210. Belimbing besi. Alor Sta, 10418.—Ringworm. Pound the shoots, and poultice.

211. Belimbing. Tanjong Malim, 14057.—Vomiting. Make a decoction of the leaves and fruit, and give it to drink.

212. Belimbing. Tanjong Malim.—Headache. Pound the leaves with those of *Hibiscus rosa-sinensis*, &c., and poultice. See no. 161.

213. Belimbing besi. Kuala Tembeling, 15850.—Chicken-pox. Crush the leaves with turmeric and broken rice, and apply as a poultice.

Connaropsis sericea, Ridl.

214. Cherichék. Beserah, 17611.—Wounds. Pound the root and apply.

Connaropsis ?macrophylla, King

215. Belimbing hutan. Singapore.—As a poultice.

RUTACEAE

Evodia latifolia, DC.

216. Daun chabang tiga. Kuala Tembeling, 15844.—Fever, remittent. Take a handful of the leaves: place them parallel and grasp them so: cut off whatever projects on either side of the hand; warm what is retained over a fire and then apply it to the body.

Evodia malayana, Ridl.

217. Medang ketiwang. Telok Anson, 16188.—Fever, remittent.

Zanthoxylum hirtellum, Ridl.

218. Kayu sekatok. Manchis, 16778.—Toothache. Pound the bark and put it into a hollow tooth.

Glycosmis puberula, Lindl.

219. Nerapi. Alor Sta, 10474.—Nausea. Pound the leaves, bark and roots, with black pepper, and ginger and glutinous rice thoroughly; and then poultice.

Glycosmis ?puberula, Lindl.

220. Terapeh. Beserah, 16747-2.—Child-birth. Infuse leaves and roots with leaves and roots of *Rhodamnia trinervia*, of *Elephantopus scaber*, and of *Callicarpa ?longifolia*, to serve as an ubat meroyan.

Micromelum hirsutum, Oliv.

221. Senagu. Grik, 13721.—Vertigo. Take a bit into the mouth and chew it. Possession. It protects from this also.

222. Cherek-cherek. Kuala Kangsar, 16019.—Child-birth. A decoction of the root as an ubat meroyan.

223. Secherek. Telok Anson, 16294.—Possession. A decoction to drive an evil spirit out.

224. Cherek-cherek. Telok Anson, 10313.—Caterpillar rash. Pound the leaves with tamarind and salt, and poultice.

225. Daun gelang. Telok Anson, 15894.—Skin diseases. Pound the leaves, and poultice.

226. Secherek. Telok Anson, 15611.—Gout. Take an infusion of the leaves in the morning.

227. Chememar. Raub, 16968.—Fever. Pound the leaves, and poultice.

228. Chemama. Bentong, 16474.—Sickness in the bones. Take the twigs of this, and the twigs of several other plants in a bunch, and beat the body with the bunch. For the plants see *Delima sarmentosa*, no. 5.

229. Cherek. Kuala Kangsar, 10345.—Skin diseases. Pound the leaves, and poultice.

Clausena excavata, Burm.

230. Chemamah. Kuala Kangsar, 14910.—Child-birth. Boil the leaves and use the decoction as an ubat meroyan.

231. Semuru (elsewhere Semutuh). Beserah, 17590.—Fever. Take the leaves and poultice the head with them.

232. Semuru. Beserah, 17590.—Fever. Infuse the root, and give to drink.

233. Semuru. Beserah, 17565.—Ulcerated noses. Take the leaves with the leaves of *Leptonychia glabra*, &c., and poultice. See *Leptonychia*, no. 189.

Murraya exotica, Linn.

234. Kemuning. Telok Anson, 15884.—Intestinal worms (*Taenia*). Way of using not recorded.

Luvunga scandens, Ham.

235. Susok ayam hutan. Kuala Kangsar, 16042.—Child-birth. Boil the root, and use the infusion as an ubat meroyan.

Paramignya sp.

236. Susok ayam. Kuala Kangsar, 15956.—Child-birth. Boil the roots: boil and use the decoction as an ubat meroyan.

237. Susok ayam kampong. Kuala Kangsar, 16044.—Child-birth. The same.

238. Mechanduk. Manchis, 16767.—Abdominal complaints. The same.

239. Panak rimba. Manchis, 16782.—Syphilis. Boil the plant and use the decoction as a lotion.

?Paramignya.

240. Susok ayam. Grik, 12350.—Child-birth. Boil the roots with the roots of *Goniothalamus Scortechinii*, and drink the decoction as an ubat meroyan.

Atalantia Roxburghiana, Hook. f.

241. Limau pagar. Tanjong Malim, 14049.—Stomach ache. Pound the leaves with the leaves of *Citrus aurantifolia* and of *Areca catechu*, and swallow the juice.

Citrus hystrix, DC.

242. Limau hantu. Alor Sta, 10466.—Pain in the joints. Take its leaf with turmeric: shred fine, and boil; then use the decoction as a lotion over the whole body.

Citrus aurantifolia, Swingle

243. Limau nipis, the lime. Alor Sta, 10446.—Headache. Pound the leaves and apply to the head.

244. Limau nipis. Grik, 12356.—Possession. Chew the leaf, and bespatter the face of the bewitched who sees ghosts in his sleep.

245. Limau nipis. Telok Anson, 15854.—Headache during confinement. Pound the leaves in water, and sprinkle over the head.

246. Limau nipis. Tanjong Malim, 14050.—Stomach ache. Pound the leaves with the leaves of *Atalantia* and of *Areca*, and swallow. See *Atalantia*, no. 241.

247. Limau nipis. Kuala Tembeling, 16067.—Coughs. Sip lime juice.

Citrus medica, Linn.

248. Race Limau kapas. Grik, 12510.—Possession. Boil the leaves with the bark of *Entada* (which is used as soap) and the leaves of ?*Paspalum* sp.; bathe in the water, which will drive the evil spirits away.

Citrus medica, Linn.

249. Race Limau mata kerbau, which has a big fruit. Raub, 16210.—Vermifuge and for loss of appetite. Take fresh shoots; make an infusion and drink it.

Citrus decumana, Linn.

250. Limau besar. Beserah, 17631.—Aches and swellings. Boil the leaves and bathe in the hot infusion.

SIMARUBACEAE

Brucea sumatrana, Roxb.

251. Lada pahit or melada. Taiping, 13297.—Boils. Pound and use as a plaster.

252. Lada pahit. Grik, 12358.—Boils. The same.

253. Lada pahit. Grik, 13722.—Stomach ache. Boil, and drink the infusion.

254. Lada pahit. Grik, 12310.—Fever. Pound the plant with the leaves of *Solanum sarmentosum*, and drink the juice.

255. Suntang hutan. Kuala Kangsar, 15595.—Discoloration of the skin. Pound the leaves with a little coral lime and apply as a poultice.

256. Lada barau. Tapah, 14155.—Scurf. Pound the leaves and apply as a poultice.

257. Lada pahit. Budu, 15813.—Remittent fever. Pound the leaves and rub the paste on the body over the spleen.

Eurycoma longifolia, Jack

258. Tongkat ali. Taiping, 13282.—Tonic. Infuse the roots, and drink.

259. Tukar ali and tongkat ali. Grik, 12503, 13750.—Tonic. The same.

260. Tongkat ali. Kuala Kangsar, 15550.—Child-birth. A decoction of the root used as an ubat meroyan.

261. Tongkat ali. Kuala Kangsar, 16026.—Fever. The same.

262. Jelas (Sakai name). Tapah, 14157.—Wounds and ulcers. Scrape the bark and poultice with it.

263. Penawar puteh. Beserah, 17643.—Fever. Boil the leaves with root of ? *Ilex cymosa*, the leaves of *Erioglossum edule*, and the roots of *Fagraea racemosa*; drink the infusion.

264. Penawar pahit. Pekan, 17287.—Fever. Boil the roots and leaves, and drink the infusion.

265. Petala bumi. Bentong, 16737.—Child-birth. Pull up the plant in silence: under no circumstance mention its name: make a decoction of it by boiling, and use as an ubat meroyan.

266. Muntah bumi. Bentong, 16717.—Headache.

BURSERACEAE

Santiria ? longifolia, King

267. Mentiyaga malam. Grik, 13630.—Fever. Boil the plant and bathe in the infusion.

MELIACEAE

Sandoricum indicum, Cav.

268. Sentol. Alor Sta, 10419.—Fever. Chew the leaves and bespatter the face of the patient.

269. Sentol. Grik, 12369.—Fever. The same.

270. Setol. Telok Anson, 15639.—Remittent fever. Pound the leaves in water and give to drink every morning.

271. Sentol. Bentong, 16608.—Tonic. Boil the leaves with the leaves of *Adenantha pavonina*, of *Fagraea racemosa*, of *Clerodendron disparifolium*, of *Artocarpus ? rigida*, and of ? *Uvaria sp.*; and drink.

Sandoricum nervosum, Blume

272. Ketapi. Kuala Lipis, 15787.—Itch. Pound the leaves and apply as a poultice.

Aglaia salicifolia, Ridl.

273. Sikjot (a Semang name). Kuala Lipis, 15743.—Child-birth. Pound the leaves in cold water, and use the water for washing the body after child-birth.

Lansium domesticum, Jack

274. Langsat. Telok Anson, 15851.—Sore eyes. Drop the juice into the eye.

275. Langsat. Tanjong Malim, 14010.—Dysentery. Boil the bark and the leaves, and drink the decoction.

276. Langsat. Beserah, 17616.—Scorpion stings. Pound the bark and apply it to the place.

Carapa moluccensis, Lam.

277. Nireh. Telok Anson, 16263.—Stomach ache. Boil the bark, and drink the infusion.

278. Nireh. Telok Anson, 16263.—Wounds. Powder the bark and poultice with it.

CHAILLETIACEAE

Chailletia Griffithii, Hook. f.

279. Meroyan kabut. Kuala Lipis, 15736.—Child-birth. Boil the root, and use as an ubat meroyan.

280. Meroyan kabut. Bentong, 16726.—Child-birth. The same.

OLACACEAE

Ochanostachys amentacea, Mast.

281. Petaling. Tanjong Malim, 14018.—Fever. Boil the bark with the bark of *Pometia pinnata* and of *Koompassia malaccensis*, and bathe the body in the infusion for high fever.

282. Petaling. Bentong, 16724.—Fever. Boil the bark, and use the infusion for bathing the body.

Gomphandra ?affinis, Mast.

283. Taring pelandok. Raub, 16239.—Child-birth. Boil the root, and use the decoction as an ubat meroyan.

Gomphandra salicifolia, Ridl.

284. Ekor bukit derimba. Kuala Kangsar, 15973.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

ILICACEAE

?Ilex cymosa, Blume

285. Mesirah. Beserah, 17609.—Fever. Boil the root, and drink the infusion.

286. Mesirah. Beserah, 17642.—Fever. Boil the root with *Eurycoma*, &c., and drink. See *Eurycoma*, no. 263.

287. Mengkirai. Pekan, 17240.—Boils. Pound the root, and poultice to ripen the boils.

CELASTRACEAE

Hippocratea ?indica, Willd.

288. Alor Sta, 10416.—Ringworm. The way of using not recorded.

289. Serapat akar. Batu Gajah, 13405.—After child-birth. A decoction of the root administered to encourage the return of the menses.

Hippocratea sp.

290. Akar beting (elsewhere akar bintang). Beserah, 17587.—Cracked lips. Make an extract from the root with cold water, and drink it.

Salacia grandiflora, Kurz

291. Serapat akar. Kuala Kangsar, 16033.—Child-birth. A decoction of the root is taken to encourage the return of the menses.

?Salacia grandiflora, Kurz

292. Serapat akar. Kuala Kangsar, 15964.—Child-birth. The same.

293. Meriku. Raub, 16233.—Child-birth. The same.

Salacia flavescens, Kurz

294. Sireh iput (serapat). Raub, 16228.—Child-birth. A decoction of the roots as an ubat meroyan.

Salacia sp.

295. Rajah beraleh. Raub, 16213.—Child-birth. A decoction of the roots drunk as an ubat meroyan.

Or mixed with very numerous different roots.

RHAMNACEAE

Zizyphus ?Kunstleri, King

296. Pala hutan (?=pialu hutan). Kuala Kangsar, 15577.—Child-birth. The leaves are boiled and the decoction used as an ubat meroyan.

297. Lawang hutan. Kuala Kangsar, 16233.—Child-birth. The roots are boiled and the decoction used as an ubat meroyan.

Zizyphus elegans, Wall.

298. Chong kayet (Sakai name). Tapah, 14287. Fever. The root is scraped and the raspings boiled: the decoction is swallowed.

Zizyphus sp.

299. Sakar. Grik, 13767.—Ulcers. A poultice made from the roots.

Ventilago ?oblongifolia, Blume

300. Akar penak. Raub, 16978.—Cholera. A poultice of the leaves applied all over the body.

Vitis cinnamomea, Wall.

301. Gundak api. Taiping, 13254.—Child-birth.

302. Daun pakan. Grik, 13757, 13758.—Child-birth. The leaf? is eaten with betel, or with *Elephantopus scaber* and *Labisia potheria*.

303. Charek putri. Budu, 15820.—Wounds. Crush the leaves and apply as a poultice.

Vitis Lawsoni, King

304. Akar noh papan. Grik, 13793.—Fever in infants. As a poultice in the neighbourhood of the spleen.

305. Akar noh keroh. Grik, 12471.—Boils. Heat the leaf and apply it warm.

Vitis repens, Wight & Arn.

306. Riang batu. Grik, 13795.—Fever. Use as a poultice.

307. Riang. Grik, 12372.—Fever. The same.

Vitis hastata, Miq.

308. Asam riang. Batu Gajah, 13392.—Stomach ache. Apply as a poultice.

309. Riang-riang. Raub, 16814.—Boils. Pound and apply as a poultice to boils before they ripen.

Vitis trifolia, Linn.

310. Lakum. Telok Anson, 16281.—Fever. Boil the leaves and bathe in the decoction while hot.

311. Lakom. Raub, 16830.—Fever. The same.

312. Lakom. Karak, 16625.—High fever. Boil its leaves with the leaves of *Cassia nodosa*, of *Ocimum basilicum*, of *Mallotus floribundus* and of *Gleichenia linearis*; and give to the patient to drink.

Vitis ?trifolia, Linn.

313. Lakum. Alor Sta, 10440.—Ulceration of the nose. As a poultice.

Vitis novemfolia, Wall.

314. Akar kum papan. Batu Gajah, 13424.—Fever. Boil the leaves and bathe in the decoction.

315. Kepayang (by error). Telok Anson, 15885.—Skin complaints. Use as a poultice.

316. Asam papan. Kuala Lipis, 15765.—Remittent fever. Apply the leaves, heated, over the spleen.

Leea gigantea, Griff.

317. Memali. Telok Anson, 15942.—Fever. Apply as a poultice.

318. Memali. Budu, 15810.—Cuts. Pound the leaves and poultice.

Leea ?sambucina, Willd.

319. Memali. Kuala Tembeling, 16059.—Caterpillar itch. Pound the leaves with turmeric and broken rice, and apply as a poultice.

320. Memali. Bentong, 16798.—Skin complaints. Pound with leaves of *Cassia alata*, and poultice.

Leea Curtisii, King

321. Memali. Grik, 12451.—Hair, to preserve. Pound the leaf with Chinese tobacco and smear it on the head.

SAPINDACEAE

Cardiospermum Halicacabum, Linn.

322. Bintang beraleh. Grik, 12335.—Bubo in the groin. Pound with *Selaginella atroviridis*, and poultice.

Allophylus ternatus, Lour.

323. Chichang (usually chinchang). Telok Anson, 15294.—Thrush. Apply the juice of the leaves.

Erioglossum edule, Blume

324. Mertajam. Alor Sta, 10414.—Itch (kayap). The leaves as a poultice.

325. Mertajam. Grik, 12371.—Leucoderma. The same treatment.

326. Mertajam. Grik, 13780.—Fever. Make a decoction of the leaves and take it.

327. Terajam. Beserah, 17641.—Fever. Boil the leaves with those of *Fagraea racemosa*; drink the decoction.

328. Terajam. Beserah, 17641.—Fever. Boil the leaves with those of *Eurycoma longifolia* and root of ? *Ilex cymosa*, and drink the decoction. See no. 263.

Lepisanthes Kunstleri, King

329. Derajang (doubtless = terentang). Beserah, 17547.—Broken bones. Pound the bark with leaves of *Grewia paniculata*, ? *Spatholobus* and *Hedyotis capitellata*, and poultice. See no. 197.

Lepisanthes ?cuneata, Hiern

330. Ruku-ruku. Kuala Kangsar, 15993.—Cough. Pound the leaves, extract the juice, and take this.

331. Teradang (for terentang). Kuala Kangsar, 15978.—Fever. Pound the leaves in cold water and use the extract in the bath.

?Lepisanthes sp.

332. Terajang (for terentang). Beserah, 17595.—Stomach ache. Boil the root, and drink the decoction.

Headache. The same treatment.

Otophora resecta, Radlk.

333. Setengok. Beserah, 17566.—Itch (kudis). Pound the root with roots of *Tetracera assa*, *Eugenia malaccensis* and *E. pendens*, and also benzoin; apply as a poultice.

Nephelium lappaceum, Linn.

334. Rambutan. Grik, Perak, 12514.—High fever. Boil the leaves with the leaves of *Carallia suffruticosa*, of *Pometia pinata* and *Ardisia sp.*, and use the decoction in a bath.

335. Rambutan jantan. Telok Anson, 15892.—Diseases of the tongue. Use a decoction of the bark.

336. Rambutan. Beserah, 17571.—Fever. Pound the root with the root of *Gossypium brasiliense*, &c., and give the juice internally. See *Gossypium*, no. 121.

337. Rambutan. Pekan, 17269.—Fever. Boil the roots with the roots of *Hibiscus rosa-sinensis*, &c., and give to drink. See *Hibiscus rosa-sinensis*, no. 165.

338. Rambutan. Pekan, 17269.—Headache. Pound the leaves and use as a poultice upon the head.

Nephelium mutabile, Blume

339. Pulasan. Taiping, 10560.—Worms. The root is used as a vermifuge.

340. Pulasan. Pekan, 17271.—Fever. Roots used with those of *Hibiscus rosa-sinensis*, &c., for making a decoction which is administered. See *Hibiscus rosa-sinensis*, no. 165.

341. Pulasan. Pekan, 17271. Fever. Leaves may be substituted for the root.

342. Pulasan. Bentong, 16454.—Fever. Boil the leaves with *Gleichenia linearis*, and bathe the whole body with the decoction.

Pometia pinnata, Forst.

343. Kasai. Grik, 13751.—High fever. Boil the leaves, and use the decoction in the bath.

344. Kasai. Grik, 12516.—High fever. Boil the leaves with leaves of *Nephelium lappaceum*, &c., and use similarly. See no. 334.

345. Kasai. Telok Anson, 15271.—Fever. Probably the same usage.

346. Kasai. Tanjong Malim, 13978.—Fever. Boil the bark and use the decoction in the bath.

347. Kasai. Tanjong Malim, 14017.—Fever. Boil the bark with the bark of *Ochanostachys amentacea*, and use in the bath. See no. 281.

Guioa pleuropteris, Radlkf.

348. Senyamok. Beserah, 17601.—Fever. Boil the root, and give the decoction to drink.

349. Senyamok. Beserah, 17639.—Stomach ache. Boil the root with the leaves of *Glochidion littorale*, and give to drink.

Mischocarpus Lessertianus, Ridl.

350. Kelat puteh. Pekan, 17245.—Cough. Boil the root and give the decoction to drink for deep-seated cough—'batok dalam'.

ANACARDIACEAE

Buchanania lucida, Blume

351. Otak hudang. Beserah, 17588.—Headache. Pound the leaves and use as a poultice.

Mangifera sp.

352. Pauh. Pekan, 17279.—Flatulence. Boil the bark with the bark of *Beilschmiedia pahangensis*, and drink.

Anacardium occidentale, Linn.

353. Janggung. Telok Anson, 14350.—Diarrhoea, severe. Boil the bark, and drink the decoction.

Microstemon velutina, Engl.

354. Pelong. Raub, 17006.—Ringworm. Apply the oil from the seeds.

CONNARACEAE

Connarus oligophyllus, Wall.

355. Merensa. Pekan, 17239.—Stomach ache. Boil the bark, and drink the decoction.

356. Lelemak. Pekan, 17304.—Itch (kudis). Pound the root, and poultice with it.

Rourea humilis, Blume

357. Akar balah. Raub, 16977.—Thrush. Rub the root upon the sore places.

358. Petala bumi. Raub, 16242.—Child-birth. Boil the roots, and drink as an ubat meroyan.

359. Pengichut. Manchis, 16777.—Fever. Boil the roots, and drink the decoction.

Rourea ?similis, Blume

360. Ribu hutan jantan. Bentong, 16739.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

361. Petai-petai. Karak, 16632.—Colds in children. The same treatment.

?Rourea sp.

362. Merbau akar. Grik, 13749.—Ulcers. Pound the roots, and poultice with them.

363. Merbau akar. Grik, 12544.—Boils. Pound the roots with the leaves of *Carallia suffruticosa*, and poultice.

Cnestis ramiflora, Griff.

364. Susun kelapa. Raub, 16234.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

365. Ribu hutan betina. Bentong, 16738.—Child-birth. The same treatment.

366. Karang-karang. Bentong, 16539.—Urinary trouble. Boil the roots with *Ixora ?stricta*, and give to drink.

367. Kulau. Bentong, 16540.—Stomach ache. Boil the plant and give to drink.

368. Karang-karang. Manchis, 16540.—Sprains. Boil and foment the place with the decoction.

?Cnestis ramiflora, Griff.

369. Rumpuk kachit. Grik, 12520.—Malaria. Pound the leaves with those of *Anplectrum glaucum*, and plants of *Phyllanthus pulcher* and *Pellionia Duvaiana*, and poultice.

LEGUMINOSAE

Abrus precatorius, Linn.

370. Saga kechil and saga akar. Telok Anson, 16262.—Use not recorded.

Abrus ?pulchellus, Wall.

371. Semelit jalin. Raub, 16201.—Colic. Boil the root with the leaves of *Hedyotis capitellata*, *Justicia inconspicua*, and *Sauropus parvifolius*, plants of *Phyllanthus urinaria*, leaves of *Croton argyratus* and rhizomes of *Homalomena*, and drink the decoction.

Dunbaria Scortechinii, Prain

372. Tampong urat. Grik, 13715.—Fever. Pound the leaves and use as a poultice.

373. Tampong urat. Kuala Kangsar, 15589.—Itch. Pound the leaves and use as a poultice. Ulcers. The same.

374. Patong urat (?tampong urat). Kuala Kangsar, 15564.—Wounds. Pound the leaves with a little coral lime, and poultice.

375. Tampong urat. Batu Gajah, 13389.—Cuts. Pound the leaves and poultice.

Flemingia strobilifera, R.Br.

376. Serengan. Taiping, 13274.—Rubefacient. Boil the leaves, and bathe in the water while still hot.

377. Serengan besar. Kuala Kangsar, 16021.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

378. Serengan. Telok Anson, 16292.—Child-birth. Boil the leaves, and use the decoction for washing the body.

379. Serengan. Telok Anson, 15929.—Rheumatism. Use as a lotion.

Dolichos Lablab, Linn.

380. Kachang kara. Bentong.—Ear-ache. Pound the leaves with the leaves of *Stereospermum fimbriatum*, and squeeze the juice into the ear.

Phaseolus calcaratus, Roxb.

381. Kachang sepalit. Telok Anson, 15625.—Stomach ache. Pound the leaves with rice flour, and poultice the abdomen.

Vigna Catiang, Walp.

382. Kachang perut ayam. Telok Anson, 16287.—Ear-ache. Take the leaves, put them into a vessel and plunge it into rice that is boiling; when steamed, remove; squeeze the juice into the ear.

Pueraria phaseoloides, Benth.

383. Tampong urat. Tapah, 13968.—Ulcers, foul-smelling (pekong). Take a decoction internally: 'it sweeps them out'.

384. Ulan susu. Tapah, 13544.—Boils in children. Poultice with it.

?Dioclea reflexa, Hook. f.

385. Pinang keras. Pekan, 17243.—Heart-trouble. Boil the root, and drink the decoction.

Canavalia gladiata, DC.

386. Kachang parang. Singapore.—Stomach ache. Pound the seed, and apply to the abdomen as a poultice.

?Spatholobus sp.

387. Popong (?elsewhere pongpong). Beserah, 17548.—Fractured bones. Pound the leaves with leaves of *Grewia paniculata*, &c., and poultice. See no. 197.

Mucuna biplicata, Teysm. & Binn.

388. Kachang paleh. Kuala Kangsar, 15524. Fever. Heat the leaves, and apply them in a bandage to the abdomen.

Erythrina indica, Lam.

389. Dedap. Grik, 13784.—Toothache. Pound a bit of bark and press it into a hollow tooth.

390. Dedap. Grik, 12317.—Tonic. Boil the leaves, and drink the decoction to increase the appetite.

Indigofera suffruticosa, Mill. (1. anil, *Linn.*)

391. Tarom. Telok Anson, 15281.—Stomach ache. Boil the leaves, and drink the decoction.

Indigofera ?suffruticosa, Mill.

392. Sekebah. Kuala Kangsar, 15996.—Fever. Bruise the leaves in cold water, and wash the body with the water to bring down the temperature.

Millettia sericea, Benth.

393. Jemerah. Grik, 12452.—Toothache. Pound the leaf, and place it in a hollow tooth.

394. Sekebah. Kuala Kangsar, 15532.—Fever. Boil the leaves, and drink the decoction.

395. Lemak pahit. Bentong, 16665.—Child-birth. Boil the root, and drink as an ubat meroyan.

396. Mambul. Bentong, 16462.—Beriberi. Boil the leaves, and the plant of *Loranthus ferrugineus* and *Loranthus* sp., and use as a lotion.

397. Mambul. Bentong, 16462.—Urinary trouble. Boil the leaves with the leaves of *Melochia corchorifolia* and *Celosia argentea*, and drink the decoction. See no. 184.

?Milletia Hemsleyana, Prain

398. Mempari. Grik, 12454.—Toothache. The treatment under *Milletia sericea*, no. 393.

Dalbergia tamarindifolia, Roxb.

399. Semelit jangkar. Telok Anson, 16200.—Varicose veins. Pound the leaves with rice water, and poultice the skin over the veins.

400. Lortan haji. Telok Anson, 15618.—Nervous complaints. Pound the leaves with seed of *Cuminum cyminum*, and poultice.

Pterocarpus indicus, Willd.

401. Sena. Telok Anson, 15276, 15890.—Sore mouth. The fresh kino is applied by touching the sore places with the bark.

Derris dalbergioides, Baker

402. Daun batai. Kuala Tembeling, 16061.—Itch (kudis hitam). Pound the root in coconut milk and poultice.

403. Daun beratai. Kuala Lipis, 15782.—Itch. Crush the bark with a little coconut oil and smear it upon the skin. It is also the ubat ruan buta, or medicine for the spell cast on a man by blinding a murril fish in his name.

Derris elliptica, Benth.

404. Tuba. Telok Anson, 15640.—Itch, &c. Boil the plant, mix with coconut oil, and apply as a poultice.

Uraria crinita, Desv.

405. Keretok babi. Grik, 13704.—Colic in children. A decoction.

406. Keretok babi. Grik, 13704.—Fever in children. The same.

407. Ekor kucing. Kuala Kangsar, 15554.—Child-birth. Boil the roots and give to drink as an ubat meroyan.

408. Pematil ulat. Telok Anson, 15916.—Lice. Leaves as an insecticide.

409. Serengan hutan. Bentong, 16735.—Child-birth. When the body is sore after child-birth, wash it with a lotion made from this plant.

Uraria lagopoides, DC.

410. Korat tanah. Alor Sta, 10469.—Dysentery. Boil leaves and roots together, and give the decoction to drink.

Desmodium triflorum, DC.

411. Rumput barek sisek puteh. Grik, 13644.—Skin complaints. Pound and make a poultice with it.

412. Sisek tenggeling. Budu, 15814.—Colic. Boil the roots and drink the decoction; also take the leaves and poultice with them.

Desmodium heterophyllum, DC.

413. Peparu bendang. Grik, 12313.—Stomach ache. Make a decoction and drink it.

414. Kekara. Bentong.—Abdominal complaints (barah perut). Make a decoction and drink it.

Desmodium pulchellum, Baker

415. Serengan kechil. Kuala Kangsar, 16022.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

Desmodium capitatum, DC.

416. Korat nasi. Grik, 12519.—Colic. The way of using not recorded.

Desmodium gangeticum, DC.

417. Meringan. Alor Sta, 10450.—Sedative for fretful children.

418. Sepantan. Telok Anson, 16254.—Diarrhoea. Make a decoction from the roots and drink it.

Desmodium gyroides, DC.

419. Leguni. Grik, 13717.—?Rheumatism.

Cajanus indicus, Spreng.

420. Kachang kayu. Alor Sta, 10448.—Cough. Way of using not recorded.

421. Kachang kayu. Telok Anson, 16193.—Abdominal trouble such as appendicitis. Boil the leaves with seed of *Cuminum cyminum*, and drink the decoction.

422. Kachang kayu. Telok Anson, 15286.—Cough. Pound the leaves with a little salt, and eat the mixture morning by morning.

423. Kachang kayu. Kuala Kangsar, 15555.—Diarrhoea. Boil the leaves and drink the decoction.

424. Kachang kayu. Kuala Kangsar, 15590.—Ear-ache. Squeeze the juice of the leaves into the ear.

Psophocarpus tetragonolobus, DC.

425. Kachang belimbing. Tanjong Malim, 14026.—Small-pox. Boil the leaves with the leaves of *Peristrophe acuminata*, *Kalanchoe laciniata* and *Costus speciosus*, and tubers of *Stachyphrynium* and leaves of *Drymoglossum heterophyllum*, and use the decoction as a lotion upon the skin.

Cassia nodosa, Ham.

426. Bereksa. Kuala Lipis, 15769.—Boils between the shoulders. Pound the leaves: crush them and poultice with them.

427. Berekseh. Raub, 16842.—Constipation. Eat the leaves with food.

428. Saga. Karak, 16627.—High fever. Boil the leaves with the leaves of *Vitis trifolia*, &c., and give to drink. See no. 312.

429. Kayu busok. Raub, 17019.—Itch. Pound the bark, and apply it.

Cassia siamea, Lam.

430. Jeragor. Kuala Kangsar, 15974.—Convulsions. Tie to the child's neck a piece of the thick root, as a charm. It is believed also that the presence of the root prevents worms in the child's stomach from travelling upwards; and that they by so doing would cause convulsions.

Cassia Tora, Linn.

431. Gelenggang kechil. Alor Sta, 10453.—Coughs. Way of using not recorded.

432. Gelenggang kechil. Grik, 13706.—Skin complaints. The leaves are used as a substitute for those of *Cassia alata*, if the latter is not available.

Cassia obtusifolia, Linn.

433. Gelenggang sayor, Telok Anson, 14347.—Boils and carbuncles. Pound the leaves with rice, and apply.

434. Gelenggang nasi. Kuala Lipis, 15789.—Vomiting. Eat the leaves and they bring relief by causing purging.

435. Gelenggang nasi. Raub, 16223.—Child-birth. Boil the root and drink the decoction as an ubat meroyan.

436. Gelenggang kechil. Bentong, 16604.—Skin complaints. Pound the leaves with leaves of *Dysophylla auricularia* and of *Leucas zeylanica*, and use as a poultice. If put upon the faces of children with prickly heat, it will induce sleep.

437. Gelenggang kechil. Kuala Kangsar, 16604. Restlessness in children. Rub the leaves upon the skin.

Cassia alata, Linn.

438. Gelenggang besar. Grik, 12370, 12534, 13702.—Skin complaints. Rub the leaf direct upon the skin. It is recommended that the patient should sleep for three nights upon a banana leaf that he may not rub the juice off.

439. Gelenggang besar. Kuala Kangsar, 15595.—Skin complaints. Pound the leaves with a little coral lime, and poultice.

440. Gelenggang and gelenggang besar. Telok Anson, 16277, 10308.—Skin complaints, particularly ringworm. The same as the last.

441. Gelenggang. Telok Anson, 15927, 15939, 16185.—Skin complaints. Pound the leaves and poultice.

442. Gelenggang. Telok Anson, 10308.—Constipation. Make a decoction of the leaves and drink it.

443. Gelenggang besar. Tapah, 13521.—Skin complaints. Rub the leaf on to the skin.

444. Gelenggang besar. Tanjong Malim, 14015, 14069.—Constipation. Boil the leaves, and drink the decoction.

445. Gelenggang besar. Tanjong Malim, 14015, 14069.—Constipation. Add a few leaves to the rice cooked for the table.

446. Gelenggang besar. Kuala Tembeling, 16064.—Constipation. Boil the young leaves and the flowers, and drink the decoction.

447. Gelenggang besar. Kuala Tembeling, 16064.—Ringworm. Apply the leaves.

448. Gelenggang. Raub, 16843.—Yaws. Apply the leaves.

449. Gelenggang. Beserah, 17559.—Skin complaints. Apply the juice expressed from the leaves.

450. Gelenggang. Pekan, 17282.—Ringworm. Pound the leaves with sulphur and saltpetre, or with a little gunpowder taken from Chinese crackers, and apply to the skin.

451. Gelenggang. Bentong, 16797.—Skin complaints. Pound the leaves with the leaves of *Leea ? sambucina*, and apply.

452. Gelenggang. Bentong, 16797.—Skin complaints. Pound the leaves of *Leea ? sambucina*, of *Hydrocotyle asiatica*, of *Momordica Charantia*, and of *Fimbristylis saestivalis*: mix in a little damar of the *Melipona* bee, and if fancied a little gunpowder: then poultice.

Koompassia malaccensis, Benth.

453. Kumpas. Tanjong Malim, 14019.—Fever. Boil the bark with the bark of *Pometia pinnata* and *Ochanostachys amentacea*, and bathe in the infusion.

?Dialium laurinum, Baker

454. Samak penangok (? samak pelanchok). Tanjong Malim, 14042.—Baldness. Poultice the head with the leaves.

Bauhinia acuminata, Linn.

455. Bunga perak. Telok Anson, 15860.—Ulceration of the nose. Pound the leaves and poultice with them.

Bauhinia ?Griffithiana, Prain

456. Akar kempaga. Raub, 17002.—Diarrhoea. Make a decoction and drink it.

457. Selak kerebok. Tapah, 13525.—Ulceration of the nose. Make a decoction and give it to drink.

Bauhinia ?bidentata, Jack

458. Dedaup. Karak, 16629.—Nervous complaints in women. A preparation of it and an undetermined Anonacea, administered internally. See no. 59.

Tamarindus indica, Linn.

459. Asam jawa. Grik, 12360.—Put the shoots into the patient's bath to induce fits of perspiration.

460. Asam jawa. Grik, 12302.—Ulcers. Pound the bark, and poultice with it.

Sindora sp.

461. Sampar hantu. Singapore.—Children's ailments. Make a lotion from it and *Acorus calamus*, for external use.

Azelia retusa, Kurz

462. Malapari. Telok Anson, 15901.—Use not recorded, but medicinal.

Peltophorum ?dasyrachis, Kurz

463. Kerayong. Kuala Lipis, 15768.—Coughs. Pound the bark in water; strain and drink the liquor. The vernacular name belongs also to *Parkia*.

Mezoneuron sumatranum, Walk. & Arn.

464. Gorek. Taiping, 10554.—Child-birth. The leaves are boiled and the decoction used as an ubat meroyan. The vernacular name more properly belongs to *Caesalpinia Bonducella*.

465. Matichang (?mati chaching). Kuala Kangsar, 15990.—Worms in children. Boil the leaves and bathe the child in the water.

466. Mentiong. Telok Anson, 15278.—Worms in children. Pound the leaves and poultice with them.

467. Tampu rengat. Bentong, 16614.—Diarrhoea and other complaints of the intestine. Boil the leaves with the rhizomes of *Imperata arundinacea*, and give to drink.

Caesalpinia Bonduc, Roxb.

468. Renting. Telok Anson, 15883.—Worms. The leaves made into a paste which is applied.

469. Gorek. Beserah, 17629.—Caterpillar itch. Make a paste by pounding the root, and apply it.

470. Gorek. Kuala Lipis, 15788.—Worms. Pound the leaves and apply the paste as a poultice over the abdomen, taking care on no account to touch the navel. It is used for children.

471. Gorek. Kuala Tembeling, 15836.—Regulating the menses. Boil the roots and drink the decoction; but no other part of the plant is useful for the purpose.

472. Kuku tupai. Raub, 16920.—Medicinally used, but method not ascertained.

473. Gorek-gorek. Raub, 16831.—Worms. Chew the leaves small; and spit the saliva on to the infant's abdomen.

474. Gorek-gorek. Raub, 16831.—To it may be added leaves of *Premna pyramidata* and *Cyathula prostrata*.

Caesalpinia Sappan, Linn.

475. Sepang. Manhis, 16760.—Vomiting blood. Boil the red wood and drink the decoction.

?Caesalpinia sp.

476. Nenering. Grik, 13638. Skin complaints. Make a decoction from the plant, drink some and apply some externally.

477. Nenering. Grik, 13748.—Ulcers. Make a poultice and apply it.

Adenantha pavonina, Linn.

478. Saga. Bentong, 16609.—Tonic. Boil the leaves with the leaves of *Sandoricum indicum*, &c., and drink. See *Sandoricum*, no. 271.

Neptunia oleracea, Lour.

479. Kangkong putri or keman gajah. Telok Anson, 16192.—Fever. Infuse and mix the infusion with rice flour, and apply all over the body.

480. Keman ayer. Grik, 12318.—Ear-ache. Squeeze the juice of the stem into the ear.

Entada spiralis, Benth. (E. Schefferi, *Ridl.*).

481. Beluru. Telok Anson, 15646.—Abdominal complaints such as appendicitis. Burn the plant, and collect the ashes; rub them over the body.

Mimosa pudica, Linn.

482. Rumput malu. Telok Anson, 15946.—To purify the blood.

483. Memalu. Tanjong Malim, 14048.—For fretful children. Boil the plant and use the decoction for bathing them.

484. Memalu. Tanjong Malim, 14048.—The same. 'Put a bit under their sleeping mat and they will sleep.'

485. Rumput malu-malu or rumput rimau. Kuala Tembeling, 16068.—Swellings. Pound the leaves with turmeric and broken rice, and poultice.

Acacia Farnesiana, Willd.

486. Bunga siam. Telok Anson, 15612.—Swellings. Pound the roots and poultice.

Albizzia myriophylla, Benth.

487. Tebu gajah. Beserah, 17575.—Fever. Pound the root with the roots of *Gossypium brasiliense*, &c., withdraw the juice, and give it to drink. See *Gossypium*, no. 121.

Pithecolobium lobatum, Benth.

488. Jering. Kuala Tembeling, 15842.—Skin complaints. Pound the leaves and poultice.

489. Jering. Kuala Tembeling, 15842.—Pain at the heart. Use the same poultice.

Pithecolobium angulatum, Benth.

490. Petai belalang. Kuala Lipis, 15777.—Itch (kudis chengkereng). Burn the leaves; collect the ash; mix it with coconut oil and apply.

Pithecolobium clypearia, Benth.

491. Petai belalang. Telok Anson, 14349.—Small-pox. Pound the leaves with rice, and poultice.

492. Petai belalang. Telok Anson, 15631.—Chicken-pox. The same.
493. Petai belalang. Telok Anson, 15631.—Coughs. The same.

ROSACEAE

Pygeum ?persimile, Kurz

494. Selusoh (indicates the use, rather than the plant). Kuala Lipis, 15746.—Child-birth. A decoction of the leaves to facilitate delivery, among the Sakai.

Rubus alceifolius, Poir.

495. Asam susok. Batu Gajah, 13422.—Fever. Poultice with the leaves.

496. Tampu rengat. Kuala Lipis, 15793.—Child-birth. Boil the leaves, and steam the patient during seven days after child-birth.

497. Tampu rengat. Kuala Tembeling, 16062.—Dysentery. Boil the roots, and drink the decoction.

498. Tampu rengat. Raub, 16837.—Urinary trouble. The same.

CRASSULACEAE

Bryophyllum calycinum, Salisb.

499. Setawar padang. Kuala Kangsar, 15975.—Cough and pains in the chest. Pound the leaves with boiled rice, and poultice the chest.

500. Rajah bangun. Telok Anson, 15923.—Headache. A poultice.

Kalanchoe laciniata, DC.

501. Setawar. Kuala Kangsar, 16003.—Cough and cold in the chest. Pound the leaves and poultice the chest.

502. Setawar kampong. Kuala Kangsar, 15533.—Possession. The leaves are strewn to charm good spirits into a newly-built house, or into a house made unlucky by a death in it.

503. Setawar. Telok Anson, 16187.—Possession. Strew the leaves in the house to ward off evil spirits.

504. Setawar. Telok Anson, 14027.—Small-pox. Boil the leaves with leaves of *Psophocarpus tetragonolobus*, &c., and make a lotion. See *Psophocarpus*, no. 425.

LEGNOTIDACEAE

Carallia suffruticosa, Ridl.

505. Sireh puyoh. Grik, 13736.—Worms. Infuse a very little in cold water, and drink the infusion.

506. Sireh puyoh. Grik, 12543.—Boils. Pound the leaves along with the roots of a *Rourea* (?), and poultice. See no. 363.

507. Sisek puyu. Grik, 12515.—High fever. Boil its leaves with those of *Nepheium lappaceum*, and of *Pometia pinnata*; use the decoction for bathing. See no. 334.

508. Sisek puyu. Budu, 15803.—Boils. Pound the tender leaves with turmeric and broken rice, and poultice.

509. Sireh puyoh. Beserah, 17646.—Child-birth. Pound the leaves and extract the juice; use this as an ubat meroyan.

510. Tulang daing. Bentong, 16459.—Coughs. Infuse the leaves with the leaves of *Averrhoa Bilimbi* and *Lygodium scandens* in coconut milk, and drink cold. See no. 209.

511. Tulang daing. Bentong, 16459.—Boils. Take the leaves with leaves of *Litsea amara*; pound them and poultice.

?*Pellacalyx* sp.

512. Huka haga. Grik, 13800.—Yaws. As a poultice.

COMBRETACEAE

Combretum ?acuminatum, Roxb.

513. Songsong. Telok Anson, 15290.—Worms. Boil the leaves until the decoction is thick; then mix with rice flour and make into pills, which take.

514. Susong harus. Telok Anson, 14343.—Worms. Drink a decoction.

515. Songsong harus. Telok Anson, 15903.—Worms. The same.

516. Sangsong harus. Budu, 15798.—Boils. Make a thick paste by pounding the leaves, and poultice.

Combretum ?sundaicum, Miq.

517. Akar chinas. Raub, 16960.—Boils. Boil the roots and the leaves together, and poultice.

Combretum nigrescens, King

518. Akar urat. Raub, 16989.—Wounds. Pound the leaves, and poultice.

Quisqualis densiflora, Wall.

519. Redani. Kuala Kangsar, 15542.—Worms in children. Pound the roots; extract the juice, and give this to drink.

?*Quisqualis densiflora*, Wall.

520. Dani. Raub, 16967.—Worms. Boil the leaves, and give to drink.

?*Quisqualis* sp.

521. Setandok. Kuala Kangsar, 16001.—Boils and ulcers. Pound the leaves, and poultice.

MYRTACEAE

Rhodamnia cinerea, Jack

522. Jaing. Grik, 13745.—Stomach ache. Boil the roots and drink the decoction.

523. Jaing. Grik, 13745.—Stomach ache. Boil the roots with the leaves of *Psidium Guyava* and the leaves of *Bridelia tomentosa*, and drink the decoction.

524. Mempoyan. Raub, 17010.—Scalds. Pound the shoots, and poultice.

525. Jeing or mempoyan. Beserah, 17647/4.—Child-birth. Take the leaves and roots with the leaves and roots of *Glycosmis ?puberula*, &c., infuse and drink as an ubat meroyan. See no. 220.

526. Poyan. Pekan, 17286.—Child-birth. Boil the roots and drink the decoction as an ubat meroyan.

527. Poyan. Pekan, 17286.—Crush the leaves and swallow the juice also.

Rhodomyrtus tomentosa, Wight

528. Kemunting. Beserah, 17644.—Stomach ache. Boil the leaves and the roots with the leaves of *Sideroxylon ferrugineum*, and drink the decoction.

529. Kemunting. Beserah, 17630.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

530. Kemunting. Pekan, 17244.—Diarrhoea. The same.

Eugenia Jambos, Linn.

531. Jambu ayer mawar. Alor Sta, 10411.—Itch. Poultice with it.

Eugenia malaccensis, Linn.

532. Jambu bubul. Tanjong Malim, 14064.—Tongue, cracked and sore. Take the leaves; dry and powder them; then apply.

533. Jambu kling. Beserah, 17567.—Itch. Pound the roots with the roots of *Tetracera assa*, &c., and with benzoin, and poultice. See no. 7.

Eugenia pendens, Duthie

534. Jambu puteh. Beserah, 17568.—Itch. The same as the last.

Eugenia ?chlorantha, Duthie

535. Jambu ayer. Alor Sta, 10413.—Itch. Poultice with the roots.

Eugenia lineata, Duthie

536. Sekujah. Raub, 16226.—Child-birth. Take a decoction of the root as an ubat meroyan.

537. Kayu kelat. Beserah, 17625.—Child-birth. The same.

Eugenia polyantha, Wight

538. Samak. Alor Sta, 10425.—Itch. Poultice with the leaves, root and bark.

Eugenia ?urceolata, King

539. Jambu ayer. Beserah, 17605.—Child-birth. Take a decoction of the root as an ubat meroyan.

540. Jambu ayer. Beserah, 17572.—Fever. Pound the root with the root of *Gossypium brasiliense*, &c., and administer the juice. See no. 121.

Psidium Guyava, Raddi

541. Jambu biji. Alor Sta, 10412.—Ringworm. The way of using not recorded.

542. Jambu biji. Grik, 13746, 12359.—Stomach ache. Boil the leaves and drink the decoction.

543. Jambu biji. Grik, 12348.—Diarrhoea. Boil the leaves with a little gambier, and drink the decoction.

544. Jambu bereksa. Telok Anson, 15921.—Skin complaints. Boil the leaves, and use the decoction as a lotion.

545. Jambu bereksa. Telok Anson, 15289.—Diarrhoea. Boil the leaves, and drink the decoction for slight diarrhoea.

546. Jambu bereksa. Telok Anson, 16157.—Wounds. Boil the leaves, and use the decoction as a lotion.

547. Jambu biji. Pekan, 17267.—Stomach ache. Boil the leaves and drink the decoction.

548. Jambu padang or jambu biji. Bentong, 16468.—Stomach ache. Boil the leaves with those of *Vitex pubescens*, and drink the decoction.

Barringtonia racemosa, Roxb.

549. Putat kedal. Alor Sta, 10422.—Itch. Pound the leaves and the root, and poultice.

550. Pokok darah (elsewhere p. darat). Alor Sta, 10424.—Itch. The same with the addition of the bark.

Barringtonia ?racemosa, Roxb.

551. Putat. Telok Anson, 15606.—Chicken-pox. Pound the leaves, and poultice.

Barringtonia macrostachya, Kurz

552. Putat. Kuala Kangsar, 16632.—Sore eyes. Pound the root, and apply.

553. Putat. Kuala Kangsar, 16632.—Ringworm. The same prescription.

Barringtonia ?macrostachya, Kurz

554. Putat. Raub, 16969.—Stomach ache. Boil the leaves, and drink the decoction.

Barringtonia spicata, Blume

555. Pokok gajah beranak. Taiping, 10556.—As a contraceptive, or perhaps as an abortient. The way of using not recorded.

556. Putat nasi. Grik, 12303.—Ulcers. Pound the bark and the leaves with the leaves of *Tamarindus indica*, and apply.

Barringtonia ? spicata, Blume

557. Putat nasik. Alor Sta, 10423.—Itch. Pound the root, the leaves and the bark; and poultice.

MELASTOMACEAE

Melastoma decemfidum, Roxb.

558. Senduduk. Bentong, 16585.—Dysentery. Boil the leaves with leaves of *Delima sarmentosa*, &c., and give the decoction to drink. See no. 4. This *Melastoma* is considered better than either of the other two senduduks which are available, i. e. *M. malabathricum* and *Blastus Cogniauxii*.

Melastoma malabathricum, Linn.

559. Keduduk. Kuala Kangsar, 14919, 16007.—Child-birth. Boil the leaves and the root, and give as an ubat meroyan.

560. Keduduk. Batu Gajah, 13362.—Small-pox. Take the leaves and the root; dry and powder; sprinkle the powder over the pocks that they may dry up without leaving marks.

561. Senduduk. Tanjong Malim, 14009.—Dysentery. Boil the leaves with the leaves of *Hedyotis capitellata* and *Ageratum conyzoides*, and give to drink.

Melastoma polyanthum, Blume

562. Senudok. Beserah, 17603.—Child-birth. Boil the leaves and the root; give the decoction as an ubat meroyan.

Allomorpha malaccensis, Ridl.

563. Lidah buaya. Bentong, 16672.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Allomorpha exigua, Blume

564. Keduduk hutan. Kuala Kangsar, 16027.—Child-birth. The same prescription.

565. Kenduduk. Manhis, 16770.—Remittent fever. Heat the leaves and apply them to the abdomen.

Allomorpha alata, Scort.

566. Puding hutan. Taiping, 13278.—Stomach ache. Boil the leaves, stem and root, and drink the decoction.

Blastus Cogniauxii, Stapf

567. Keduduk hutan or keduduk cherang. Taiping, 13269.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

568. Senduduk rimba. Bentong, 16733.—Child-birth. The same.

Sonerila nidularia, Stapf

569. Kachit fatimah. Taiping, 13276.—Child-birth. Boil stems and root, and use the decoction as an ubat meroyan.

570. Serengan kerbau. Taiping, 13298.—Stomach ache in children. Burn the plant; collect the ashes, and administer.

Phyllagathis rotundifolia, Blume

571. Kachit fatimah. Grik, 13628.—Child-birth. Chew the roots with betel as an ubat meroyan.

572. Kachit fatimah. Grik, 12327.—Child-birth. Pound the roots with betel, and give as a tonic after child-birth.

573. Tapak gajah. Raub, 16953.—Stomach ache. Boil the leaves and drink the decoction.

Marumia nemorosa, Blume

574. Senuduk. Raub, 16998.—Scalds. Rub the leaves upon the scalded place.

Dissochaeta gracilis, Blume

575. Chong keradak (Sakai name). Tapah, 14297.—Antidote to *Antiaris* poison. Make a decoction of the leaves and take it. (The time occupied in preparing a decoction would seem to make the remedy useless.)

Dissochaeta annulata, Hook. f.

576. Kayu mata hari. Bentong, 16727.—Child-birth. Boil the leaves and use the decoction as an ubat meroyan.

Anplectrum glaucum, Triana

577. Kayu metah. Grik, 12523.—Malaria. Pound the leaves with the leaves of *Cnestis ramiflora*, &c., and poultice. See no. 369.

Anplectrum divaricatum, Triana

578. Lidah kucing or kopok. Bentong, 16680, 16728.—Child-birth. The same.

579. Kenduduk halus. Manchis, 16764.—Sprains. Boil the leaves, and bathe the place in the hot decoction daily.

Memecylon dichotomum, Clarke

580. Bebuas. Raub, 16249.—Child-birth. Boil the roots, and take the decoction as an ubat meroyan.

Memecylon ?amplexicaule, Roxb.

581. Pekan. Alor Sta, 10475.—Dizziness. Boil its leaves with coriander seed and an onion; and use the decoction as a lotion upon the head in the morning.

Memecylon ?minutiflorum, Miq.

582. Sedawai hitam. Raub, 16219.—Child-birth. Boil the roots and use the decoction as an ubat meroyan.

LYTHRACEAE

Lawsonia inermis, Linn.

583. Inai. Batu Gajah, 13363, 13410.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

584. Inai. Telok Anson, 15601.—Circumcision. Pound the leaves, and use as a poultice.

585. Inai. Telok Anson, 16270.—Skin complaints. Pound the leaves with turmeric and rice, and use as a poultice.

586. Inai. Telok Anson, 14341.—Stomach ache. Make a decoction of the leaves and drink it.

587. Inai. Telok Anson, 14341.—Wounds. Pound the leaves and use as a poultice.

588. Inai. Telok Anson, 15940.—Hoarseness. Make a decoction of the leaves and drink it.

589. Inai parsi. Tanjong Malim, 14052.—Rheumatism in the body and distension of the stomach. Take the leaves, dry and powder them; mix with the yolk of an egg and smear over the body.

Lagerstroemia ?floribunda, Jack

590. Bungor. Sungei Raya, 13396.—Fever. Pound the leaves, and poultice the body during the hot stage.

Lagerstroemia flos-reginae, Retz.

591. Bongor. Pekan, 17277.—Abdominal pains. Boil the bark, and drink the decoction.

Lagerstroemia ?flos-reginae, Retz.

592. Bongor. Telok Anson, 15941.—Malaria. Pound the leaves, and poultice.

593. Bungor melukat. Kuala Lipis, 15791.—Cracked feet. The same treatment.

Lagerstroemia sp.

594. Bongor. Kuala Kangsar, 10350, 15578.—Fever. Take the leaves, smear with coconut oil; heat and apply hot to the abdomen.

595. Bungor. Batu Gajah, 13413.—Itch. Boil the leaves, and use the decoction as a lotion.

596. Jelutan. Kuala Lipis, 15786.—Itch. Pound the leaves, and poultice.

597. Bungor betul. Kuala Lipis, 15792.—Fever. Take the leaves; heat them and apply over the spleen.

Sonneratia acida, Linn. f.

598. Berembang. Telok Anson, 15635.—Small-pox. Pound the leaves with broken rice, and poultice the body.

Sonneratia Griffithii, Kurz

599. Berembang. Alor Sta, 10420.—Ringworm. Pound the root, and poultice.

PUNICACEAE

Punica Granatum, Linn.

600. Delima. Alor Sta, 10447.—Irregular menses. Take the roots and the leaves; boil, and drink the decoction.

601. Delima. Taiping, 15615.—Itch. Pound the leaves, and poultice.

602. Delima. Grik, 12352.—Irregular menses. Boil the leaves and the roots, and drink the decoction.

603. Delima. Beserah, 17553.—Sore eyes. Pound the root with the leaves of *Jasminum Sambac* and of *Sauropus albicans*, and squeeze the juice into the eyes.

ONAGRACEAE

Jussiaea repens, Linn.

604. Ubat kulit. Grik, 12426.—Skin complaints. Pound the leaves, and poultice.

Jussiaea linifolia, Vahl (*J. suffruticosa*, Ridl.)

605. Inai paya. Kuala Lipis, 15758.—Syphilis. Infuse the root in cold water, and drink the infusion.

Jussiaea erecta, Linn.

606. Jenlidah. Telok Anson, 15617.—Nervous diseases. Pound the leaves with seed of *Cuminum cyminum*, and poultice.

PASSIFLORACEAE

Adenia ?populifolia, Engl.

607. Lelayang. Kuala Kangsar, 15525.—Convulsions. Burn the leaves, and smoke the child.

CUCURBITACEAE

Hodgsonia capniocarpa, Ridl.

608. Kepayang. Grik, 12355.—Nose, complaints of the. Dry the leaves and burn them, inhaling the smoke.

609. Kepayang. Grik, 12355.—The same. Boil the leaves and drink the decoction.

610. Kepayang. Grik.—Fever. The last treatment.

611. Kepayang. Batu Gajah, 13400.—Nose, parasites in the. Squeeze the juice of the stem into the nostrils.

Trichosanthes Wallichiana, Wight

612. Jari buaya. Kuala Kangsar, 15535.—Miscarriage. Bandage the leaves upon the abdomen by using the leaves of the cultivated banana.

Gymnopetalum cochinchinense, Kurz

613. Tuwasah. Grik, 12453.—Miscarriage followed by tetanus. Boil the leaves and give the decoction to drink.

614. Tuwasah. Grik, 12453.—The fruit is said to be very poisonous, and this decoction to be an antidote.

615. Bertimum tikus. Telok Anson, 16286.—Ophthalmia. Pound the leaves: enfold in a clean cloth, and squeeze the juice through the cloth into the eyes.

Momordica charantia, Linn.

616. Peria or periok. Telok Anson, 15949.—Burns and scalds. Pound the leaves, and poultice.

617. Peria. Telok Anson, 15616.—Skin complaints in children. Boil the leaves, and use the decoction as a lotion.

618. Peria. Tanjong Malim, 14006.—Diarrhoea. Pound the leaves with the leaves of *Adenostemma viscosum*, of *Dysophylla auricularia*, and of *Polygonum barbatum*; poultice the abdomen.

619. Peria. Raub, 16816.—Stomach ache in children. Pound the leaves, and poultice the abdomen.

620. Peria kechil. Bentong, 16797.—Skin complaints. Pound the leaves with the leaves of *Cassia alata*, &c., and poultice. See *Cassia alata*, no. 452.

Melothria sp.

621. Akar belang. Raub, 16975.—Pain at the heart. Make a decoction and drink it.

Benincasa cerifera, Savi

622. Kundor. Bentong, 16456.—Bruises. Rub the leaves upon the bruise, or poultice with them.

Cucurbita Pepo, Linn.

623. Labu ayer. Telok Anson, 16268.—Discomfort during pregnancy. Take the leaves, infuse and mix ashes from the hearth, and use as a lotion upon the abdomen.

BEGONIACEAE

Begonia isoptera, Dryand.

624. Riang batu. Grik, 13636.—Enlarged spleen. Pound, and poultice with it.

Carica Papaya, Linn.

625. Betik. Telok Anson, 15865.—Worms. Infuse the leaves, and drink the infusion.

626. Betik. Telok Anson, 15865.—Boils. Poultice with fresh leaves.

627. Betek. Bentong, 16469.—Colic. Infuse the leaves, and drink the infusion.

UMBELLIFERAE

Hydrocotyle asiatica, Linn.

628. Pegaga. Telok Anson, 15622.—As a cooling medicine. An infusion of the plant.

629. Pegaga. Telok Anson, 16265.—Rheumatism. Infuse the plant with an onion, and drink the infusion.

630. Pegaga. Grik, 13740, 12375.—Tonic. Eat with rice. (This use is almost universal in the Malay Peninsula.)

631. Pegaga. Tapah, 13966.—Tonic. Eat with rice.

632. Pegaga. Bentong, 16799.—Skin complaints. Pound the plant with leaves of *Cassia alata*, &c., and poultice. See *Cassia alata*, no. 452.

ARALIACEAE

Schefflera affinis, Ridl.

633. Pokok bajang beranak. Taiping, 13262.—Child-birth. Boil the leaves and the roots, and administer as an ubat meroyan.

634. Bekak rengat. Grik, 13615.—Abdominal trouble. Boil the leaves, and administer the decoction.

Schefflera heterophylla, Harms

635. Seregang. Budu, 15804.—Child-birth. Boil the leaves, and use as a hot lotion.

Trevesia cheirantha, Ridl.

636. Tapak etek. Taiping, 10555.—Fractured bones. Pound the leaves, and poultice with them.

637. Tapak rimau. Grik, 13614. Skin complaints. The same treatment.

638. Chengkam harimau. Kuala Kangsar, 15959.—Remittent fever. Smear the leaves with coconut oil; heat and apply hot to the abdomen.

639. Seredang. Raub, 16208. Rheumatism. Pound, and rub where the pain is.

640. Tapak badak. Raub, 16996.—Ague and intermittent fevers. The same treatment.

CORNACEAE

Aralidium pinnatifidum, Moq.

641. Sebalai. Kuala Lipis, 15779.—Fever. Smear the leaves with coconut oil; heat them and apply hot to the body.

642. Sebalai. Bentong, 16752.—Fever in children. Pound the leaves, and poultice over the abdomen.

RUBIACEAE

Mitragyne speciosa, Korth.

643. Biak. Telok Anson, 10307.—Wounds. Pound the leaves, and poultice with them.

644. Biak. Telok Anson, 10307.—Opium-craving. Take the leaves, boil them, and drink the decoction. A remedy apparently worse than the disease.

645. Biak. Tanjong Malim, 14066.—Worms in children. Bind the leaves under a bandage upon the abdomen at the time of going to rest.

646. Kotum. Tanjong Malim, 14022.—Enlarged spleen. Take the leaves with leaves of *Morinda citrifolia*, *Blumea balsamifera* and *Oroxylum indicum*; heat them, and apply hot over the spleen.

Anthocephalus indicus, Rich.

647. Kelapayan. Telok Anson, 10312.—Malaria. Smear the leaves with coconut oil; heat, and apply hot to the abdomen.

648. Kelampi. Telok Anson, 15603.—Intermittent fevers. The same application, but to the chest.

649. Kelampayan. Tapah, 13519, 13979.—High fever. The same application: keep the leaves in place all night; if they are found whole in the morning the patient will die; but if they have become cracked, he will recover.

Uncaria ferrea, DC.

650. Kait-kait. Telok Anson, 15300.—Wounds. Boil the leaves, and use the decoction as a lotion for cleaning the wounds.

651. Kekait merah. Kuala Lipis, 15780.—Inflammation of the intestines. Infuse the roots in cold water, without crushing them; drink this in the morning.

Uncaria sp.

652. Kekait. Grik, 13725.—Worms. Method of using not recorded.

Coptosapelta flavescens, Korth.

653. Semutega. Kuala Kangsar, 15543.—Worms in children. Boil the roots, and give the decoction to drink.

654. Sebereteh. Tanjong Malim, 14024.—Wind in children. Boil the leaves and use the decoction for bathing them.

655. Jaras. Kuala Lipis, 15757.—Ulceration of the nose. Boil the roots, and drink the decoction.

656. Chenderai. Kuala Lipis, 15764.—Child-birth. Infuse the root in cold water; drink the infusion as an ubat meroyan.

657. Sebereteh. Budu, 15821.—Fever in children. Scrape the roots and boil the scrapings; give the decoction to drink.

658. Sebereteh. Kuala Tembeling, 16057.—Worms in children. Scrape the root and poultice with the scrapings.

659. Ubat sampu. Raub, 16988.—Fever in children. Pound the leaves and the root and poultice the head.

660. Sebereteh. Bentong, 16541.—Fever. Make a decoction and drink it.

?Wendlandia paniculata, DC.

661. Kait-kait merah. Raub, 16827.—Boils on the head. Pound the leaves with the leaves of *Macaranga triloba* and of *Smilax Helferi*, and poultice.

Ophiorrhiza communis, Ridl.

662. Peparu. Grik, 12328, 13639, 13773, 13616.—Enlarged spleen. Pound the plant, and poultice over the spleen.

663. Peparu. Grik, 13729.—Coughs. The same, poulticing the chest.

Ophiorrhiza singaporensis, Ridl.

664. Rumpu tumor. Raub, 16963.—Leprosy. Rub the plant upon the place.

Hedyotis capitellata, Wall.

665. Daun sulaiman. Taiping, 13277.—Kidney disease. The leaves used.

666. Pokok memechah mangkok. Grik, 12367.—Kidney complaints. Eat the leaves with rice.

667. Daun semileh. Grik, 13735.—Vertigo. Take a decoction of the plant.

668. Daun semileh. Grik, 13735.—Lumbago. The same.

669. Ubat rennyut. Batu Gajah, 13401.—Stomach ache. Boil the roots and drink the decoction.

670. Sebueh. Telok Anson, 15858.—Heartburn. Make a decoction from the plant and drink it.

671. Chong churat (Sakai name). Tapah, 14154.—Fractured bones. Pound the leaves, and poultice.

672. Akar semelit (for akar sembelit). Tanjong Malim, 14008.—Dysentery. Boil the leaves with leaves of *Melastoma malabathricum* and *Ageratum conyzoides*, and drink. See no. 561.

673. Patah gogoh. Raub, 16203.—Colic. Boil the leaves with roots of *Abrus*, &c., and drink the decoction. See no. 371.

674. Patah gogoh. Raub, 16236.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

675. Patah bubul. Raub, 16986.—Fractured bones. Poultice with the leaves.

676. Sekitan. Beserah, 17546.—Fractured bones. Pound the leaves with leaves of *Grewia paniculata*, &c., and poultice. See no. 197.

677. Sekitam. Beserah, 17666-3.—Child-birth. Pound the leaves, and administer the juice as an ubat meroyan.

678. Meroyan puteh. Bentong, 16664.—Child-birth. Use a decoction of the root as an ubat meroyan.

679. Meroyan kuching. Bentong, 16663.—Child-birth. The same.

680. Meroyan kuching. Bentong, 16607.—Bruises. Pound the leaves, and wrap them in a *Crinum* leaf; poultice with them.

681. Patah bubul. Karak, 16623.—Child-birth. Boil the roots with the leaves of *Didymocarpus crinitus* and *Dracaena ? conferta*, and use the decoction as an ubat meroyan.

682. Sekembang. Karak, 16637.—Constipation. Boil the roots, and drink the decoction for two or three days.

Hedyotis glabra, R.Br.

683. Kateh murai. Grik, 12323.—Stomach ache in very small children. Pound the plant with *Biophytum adiantoides*, &c., and poultice. See no. 204.

684. Chengkering. Batu Gajah, 13406.—For purifying the blood, to be used by women.

Hedyotis congesta, Wall.

685. Kayu bulu. Raub, 16999.—Scalds. Use as a poultice.

Hedyotis hispida, Retz.

686. Lidah tong. Grik, 12538. For new-born children. Take the plant, with *Biophytum adiantoides*, *Piper argenteum* and *Cheilanthes tenuifolia*; reduce to ashes, and powder the abdomen.

687. Lidah tong. Grik, 12325.—Stomach ache in small children. Pound the plant with *Biophytum adiantoides*, &c., and use as a poultice. See no. 204.

Oldenlandia corymbosa, Linn.

688. Penang, 13672.—Stocked in Chinese herbalists' shops.

Oldenlandia diffusa, Roxb.

689. Penang, 13659.—Stocked in Chinese herbalists' shops.

Oldenlandia Heynei, Don

690. Penang, 13655.—Stocked in Chinese herbalists' shops.

Mussaenda villosa, Wall.

691. Balek adap. Alor Sta, 10471.—'Angin darah'. Chew its leaves with seed of *Nigella sativa* and an onion, and spray the abdomen.

692. Balek adap. Budu, 15816.—Rheumatism. Boil the leaves with seed of *Nigella sativa* and garlic, and drink the decoction.

Mussaenda glabra, Vahl

693. Balek adap. Tapah, 13951.—Headache. Poultice with the leaves.

694. Balek adap. Beserah, 17634.—Headache. Pound the leaves with leaves of *Urena lobata*, &c., and poultice. See no. 154.

695. Balek adap. Pekan, 17306.—Child-birth. Boil the root, and give the decoction to drink.

Mussaenda sp.

696. Tampoi rengang. Bentong, 16681.—Child-birth. The same.

Urophyllum hirsutum, Hook. f.

697. Serikan. Bentong, 16669.—Child-birth. The same.

?Urophyllum glabrum, Wall.

698. Bebulu. Raub, 16955.—Fever. Infuse the leaves in cold water, and give to drink.

?Randia Curtisii, King and Gamble

699. Tambun tahi. Taiping, 13263.—Child-birth. Take the leaves and the roots.

Gardenia florida, Linn.

700. Bunga china. Kuala Kangsar, 15585.—Headache in children. Pound the leaves and poultice.

701. Bunga china. Batu Gajah, 13391.—Headache. The same.

702. Bunga china. Telok Anson, 10311, 15633, 15914, 16156.—Headache in children. The same.

703. Bunga china. Telok Anson, 15950.—Swollen breasts. The same.

704. Bunga china. Tapah, 13972.—Headache. The same.

705. Bunga china. Tanjong Malim, 13498.—Headache. Pound the leaves with leaves of *Hibiscus rosa-sinensis*, &c., and poultice. See no. 161.

706. Bunga china. Beserah, 17576.—Fever. Pound the leaves with crystalline sugar, and swallow for three mornings.

707. Bunga china. Pekan, 17274.—Fever. Boil old leaves and the root, and drink the decoction.

708. Bunga china. Pekan, 17274.—Fever. Boil the old leaves and the roots with leaves of any of the following: *Hibiscus rosa-sinensis*, *Durio zibethinus*, *Nepheium lappaceum*, *Nepheium ? mutabile*, *Psidium Guyava*, *Blumea balsamifera*, and *Artocarpus integrifolia*; drink the decoction.

709. Bunga china. Pekan, 17213.—Fever. Boil shoots with leaves of *Gossypium brasiliense*, &c., and drink the decoction cold, sparingly.

Ixora Lobbii, Loud.

710. Jarum. Taiping, 10555.—Child-birth. The root is used as an ubat meroyan.

711. Salang. Raub, 17003.—Headache. Make a poultice from the leaves.

Ixora stricta, Roxb.

712. Pechah periok. Beserah, 17602.—Child-birth. The root is used as an ubat meroyan.

Ixora ?stricta, Roxb.

713. Pechah periok. Pekan, 17307.—Child-birth. The same.

714. Penujuh. Bentong, 16538.—Urinary trouble. Boil any part of this plant with the roots of *Cnestis ramiflora*, and drink the decoction.

Ixora grandifolia, Zoll. and Moritz.

715. Kayu tajam. Raub, 16961.—Stomach ache. Boil the leaves and drink the decoction when it has become cold.

Ixora ?grandifolia, Zoll. and Moritz.

716. Belat. Kuala Lipis, 15744.—Child-birth. Eat the leaves with betel before child-birth to mitigate the labour pains.

Ixora sp.

717. Mata ayam. Pekan, 17230.—Stomach ache. Boil the roots and drink the decoction.

718. Pechah periok. Pekan, 17231.—Stomach ache. Boil the plant and drink the decoction.

Pavetta indica, Linn.

719. Nyarum (for jarum). Kuala Lipis, 15790.—Itch (kudis) long-established. Pound the root, and poultice.

720. Jenjarum. Raub, 16952.—Boils. Pound the leaves, and poultice.

Pavetta ?indica, Linn.

721. Senyarum. Bentong, 16745.—Child-birth. Boil the roots and drink the decoction as an ubat meroyan.

722. Bunga jenjarum. Kuala Kangsar, 15967.—Ulceration of the nose. Boil the leaves, and set the decoction to cool over night; both drink it and use it as a lotion.

?Pavetta sp.

723. Jenjarum. Grik, 13733.—Fever. Method of using not recorded.

Morinda citrifolia, Linn.

724. Mengkudu besar. Alor Sta, 10455.—Convulsions in children, and fits. The way of using not recorded.

725. Mengkudu besar. Kuala Kangsar, 16009.—Fever and cough. Heat the leaves, and apply them warm to the abdomen.

726. Mengkudu. Tapah, 13515.—Nausea. The same treatment.

727. Mengkudu. Tanjong Malim, 14020.—Enlarged spleen. Heat the leaves with leaves of *Mitragyne speciosa*, &c., and apply hot over the spleen. See no. 646.

Morinda elliptica, Ridl.

728. Mengkudu kechil. Alor Sta, 10445.—Convulsions. The method of using not recorded.

729. Mengkudu kechil. Grik, 13646.—Wounds. Pound the leaves with *Peristrophe acuminata*, and poultice.

730. Mengkudu kechil. Kuala Kangsar, 16008.—Remittent fever. Heat the leaves and apply hot to the abdomen.

731. Mengkudu. Kuala Kangsar, 14914.—Child-birth. Boil the leaves, and use the decoction for a hot bath after child-birth.

732. Mengkudu. Telok Anson, 16284.—Remittent fever. Smear the leaves with coconut oil; heat and apply hot to the abdomen.

733. Menkudu or mengkudu. Telok Anson, 15867.—Piles. Boil the leaves and use the decoction as a lotion.

734. Mengkudu. Beserah, 17610.—Fever. Boil the leaves and drink the decoction.

735. Mengkudu. Karak, 16635.—Loss of appetite. Eat the leaves with rice.

Rennellia paniculata, King and Gamble

736. Akar bumi or urap gundor. Tapah, 14299.—Wounds. Rasp the bark, and apply the powder to wounds.

Canthium horridum, Blume

737. Kayu bulang. Raub, 16994.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

738. Ubat luka. Grik, 13739.—Fever. (The name implies also wounds.)

Canthium aciculatum, Ridl.

739. Melor hutan. Alor Sta, 10443.—Hiccough in small children. Boil the leaves and drink the decoction.

Psychotria sarmentosa, Blume

740. Gilik. Kuala Lipis, 15747.—Child-birth. Used by Sakai as a selusoh, or medicine to expedite child-birth.

Psychotria rostrata, Blume

741. Telor ayam. Raub.—Constipation. Make a decoction and drink it.

742. Piralu (Sakai). Bentong, 16716.—Headache. The way of using not recorded, but doubtless by poulticing.

Psychotria ?rhinocerotis, Reinw.

743. Gambir batu. Bentong, 16674.—Child-birth. Boil the plant (any part), and use the decoction as an ubat meroyan.

Psychotria montana, Blume

744. Selada. Raub, 17009.—Ulcers. Rub the leaves upon the ulcer.

745. Kayu semelit. Raub, 16993.—Swellings. Pound the leaves, and poultice.

746. Selada. Bentong, 16527.—Fever and enlarged spleen. Boil the leaves, and use the decoction as a lotion.

Psychotria stipulacea, Wall.

747. Salang. Tapah, 14153.—Swellings and prickly heat. Pound the leaves in a little water, and apply.

748. Sesalang. Budu, 15799.—Itch (kudis). Pound the roots, and poultice.

749. Meroyan sakat. Kuala Tembeling, 15841.—Child-birth. Boil the roots with the roots of *Uvaria micrantha*, and use the decoction as an ubat meroyan.

?Psychotria sp.

750. Kayu lichin. Raub, 16964.—Leprosy. Boil the leaves and drink the decoction.

Chasalia curviflora, Thwaites

751. Beberas (perhaps for beberak). Alor Sta, 10442.—Convulsions. The way of using not recorded.

752. Beberas (perhaps for beberak). Grik, 13799. Headache in children. Pound the leaves and poultice the forehead.

753. Jarum. Tapah, 13543.—Coughs. Pound the leaves, and poultice.

754. Beberak. Pekan, 17221.—Fever. Pound the roots, and swallow.

Lasianthus stipularis, Blume

755. Ubat barah. Bentong, 16532.—Noises in the head. Boil the leaves with the leaves of ?*Lindera selangorensis*, and drink the decoction. (The name suggests that it is used also for boils.)

Lasianthus oblongus, King and Gamble

756. Temberak hutan. Kuala Kangsar, 16047.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Lasianthus villosus, Ridl.

757. Medang. Budu, 15811. Child-birth. The same.

Lasianthus filiformis, King and Gamble

758. Sekentut. Raub, 16227.—Child-birth. The same.

Saprosma glomerulatum, King and Gamble

759. Kentut. Grik, 12316.—Digestive. The leaves are used in food.

?**Saprosma Scortechinii**, King and Gamble

760. Berkerak. Grik, 13732.—Fever. The leaves used.

Saprosma ternatum, Hook, f.

761. Kesimbuk. Raub, 16991.—Stomach ache. Eat the leaves.

Paederia foetida, Linn.

762. Sekentut. Alor Sta, 10441.—Ulceration of the nose. Pound the leaves and poultice with them.

Borreria hispida, K. Schum.

763. Rumput anak temot. Grik, 12324.—Stomach ache in very small children. Pound the plant with *Biophytum adiantoides*, &c., and poultice. See no. 204.

COMPOSITAE

Elephantopus scaber, Linn.

764. Tapak sulaiman (Solomon's seal). Taiping, 13283.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan. (A protection against spirits.)

765. Tapak sulaiman. Grik, 12532, 13649.—Child-birth. The same.

766. Bersah hitam (black cleanser). Grik, 13760.—Child-birth. Taken in betel along with *Vitis cinnamomea* and *Labisia pthoina*, as an ubat meroyan.

767. Chapa. Kuala Kangsar, 15995.—Child-birth. Boil the leaves and bathe the mother in the decoction.

768. Chapa. Kuala Kangsar, 15995.—Possession. Burn the leaves that the smoke may keep evil spirits away from the newborn infant.

769. Tutup bumi (bung of the earth). Telok Anson, 15855.—

Veneral disease in women. Boil the leaves and drink the decoction.

770. Tutup bumi. Tapah, 13328.—Child-birth. Boil the roots and drink the decoction.

771. Sebongbong. Tapah, 13983.—Child-birth. The same.

772. Tapak leman (for tapak sulaiman). Beserah, 17647/3.—Child-birth. Boil the leaves and the root, and use the decoction as an ubat meroyan.

Mikania scandens, Willd.

773. Selepat tungau. Raub, 16209.—Itch. Rub the leaves upon the place.

Ageratum conyzoides, Linn.

774. Daun misai kucing. Grik, 13716.—Fever. Boil the leaves and drink the decoction.

775. Rumput jalang. Telok Anson, 15861.—Urinary diseases. The way of using not recorded.

776. Sekedok. Tapah, 13549.—Diarrhoea in children. Take the leaves, and poultice with them upon the abdomen.

777. Senarong kambing. Tanjong Malim, 14007.—Dysentery. Boil the leaves with the leaves of *Melastoma malabathricum* and *Hedyotis capitellata*, and drink the decoction.

?**Ageratum conyzoides**, Linn.

778. Ara batu. Bentong, 16755.—Itch. Pound it with leaves of *Justicia sp.* and *Phyllanthus pulcher*, and poultice.

Adenostemma viscosum, Forst.

779. Rumput tahi babi. Grik, 12311, 12398, 13622.—Skin diseases. Pound the leaves, boil them, and use the decoction as a lotion. This is especially serviceable for any skin complaint upon the face.

780. Rumput tahi babi. Kuala Kangsar, 15574.—Ulceration of the nose. Pound the leaves, squeeze out the juice, and use this upon the place.

781. Rumput tahi babi. Telok Anson, 16261.—Vertigo. Poultice the head with it.

782. Rumput tahi babi. Telok Anson, 15886.—Catarrh. The same.

783. Rumput tahi babi. Telok Anson, 15856.—Headache in women. The same.

784. Pulot-pulot. Telok Anson, 15930.—Fever. Poultice with it.

785. Rumput tahi babi. Telok Anson, 16169.—All sorts of diseases. The same.

786. Daun lok (lolok) kemala hakim. Telok Anson, 16258.—The same.

787. Rumput tahi babi. Tanjong Malim, 14054.—Quartan

fever. Pound the leaves, squeeze out the juice, and drop it into the left eye.

788. Rumput tahi babi. Tanjong Malim, 14005.—Diarrhoea and other complaints. Pound the leaves with *Momordica charantia*, &c., and poultice the abdomen. See no. 618.

789. Rumput tahi babi. Raub, 16815.—Headache. Pound the leaves, and poultice the head.

790. Rumput tahi babi. Raub, 17004.—Ear-ache. Pound the leaves, and squeeze the juice into the ear.

791. Rumput tahi babi. Beserah, 17556.—Sore eyes. Pound the leaves with leaves of *Mimusops Elengi* and the bark of *Baccaurea Motleyana*, squeeze out the juice, and drop it into the eye.

792. Rumput tahi babi. Bentong, 16749.—Headache from exposure to the sun. Pound the leaves, and poultice the head.

Bidens pilosa, Linn.

793. Kanching baju. Batu Gajah, 13426.—Coughs. Boil the plant, and drink the decoction.

794. Kanching baju. Raub, 16835.—Sore eyes. Pound the plant with alum, squeeze out the juice, and drop this into the eye.

Synedrella nodiflora, Gaertn. f.

795. Getang. Telok Anson, 16159.—Ear-ache. Pound the leaves and seed of *Nigella sativa*, and place in the ear.

Spilanthes Acmella, Murr.

796. Is stocked in Chinese herbalists' shops in Singapore and Penang.

Wedelia biflora, DC.

797. Serunai laut. Telok Anson, 10310, 15905.—Swellings and varicose veins. Pound the leaves with lime, and poultice.

798. Serunai laut. Telok Anson, 10316.—Cuts and insect bites. The same.

799. Serunai laut. Telok Anson, 15274.—Discoloration of the skin (kedal). The same.

Eclipta alba, Hassk.

800. Dakelin. Kuala Kangsar, 15969.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

801. Dawah. Telok Anson, 15931.—Cuts. Pound the plant, and poultice with it.

802. Aging-aging. Telok Anson, 16158.—Vertigo. Boil the leaves with seed of *Nigella sativa*, and drink the decoction.

803. Orang-arang. Telok Anson, 10305.—Child-birth. Boil the plant with seed of *Cuminum cyminum* in a covered pot, and drink the decoction as an ubat meroyan.

It is stocked in Chinese herbalists' shops in Penang.

Vernonia javanica, DC.

804. Kayu kepialu. Raub, 17014.—Fever. Scrape the root, mix the scrapings with water, and drink.

805. Berambong. Bentong, 16592.—High fever. Boil the bark with the barks of *Artocarpus sp.* and *Ficus hispida* and plants of *Costus speciosus* and *Monochoria vaginalis*, and drink the decoction.

Vernonia cinerea, Less.

806. Chongchong hari. Telok Anson, 16160.—Headache. Pound the leaves with the seed of *Nigella sativa* and an onion, and poultice the head.

807. Chenderong hari. Telok Anson, 14345.—Wounds. Pound the leaves with lime, and apply.

808. Jenduang hari. Telok Anson, 15610.—Ringworm. Pound the leaves, and rub them over the place.

It is stocked in Chinese herbalists' shops in Penang (13669).

Notonia grandiflora, DC.

809. It is stocked in Chinese herbalists' shops in Ipoh (13358).

Emilia sonchifolia, DC.

810. It is stocked in Chinese herbalists' shops in Penang.

Blumea balsamifera, DC.

811. Chapa. Alor Sta, 10460.—Beri-beri. Boil the leaves, and use the decoction as a lotion.

812. Chapa. Grik, 12507.—Rheumatism. The same preparation, to be used hot.

813. Chapa. Grik, 13848.—Child-birth. The same.

814. Chapa. Kuala Kangsar, 15541.—Child-birth. Boil the leaves, and give the decoction to drink as an ubat meroyan.

815. Daun telinga kerbau. Batu Gajah, 13411.—Fever. The same preparation.

816. Chapa. Telok Anson, 16293, 15908.—Fever. The same.

817. Chapa. Telok Anson, 15297.—Stomach ache. Boil the leaves with the seed of *Pimpinella anisum*, and drink the decoction.

818. Chapa. Telok Anson, 16259.—Inflammation about the heart. Eat the leaves with betel.

819. Chapa. Tapah, 13520.—Child-birth. As above.

820. Chapa. Tanjong Malim, 14059.—Headache. Pound the leaves along with leaves of *Sida rhombifolia*, and poultice.

821. Chapa. Tanjong Malim, 14021.—Enlarged spleen. Heat the leaves with leaves of *Mitragyne speciosa*, &c., and apply hot over the spleen. See no. 646.

822. Sembang (usually sembong). Kuala Lipis, 15760.—Cuts. Crush the leaves and apply.

823. Chapa. Raub, 16222.—Child-birth. Boil the roots, and drink the decoction as an ubat meroyan.

824. Chapa. Beserah, 17648/1.—Child-birth. Pound the leaves, and smear over the body.

825. Sembong. Pekan, 17299.—Loss of appetite. Eat the leaves, and drink a decoction of the roots.

826. Sembong. Pekan, 17266.—Fever. Boil leaves and roots, and drink the decoction.

827. Chapa. Bentong, 16617.—Skin complaints. Pound the leaves, infuse, and use as a lotion.

828. Chapa. Bentong, 16617.—Fever. Drink the infusion.

829. Semboh. Karak, 16636.—Lumbago. Boil roots, and drink the decoction.

Erigeron linifolius, Willd.

830. Chundong ari. Raub, 16247.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

STYLIDIACEAE

?**Stylium** sp.

831. Seen in stock in a Chinese herbalist's shop in Singapore.

CAMPANULACEAE

Pentaphragma begoniifolium, Wall.

832. Salang suwang. Taiping, 10551.—Swellings. Poultice with the roots.

EPACRIDACEAE

Leucopogon malayanus, Jack

833. Jiring atap and chuchor atap. Pekan, 17284.—Stomach ache, and for aches all over the body. Boil the leaves and the root, and drink the decoction.

PLUMBAGINACEAE

Plumbago zeylanica, Linn.

834. Daun jarak. Telok Anson, 14150.—Delayed menstruation. Eat the leaves with betel.

835. Daun jarak. Bentong, 16732.—Child-birth. Boil the plant, and drink the decoction as an ubat meroyan.

PLANTAGINACEAE

Plantago major, Linn.

836. Sejumbok. Kuala Kangsar, 15566.—Dysentery. Boil the leaves, and drink the decoction.

It is stocked in Chinese herbalists' shops in Penang.

MYRSINACEAE

Maesa ramentacea, Wall.

837. Gambir badak. Batu Gajah, 13403.—Skin diseases in children. Poultice with the leaves.

838. Puding. Kuala Lipis, 15755.—Possession. Take twigs with the leaves on them and whip the body of children as a protective charm.

839. Kayu pinang bujong. Raub, 16985.—Itch (kudis). Pound the leaves, and use as a poultice.

840. Jelai. Raub, 16829.—Pain in the region of the heart. Pound the leaves with flour of black rice, and eat.

Labisia pothoina, Lindl.

841. Kachit fatimah. Grik, 13759.—Child-birth. Boil the roots, and use as an ubat meroyan. Eat the roots along with *Vitis cinnamomea* and *Elephantopus scaber*.

842. Kachip patimah. Kuala Kangsar, 15583, 15551.—Child-birth. Boil the roots, and drink as an ubat meroyan.

843. Kachip patimah. Kuala Kangsar, 16030.—Dysentery. Boil the leaves and drink the decoction.

844. Rumput sitti fatimah. Raub, 16217.—Child-birth. Boil the plant, and drink the decoction as an ubat meroyan.

845. Rumput palis. Raub, 16984.—Sickness in the bones. The same prescription.

846. Kachit fatimah. Pekan, 17285.—Flatulence. The same.

847. Mian batu (Sakai name). Bentong, 16712.—Irregular menses. The same.

848. Tadah mata hari. Bentong, 16744.—Child-birth. The same preparation as an ubat meroyan.

849. Selusoh fatimah. Manchis, 16759.—Child-birth. Administer a decoction in difficult labour, and to bring it on.

Ardisia littoralis, Andr.

850. Daun bisa hati. Pekan, 17235.—Pain at the heart. Boil the leaves or the root, and drink the decoction.

Ardisia oxyphylla, Wall.

851. Daun mata etek. Grik, 13634.—Cracks in the skin of the feet. Pound the leaves, and poultice.

852. Daun mata etek. Grik, 13742.—Ulcers upon the feet. Pound its leaves with plants of *Phyllanthus Niruri*, and poultice.

Ardisia near A. Hullettii, Mez

853. Sireh padang. Pekan, 17289.—Child-birth. Boil the root alone or with other plants which are of similar use, and administer as an ubat meroyan.

Ardisia colorata, Roxb.

854. Kayu lupa dahan. Taiping, 13285.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

855. Beberas nasi. Raub, 16240.—Child-birth. The same.

856. Penjarang (name from a Sakai). Bentong, 16721.—Coughs. Make a decoction and drink it.

Ardisia ?lanceolata, Roxb.

857. Asam. Bentong, 16548.—Wounds. Pound the leaves, and poultice.

Ardisia crenata, Roxb.

858. Mata ayam. Beserah, 17578.—Itch (kudis). Pound the bark with coconut oil and sulphur, and apply.

859. Mata ayam. Beserah, 17596.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

860. Mata ayam. Pekan, 17294.—Itch (kudis). Pound the plants and poultice.

861. Sireh puyoh. Pekan, 17238.—Coughs. Boil the roots and drink the decoction.

862. Mata ayam. Pekan, 17222.—Fever and diarrhoea. Pound the root, and swallow it.

Ardisia ?crenata, Roxb.

863. Akar bebulu. Pekan, 17242.—Swollen testicles. Pound the root, and poultice.

Ardisia ?Ridleyi, King and Gamble

864. Peluroh (Sakai name). Kuala Lipis, 15742.—Child-birth. Boil the plant, all parts of it, and give the decoction to drink immediately after child-birth.

865. Pingarut (Sakai name). Bentong, 16713.—High fever. Boil the plant, and give the decoction to drink.

Ardisia sp.

866. Sisek puyu. Grik, 12515.—High fever. Boil its leaves with leaves of *Nephelium lappaceum* and of *Carallia suffruticosa*; use the decoction in the bath. See no. 334.

867. Sireh nyireh. Grik, 13736.—Worms. Infuse its leaves in cold water, and swallow a very little.

868. Kacham. Raub, 16823.—Child-birth. Pound the leaves, and poultice for two or three days.

869. Asam kumbang. Bentong, 16582.—Dysentery. Boil the stems and the roots with *Delima sarmentosa*, &c., and drink. See no. 4.

870. Nerum (?nyarum). Bentong, 16544.—Malaria. Boil the plant, and drink the decoction in the cold stage of the fever. *Tropidia* may be used with it, see no. 1417.

SAPOTACEAE

Achras Zapota, Linn.

871. Chiku. Telok Anson, 15926.—Mild diarrhoea. Apparently immature fruit is used.

Sideroxylon ferrugineum, Hook. and Arn.

872. Nasi (for nasi-nasi). Beserah, 17645.—Stomach ache. Boil the leaves along with leaves of *Rhodomyrtus tomentosa*, and drink the decoction.

873. Nasi. Beserah, 17613.—Pain in the chest. Boil the leaves and drink the decoction.

874. Pelangas. Pekan, 17233.—Lumbago. Pound the leaves, and poultice.

Payena lucida, DC.

875. Bedara tiong. Raub, 16229.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Mimusops Elengi, Linn.

876. Bunga tanjong. Grik, 12304.—Skin complaints. Boil the bark along with bark of *Tamarindus indica*, and use the decoction as a lotion.

877. Bunga tanjong. Kuala Kangsar, 16000.—Headache. Boil the leaves: let them cool, and then apply.

878. Bunga tanjong. Batu Gajah, 13382.—Headache. The same.

879. Bunga tanjong. Telok Anson, 16280, 16260.—Ulceration of the nose. Pound the leaves along with seed of *Nigella sativa*, and poultice.

880. Bunga tanjong. Telok Anson, 15604.—Ulceration of the nose. Roll the leaves into the form of a cigarette with dried leaves of *Areca Catechu*; smoke and inhale the smoke.

881. Bunga tanjong. Tapah, 13969.—Ulceration of the nose. The same.

882. Bunga tanjong. Beserah, 17558.—Sore eyes. Pound the leaves with the leaves of *Adenostemma viscosum* and the bark of *Baccaurea Motleyana*, and squeeze the juice into the eye.

EBENACEAE

?**Diospyros graciliflora**, Hiern

883. Ganding hutan. Raub, 16237.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Diospyros Wallichii, King and Gamble

884. Daun tuba. Grik, 13779.—Yaws (puru). Applied as a poultice.

STYRACEAE

Symplocos rubiginosa, Wall.

885. Kelap (Sakai name). Tapah, 14290.—Enlargement of the spleen. Slash the bark and collect the juice which runs out; smear this over the skin in the neighbourhood of the spleen as a preventive treatment.

OLEACEAE

Jasminum Sambac, Ait.

886. Melor susun. Kuala Kangsar, 15970.—Wounds, old. Pound the leaves, and poultice.

887. Maloh. Beserah, 17554.—Sore eyes. Pound the leaves with the root of *Punica granatum* and the leaves of *Sauropus albicans*, and squeeze the juice into the eye. See no. 603.

888. Maloh. Pekan, 17275.—Fever. Boil the leaves and the roots, and drink the decoction.

889. Maloh. Pekan, 17275.—If desired, mix with them the root of *Hibiscus rosa-sinensis*, of *Durio zibethinus*, of *Nephelium mutabile* and *Nephelium lappaceum*, and of *Artocarpus integrifolia*; boil all together and drink the decoction. See no. 165.

890. Melor. Telok Anson, 15284.—Venereal diseases. Eat the root fresh.

891. Melor. Telok Anson, 10452.—Ringworm. Pound the leaves, and poultice.

892. Meloh. Grik, 12338.—To increase milk. Poultice the breasts with it when the milk will not flow.

Jasminum ?Curtisii, King and Gamble

893. Pekan. Alor Sta, 10463.—Ulcers (pekong). Chew the leaves along with betel, and sprinkle the ulcer.

Jasminum bifarium, Wall.

894. Jarum ali. Kuala Kangsar, 15545.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

895. Pekan. Raub, 17015.—Ague in children. Pound the leaves and use as a poultice.

Myxopyrum nervosum, Blume

896. Taiping, 13284.—Child-birth. Take any part of the plant, boil, and use it as an ubat meroyan.

897. Chiput-chiput. Bentong, 16730.—Child-birth. The same.

SALVADORACEAE

Azima tetraacantha, Lam.

898. This Indian plant has been introduced by Tamils for medicinal use, into Penang (14998). It is regarded by the Malays as a *Jasminum* and called pekan. Tamils call it sung ilai.

APOCYNACEAE

Willughbeia sp.

899. Jitan. Kuala Lipis, 15745, 15776.—Yaws. The latex is smeared over the skin.

900. Jitan. Kuala Tembeling, 16058.—Yaws. The same.

901. Jitan. Raub, 16990.—Yaws. Pound the root, and poultice.

902. Aguh. Beserah, 17624.—Yaws. The latex is smeared on to the skin.

Leuconotis eugeniifolius, DC.

903. Aguh. Grik, 12470.—Yaws. The same.

Kopsia larutensis, King and Gamble

904. Chabai hutan. Taiping, 13260. Syphilis. Pound the root, and poultice.

905. Ubat karang. Taiping, 13268.—Syphilis. The same.

Ervatamia corymbosa, King and Gamble

906. Susok ayam (for susun). Taiping, 13275.—Child-birth. Take the roots and use as an ubat meroyan.

Ervatamia coronaria, Stapf

907. Susun kelapa. Alor Sta, 10444.—Convulsions. Apply the leaf.

908. Bunga china puteh. Pekan, 17217.—Ulceration of the nose. Pound the roots with the roots of another *Ervatamia* (see below no. 914), the roots and leaves of *Sauropus albicans*, and the young leaves of *Ficus hispida*, and snuff the mixture into the nostrils.

Ervatamia peduncularis, King and Gamble

909. Batang lada (usually lada-lada). Bentong, 15628.—Abscesses in the nose. Boil the roots, and drink the decoction.

Ervatamia ?malaccensis, King and Gamble

910. Lelada. Kuala Tembeling, 15838.—Abscesses in the nose. Boil the roots and sniff the steam from the boiling water into the nose.

Ervatamia cylindrocarpa, King and Gamble

911. Kayu lada. Budu, 15815.—Beri-beri, itch, and eczema. Pound the leaves with turmeric and broken rice, and poultice.

Ervatamia sp.

912. Susok ayam (for susun). Taiping, 13258.—Child-birth. Take the roots, and use as an ubat meroyan.

913. Susun kelapa. Telok Anson, 15645.—Venereal diseases. Boil the roots and drink the decoction.

914. Restong kelapa. Pekan, 17216.—Ulceration of the nose, with no. 908 above.

Alstonia scholaris, R.Br.

915. Pulai. Beserah, 17589.—Toothache. Squeeze the latex into a hollow tooth.

Alstonia spathulata, Blume

916. Pulai puteh. Batu Gajah, 13414.—Toothache. The same.

Alstonia augustiloba, Miq.

917. Pulai. Kuala Kangsar, 15988.—Remittent fever. Smear coconut oil over the leaves, heat and apply hot over the spleen.

918. Pulai. Bentong, 16480.—Sickness in the bones. Take the twigs of *Delima sarmentosa*, &c., and exorcise the disease by beating the body with the bunch. See no. 5.

?Urceola sp.

919. Kati lima (for sekati lima). Raub, 16966.—Stomach ache. Poultice the abdomen.

Aganosma marginata, G. Don

920. Sekati lima. Kuala Kangsar, 15544.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

921. Sekati lima. Raub, 16838.—Urinary disorders. Make a decoction and drink it.

ASCLEPIADACEAE

Asclepias curassavica, Linn.

922. Bunga tunjong. Kuala Kangsar, 15572.—Headache. Pound the flowers in cold water, and poultice.

Calotropis gigantea, R. Br.

923. Remiga. Telok Anson, 15863.—Toothache. The latex is put into the tooth.

924. Lembegah. Beserah, 15863.—Tonic. Boil the leaves and the flowers, and drink the decoction.

Hoya ?diversifolia, Blume

925. Kekapal. Kuala Kangsar, 15982.—Fever and rheumatism. Boil the leaves, and use the decoction in the bath.

Hoya coriacea, Blume

926. Chuk (the latex,—a Sakai word). Tapah, 14276.—Cough and asthma. Boil the leaves and drink the decoction.

LOGANIACEAE

Fagraea racemosa, Jack

927. Sepuleh. Alor Sta, 10476.—Ulceration of the nose. Pound the root, and poultice.

928. Sepulit or sepuleh or puleh. Grik, 13633, 13741.—Tonic after fever. Boil the root and drink the decoction.

929. Dada kura. Telok Anson, 15269.—Malaria. Heat the leaves, and apply hot to the abdomen.

930. Sepuleh. Kuala Lipis, 15762.—Fever. The same treatment.

931. Sekobang. Raub, 17007.—Fever in children. Boil the leaves, and use the decoction in a bath.

932. Sepuleh. Beserah, 17586.—Fever. Boil the roots and drink the decoction.

933. Sepuleh. Beserah, 17643.—Fever. Boil the roots with the leaves of *Eurycoma longifolia*, &c., and drink the decoction. See no. 263.

934. Sepuleh. Bentong, 16485.—Sickness in the bones. Take twigs with twigs of *Delima sarmentosa*, &c., and exorcise the disease by beating the body with the bunch. See no. 5.

935. Sebereteh kayu. Bentong, 16613.—Tonic. Boil the

leaves with the leaves of *Sandoricum indicum*, &c., and drink the decoction. See no. 271.

Cryptophyllum peregrinum, Blume

936. Tembusu. Alor Sta, 10468.—Blood in stools. Boil its root and drink the decoction.

BORAGINACEAE

Heliotropium indicum, Linn.

937. Rumput ekor kuching. Telok Anson, 15862.—Want of control of urine in children. Pound this plant, and poultice upon the abdomen.

CONVOLVULACEAE

Erycibe ?aenea, Prain

938. Langsat hutan. Raub, 16248.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Merremia vitifolia, Hallier f.

939. Ulan raya. Batu Gajah, 13369.—Distension of the stomach. Pound its leaves and the leaves of *Clerodendron paniculatum*, and poultice.

940. Ulan raya. Raub, 16819.—High fever. Infuse its leaves along with leaves of *Pericampylus incanus*, &c., in water for a night, and give to drink morning by morning, or evening by evening. See no. 72.

Merremia convolvulacea, Hallier f.

941. Ulan pelandok. Kuala Tembeling, 15845.—Cracks in hands and feet. Pound the leaves with turmeric and broken rice, and poultice.

Merremia umbellata, Hallier f.

942. Ulan tapak pelandok. Budu, 15808.—Burns and scalds. Pound the leaves, and poultice.

Ipomoea sagittifolia, Burm.

943. Selepat tunggal (probably for selepat tungau). Telok Anson, 16196.—Headache. Pound the leaves with the seed of *Nigella sativa*, and poultice the head.

SOLANACEAE

Solanum nigrum, Linn.

944. Kelampong puyoh. Telok Anson, 16163.—Yaws. Boil the plant, and use the decoction as a lotion.

Solanum verbascifolium, Linn.

945. Daun telinga kerbau. Grik, 13713.—Vertigo. A decoction taken internally.

946. Bunga china. Kuala Kangsar, 15972.—Headache. Pound the leaves, and poultice.

947. Daun sangsara. Batu Gajah, 13423.—Child-birth. Boil the leaves, and use the decoction for washing the body.

Solanum ferox, Linn.

948. Terong asam. Tapah, 13957.—Fever which recurs at night. Boil the roots, and use the decoction as a fomentation.

949. Terong asam. Tanjong Malim, 14012.—Syphilis. Boil the roots with *Pandanus* leaves and galls of *Quercus infectoria*, and drink.

950. Terong asam. Raub, 16207.—Itch. Pound the roots, and poultice.

Solanum torvum, Sw.

951. Terong pipit. Budu, 15796.—Cracks in feet. Pound the roots, and poultice.

Solanum sarmentosum, Nees.

952. Terong puyoh. Grik, 12309.—Fever. Pound the leaves with those of *Brucea sumatrana*, and drink the juice.

Solanum trilobatum, Linn.

953. May be found stocked in Chinese herbalists' shops in Penang (13657).

Capsicum annuum, Linn.

954. Chili besar. Bentong, 16589.—Gonorrhoea. Boil the roots with the roots of *Areca Catechu*, *Pandanus sp.*, and *Scleria sumatrensis*, and drink the decoction. See 1565.

Physalis minima, Linn.

955. Letup. Telok Anson, 15920.—Fever. Poultice with the plant.

956. Rumput meranti. Raub, 16981.—Headache. Pound the plant, and poultice.

957. Letup-letup. Raub, 16847.—Abdominal trouble. The same treatment.

It is stocked in Chinese herbalists' shops in Penang (13656).

Datura fastuosa, Linn.

958. Terong pengar. Alor Sta, 10438.—Boils. Poultice with the leaf.

959. Kechubong. Grik, 12308, 12527.—Asthma. Burn the seed and inhale the smoke.

960. Kechubong. Grik, 12399.—Skin diseases. Poultice with it.

961. Kechubong. Kuala Kangsar, 15582.—Itch, ringworm, &c. Pound the leaves and poultice with it.

SCROPHULARIACEAE

Herpestis Monniera, H. B. and K.

962. Is stocked in Chinese herbalists' shops in Penang (13666, 13697).

Limnophila villosa, Blume

963. Is stocked in Chinese herbalists' shops in Penang (13664).

Limnophila erecta, Benth.

964. Is stocked in Chinese herbalists' shops in Penang (13667).

Vandellia crustacea, Benth.

965. Rumpit jari chichak. Grik, 12330.—Child-birth. Boil the plant and drink the decoction.

It is stocked in Chinese herbalists' shops in Penang (13662).

Torenia polygonoides, Benth.

966. Rumpit kerak nasi. Telok Anson, 15623.—Dropsy. Pound the plant with rice flour, and poultice the abdomen.

It is stocked in Chinese herbalists' shops in Penang (13663).

Curanga amara, Juss.

967. Lempedu tanah. Kuala Kangsar, 16049.—Stomach ache. Boil the plant and drink the decoction.

968. Lempedu tanah. Kuala Kangsar, 15537.—Nausea. The same.

969. Lempedu tanah. Kuala Kangsar, 16049.—Loss of appetite. The same.

970. Berêmi. Bentong, 16550.—Wounds. Pound the plant, and poultice.

Bonnaya brachiata, Link and Otto

971. Rumpit jari chichak. Grik, 12329.—Child-birth. Pound the plant, and drink the juice as an ubat meroyan.

Scoparia dulcis, Linn.

972. Pokok kelambu. Alor Sta, 10464.—Syphilis with pus (karang nanah). Boil the plant and drink the decoction.

It is stocked in Chinese herbalists' shops in Penang (13689).

GESNERACEAE

Aeschynanthus ?marmorata, T. Moore

973. Maman kurai. Grik, 12542.—Boils. Pound the leaves with rice, and poultice.

Aeschynanthus sp.

974. Sawai (Sakai name). Kuala Lipis, 15750.—Worms in children. Infuse the plant in cold water, and give the infusion to drink.

Didissandra frutescens, Clarke

975. Tarum hutan. Taiping, 13256.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Didymocarpus crinita, Jack

976. Ekor kuching. Taiping, 13270.—Child-birth. The same.

977. Lemak batu. Bentong, 16671, 16741.—Child-birth. The same.

978. Meroyan kerbau. Karak, 16622.—Child-birth. Boil the roots with the roots of *Hedyotis capitellata*, &c., and use the decoction as an ubat meroyan. See no. 681.

Cyrtandromoea grandis, Ridl.

979. Bayam beraleh. Raub, 16995.—Fever. Pound the leaves, and poultice with them.

Cyrtandra pendula, Blume

980. Meroyan panas. Bentong, 16715.—Fever after child-birth. Boil the plant and drink the decoction.

Cyrtandra pilosa, Ridl.

981. Lemak batu. Bentong, 16670.—Child-birth. Use a decoction of the plant as an ubat meroyan.

Cyrtandra cupulata, Ridl.

982. Bebangun. Bentong, 16535.—Child-birth. The same.

983. Kabut (Sakai name). Bentong, 16714.—Fever. Boil the leaves and the roots, and drink the decoction.

?Cyrtandra sp.

984. Bayam beraleh. Budu, 15809.—Child-birth. Boil the roots, and drink as an ubat meroyan.

985. Bayam beraleh. Budu, 15809.—Fever in children. Boil the leaves, and poultice with them.

BIGNONIACEAE

Oroxylum indicum, Vent.

986. Bikir angkup. Taiping, 13299.—Child-birth. Boil the leaves, and use as a poultice upon the abdomen either in labour or afterwards.

987. Bikir. Taiping, 13295.—Fever. Boil the leaves, and use the decoction in the bath.

988. Bekak. Grik, 12465.—Stomach ache. Take a decoction of the leaves, which gives relief by causing eructations.

989. Bekak. Grik, 12368.—Dysentery. Boil the bark, and drink the decoction; rub the lees upon the skin.

990. Bekak kampong. Grik, 12332.—Cholera. Boil the leaves, and use the decoction hot for fomenting the body.

991. Daun juak. Kuala Kangsar, 15971.—Child-birth. Boil the leaves, and use the decoction for bathing the body.

992. Bonglai. Kuala Kangsar, 15531.—Fever. The same treatment.

993. Merelai. Kuala Kangsar, 14908.—Child-birth and rheumatism and swellings. The same treatment.

994. Bonglai. Sungei Raya, 13395.—Rheumatism. Boil the leaves and drink the decoction.

995. Bonglai. Sungei Raya, 13595.—Loss of appetite. The same.

996. Merelai. Tapah, 13526.—Wounds. Make a decoction from the roots, and drink it.

997. Bolai. Tanjong Malim, 14070.—Toothache. Pound a leaf, and poultice the cheek.

998. Bolai. Tanjong Malim, 14023.—Enlarged spleen. Heat the leaves with the leaves of *Mitragyne speciosa*, &c., and apply them hot over the spleen. See no. 646.

999. Kankatong. Bentong, 16750.—Child-birth. Boil the leaves, and use the decoction for bathing the body.

Pajanelia multijuga, DC.

1000. Bekak gunung. Grik, 12333.—Stomach disorders in children. Boil the leaves, and use the decoction hot for fomenting the body: a substitute for *Oroxylum indicum*.

Stereospermum fimbriatum, DC.

1001. Chichah. Grik, 13724.—Coughs. The way of using not recorded.

1002. Chichah. Kuala Kangsar, 15523, 15986.—Itch. Pound the leaves with a little coral lime, and apply.

1003. Chichah. Kuala Lipis, 15781.—Ear-ache. Take the leaves and squeeze the juice into the ear.

1004. Chichah. Beserah, 17623.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

1005. Chichah. Bentong, 16466.—Ear-ache. Pound the leaves with those of *Dolichos lablab*, and drop the juice into the ear.

1006. Chichah. Karak, 16633.—Ear-ache. Pound the tender leaves and put them into the ear.

ACANTHACEAE

Thunbergia laurifolia, Lindl.

1007. Daun patok tuwah (elsewhere ketuwah). Kuala Kangsar, 15563.—Excessive menses. Pound the leaves and swallow the juice.

1008. Rumput melian. Telok Anson, 15881.—Cuts. Take the leaves and poultice with them.

1009. Akar tuwauh. Kuala Lipis, 15763.—Deafness. Pound the leaves, and squeeze the juice into the ear.

1010. Tuwauh. Raub, 16813.—Boils. Pound the leaves, and poultice.

Thunbergia grandiflora, Roxb.

1011. Patok tuwauh. Batu Gajah, 13419.—Stomach complaints. Boil the leaves, and drink the decoction; also apply the lees to the abdomen.

Ruellia repens, Linn.

1012. Rumput halyor. Kuala Kangsar, 15991.—Ulcers. Pound the leaves and poultice with them.

1013. Rumput halir. Telok Anson, 16251.—Cuts. The same treatment.

1014. Daun patok tuwauh. Telok Anson, 15879.—Toothache. Pound the leaves and apply.

1015. Seranam. Telok Anson, 15880.—Abdominal trouble such as appendicitis. The same treatment.

Hygrophila angustifolia, R.Br.

1016. Inai paya. Telok Anson, 16285.—Swellings. Pound the leaves with seed of *Nigella sativa*, and poultice.

Hygrophila quadrivalvis, Nees

1017. Lutut ayam. Telok Anson, 10304.—Wounds. Pound the leaves with a little lime, and poultice.

1018. Keremak batu. Telok Anson, 16189.—Toothache. Pound the leaves with a little water, and put them into the hollow tooth.

Strobilanthes flaccidifolius, Nees

1019. Tarum siam. Taiping, 13255.—Cough. The leaves.

1020. Tarum. Grik, 12337.—Ague in children. Pound the leaves, and poultice.

Asystasia ? intrusa, Blume

1021. Is stocked in Chinese herbalists' shops in Penang (13682).

Barleria lupulina, Lindl.

1022. Setawar sakelian bisa. Kuala Kangsar, 16013.—Snake-bites. Pound the leaves, and poultice.

1023. Setawar sakelian bisa. Kuala Kangsar, 16013.—Toothache. The same treatment.

Pseuderanthemum sp.

1024. Cheraka-cheraka. Kuala Kangsar, 14911.—Child-birth. Boil the leaves and use the decoction as an ubat meroyan.

Gendarussa vulgaris, Nees

1025. Gandarusa. Alor Sta, 10473.—Lunacy. The way of using not recorded.

1026. Gandarusa. Grik, 12530.—Lumbago. Pound the plant and poultice the loins.

1027. Gandarusa. Grik, 12504.—Kidney trouble. Pound the plant with *Breynia discigera*, and poultice.

1028. Gandarusa. Grik, 12504.—Stomach trouble. Boil the plant, and drink the decoction.

1029. Gandarusa. Kuala Kangsar, 15538.—Lumbago. Pound the plant with a little coral lime, and poultice.

1030. Gandarusa. Kuala Kangsar, 15538.—Kidney trouble. The same treatment.

1031. Gandarusa. Kuala Kangsar, 15962.—Lumbago. Heat the leaves and apply hot to the back.

1032. Gandarusa. Kuala Kangsar, 14907.—Rheumatism and swellings. Boil the plant and use the decoction hot in a bath.

1033. Kanda rusa. Kuala Kangsar, 15953.—Worms in children. The same treatment.

1034. Gandarusa. Telok Anson, 15852, 15947, 15878.—Lumbago and kidney complaints. Heat the leaves, and apply them hot over the loins.

1035. Gandarusa. Telok Anson, 16272.—Spitting blood. Boil the leaves along with seed of *Cuminum cyminum*, and drink the decoction.

1036. Gandarusa. Tapah, 13516.—Rheumatism. Pound the plant and apply externally.

1037. Gandarusa. Tanjong Malim, 14063.—Rheumatism in the joints. Smear the leaves with oil; heat and apply hot.

1038. Gandarusa. Tanjong Malim, 14011.—Colic. Boil the leaves, and use the decoction hot as a lotion.

1039. Gandarusa. Beserah, 17549, 17550.—Swellings. Pound the leaves of the dark-stemmed race, gandarusa hitam, and of the light-stemmed race, gandarusa puteh, along with *Beilschmiedia pahangensis* and *Zingiber ? Cassumunar*, and poultice.

1040. Gandarusa. Pekan, 17206.—Thrush. Pound the root in water and touch the sore places with the juice; or touch the sore places with the root itself.

Justicia Neesiana, Wall.

1041. Daun tasek pechuri. Grik, 13731.—Fever. Pound the leaves with camphor, and rub over the body.

Justicia bracteata, Ridl.

1042. Akar ratus. Raub, 16204.—Colic. Boil the leaves with the root of *Abrus ? pulchellus*, &c., and drink the decoction. See no. 371.

Justicia betonica, Linn.

1043. Daun ekor tupai. Tapah, 13542.—Swellings. Pound the plant, and poultice.

Justicia uber, Clarke

1044. Daun puding. Tanjong Malim, 14001.—Abdominal complaints. Pound the plant with *Coleus atropurpureus*, and poultice.

Justicia sp.

1045. Akar pelihara. Raub, 16214.—Child-birth. Boil the roots with black pepper, cloves, and nutmeg, and use as an ubat meroyan.

1046. Tapak murai. Bentong, 16754.—Itch. Pound the leaves with *Ageratum conyzoides* and leaves of *Phyllanthus pulcher*, and poultice.

Rhinacanthus communis, Nees

1047. Ubat kurap. Bentong, 16476.—Skin complaints. Pound the leaves with benzoin and sulphur, and poultice.

Polytrema vulgare, Clarke

1048. Lipah (? lepa). Grik, 13619.—Pain at the heart. Boil the plant, and poultice.

1049. Peparu hitam. Grik, 13639.—Abdominal complaints. Pound the plant with a little rice, and poultice.

1050. Sekeras akar. Raub, 16212.—Ulcers. The same treatment.

What appears to be this species has been seen stocked in Chinese herbalists' shops in Singapore.

Peristrophe acuminata, Nees

1051. Setawar ular. Alor Sta, 10461.—Snake-bites. Pound the leaves with a little glutinous rice, and poultice the bite.

1052. Paha ayam. Alor Sta, 10435.—Wounds. The same treatment.

1053. Tangkai jerami. Taiping, 10553.—Wounds. The same treatment.

1054. Bunga kuau chermin. Grik, 13646.—Wounds. Pound the leaves with the leaves of *Morinda elliptica*, and poultice.

1055. Tanjong Malim.—Small-pox. Boil the leaves with leaves of *Psophocarpus tetragonolobus*, &c., and use the decoction as a lotion upon the skin. See no. 425.

The plant is stocked by Chinese herbalists' in Penang as a cure for snake-bites (13681).

Peristrophe tinctoria, Nees

1056. Mala pudak. Grik, 13620.—Skin complaints. Pound the leaves, and poultice.

Graptophyllum hortense, Nees

1057. Puding. Telok Anson, 15944.—Cuts. The same treatment.

1058. Puding. Telok Anson, 16153.—Ear-ache. Squeeze the juice of the leaves into the ear.

Acanthaceae.

1059. Daun kurap bukit. Grik, 13763.—Itch. Take the leaves and poultice with them.

1060. Posok. Manchis, 16768.—Abdominal trouble. Boil the root and drink the decoction: take the leaves and poultice with them.

VERBENACEAE

Lantana aculeata, Linn.

1061. Bunga tahi ayam. Kuala Kangsar, 15592.—Cuts and ulcers. Pound the leaves, and poultice.

Stachytarpheta jamaicensis, Vahl

1062. Rumput tahi babi. Tapah, 13623.—Ulceration of the nose. Boil the leaves and drink the decoction.

Chinese herbalists stock it in Penang.

Geunsia farinosa, Blume

1063. Membatu puteh. Grik, 13719.—Vertigo. The way of using not recorded.

Callicarpa arborea, Roxb.

1064. Kata kera. Batu Gajah, 13367.—Sores. Pound the leaves, and poultice.

1065. Kata kera. Sungei Raya, 13397.—Stomach ache. Boil the leaves and drink the decoction.

Callicarpa longifolia, Lam.

1066. Tampang besi. Batu Gajah, 13376.—Fever. The same treatment.

1067. Tampang besi. Tapah, 13973.—Fever. The same treatment.

1068. Tampang besi. Tapah, 13547.—Fever. Pound the leaves, and poultice with them.

Callicarpa ? longifolia, Lam.

1069. Tampang besi. Beserah, 17607.—Fever. The same treatment.

1070. Tampang besi puteh. Budu, 15818.—Abdominal trouble. Boil the plant and drink the decoction.

1071. Beti-beti. Bentong, 16729.—Child-birth. The same preparation used as an ubat meroyan.

Callicarpa cana, Linn.

1072. Tampang besi merah. Budu, 15819.—Abdominal trouble. As a substitute for the last-named plant. The tender leaves are taken.

Callicarpa sp.

1073. Kata kera. Kuala Kangsar, 10347.—Swellings. Pound the leaves, and poultice.

Premna pyramidata, Wall.

1074. Bebuas. Kuala Kangsar, 15980.—Child-birth. Boil the leaves, and bathe the body with the hot decoction.

1075. Piat. Raub, 16833.—Worms in children. Chew the tender shoots with leaves of *Caesalpinia Bonduc* and of *Cyathula prostrata*, and spray upon the abdomen.

Gmelina villosa, Roxb.

1076. Bulang. Taiping, 13253.—As a cathartic. Take the leaves.

1077. Bulang. Telok Anson, 15905.—Anaemia or blood-poisoning. Pound the leaves, and poultice.

Gmelina ? villosa, Roxb.

1078. Pekan mata hari. Grik, 12546.—Headache. Pound the leaves, and poultice.

? Gmelina sp.

1079. Bulang. Kuala Kangsar, 15570.—Swellings that are yellowish. Pound the leaves with a little coral lime, and poultice.

1080. Bulang. Batu Gajah, 13384.—Headaches. Pound the leaves, and poultice.

Clerodendron disparifolium, Blume

1081. Tumboh. Kuala Lipis, 15773.—Gumboils. Crush the roots inside the hollow tooth, and then wash out the mouth with water.

1082. Uloh-ulai. Raub, 17001.—Constipation. Eat the leaves.

1083. Perechau ulam (for perechit ulam). Raub, 16841.—To cause purging. The same use.

1084. Lampin budak. Beserah, 17615.—Aches in general. Pound the root and rub it over the place.

1085. Pencholam. Bentong, 16610.—As a tonic. Boil the leaves with the leaves of *Sandoricum indicum*, &c., and drink. See no. 271.

Clerodendron serratum, Spreng.

1086. Tambun tasek. Batu Gajah, 13374.—Stomach ache. Boil the leaves and drink the decoction.

1087. Timba tasek. Tapah, 13974.—Yaws. Boil the leaves, and use the hot decoction as a lotion.

1088. Mulas. Tapah, 13541.—Swellings. The same treatment.

1089. Tinjau tasek. Tanjong Malim, 14033.—Swollen testicles. Pound the leaves with seed of *Nigella sativa* and garlic: heat, and apply hot.

1090. Tenjal tasek. Kuala Lipis, 15771.—Leprous sores. Pound the leaves, and poultice.

1091. Tinjal tasek. Budu, 15817.—Skin diseases. Pound the leaves with camphor and wood ashes, and rub upon the place.

1092. Taman tasek (? for tambun tasek), 15848. Kuala Tembeling, 15848.—Leprosy. Pound the leaves, and poultice.

1093. Tunjal. Raub, 17005.—Ringworm. The same treatment.

1094. Tenjal tasek. Karak, 16619.—Headache or fever. The same treatment.

Clerodendron villosum, Blume

1095. Bubut. Tanjong Malim, 14062.—For all animals that are sick, smoke them with this.

Clerodendron paniculatum, Linn.

1096. Pepangil. Batu Gajah, 13368.—Distension of the stomach. Pound its leaves with the leaves of *Merremia vitifolia*, and poultice.

Clerodendron fragrans, R.Br.

1097. Setumpok. Kuala Kangsar, 14904.—Rheumatism and swellings. Boil any part of the plant, and use the hot decoction as a lotion.

1098. Setumpok. Kuala Kangsar, 14904.—Child-birth. The same treatment.

1099. Setumpok. Kuala Kangsar, 15596.—Discoloration of the skin. Pound the leaves with a little coral lime, and poultice.

Vitex trifolia, Linn.

1100. Legundi. Grik, 12341.—Possession. Squeeze into the eye a drop of the juice to expel an evil spirit.

1101. Legundi. Grik, 12535.—Rheumatism. Pound the leaves with camphor, and poultice.

1102. Lenggundi. Kuala Kangsar, 16006.—Child-birth. Infuse the leaves and drink the infusion.

1103. Lenggundi. Kuala Kangsar, 16006.—Fever. The same treatment.

1104. Lenggundi. Telok Anson, 15275.—Rheumatism. Pound the leaves with rice, and poultice.

1105. Lenggundi. Telok Anson, 16269.—Remittent fever. Pound the leaves with vinegar, and bandage them upon the abdomen.

1106. Lenggundi. Telok Anson, 16195.—Colds. Infuse the leaves; thicken the infusion with a little lime, and apply it to the forehead and nose.

1107. Lenggundi. Tanjong Malim, 14060.—Rheumatism. Pound the leaves with black pepper, heat, and apply.

1108. Legundi. Beserah, 17600.—Fever. Boil the root and drink the decoction.

Vitex pubescens, Vahl.

1109. Halban. Taiping, 13259.—Child-birth. Boil the bark, and use the decoction as an ubat meroyan.

1110. Halban. Grik, 13737.—Fever. Pound the leaves and poultice with them.

1111. Halban. Kuala Kangsar, 15594.—Possession. Use the leaves as a charm for children against convulsions.

1112. Halban. Telok Anson, 15638.—Wounds. Bruise the leaves, and poultice.

1113. Halban. Pekan, 17280.—Flatulence. Boil the bark with the bark of *Mangifera sp.*, and drink the decoction.

1114. Halban. Bentong, 16467.—Stomach ache. Boil the bark, and drink the decoction hot.

? Vitex sp.

1115. Luwi. Telok Anson, 16297.—Skin complaints. Poul-
tice.

Peronema canescens, Jack

1116. Sungkai. Grik, 12469.—Rheumatism. Pound the
leaves, and poultice.

1117. Sungkai. Telok Anson, 15632.—Intermittent fever.
Pound the leaves and squeeze out the juice; take it morning by
morning with a little water.

1118. Sungkai. Telok Anson, 16290.—Fever. Boil the
leaves, and use the decoction in a bath.

1119. Sungkai. Raub, 16845.—Ringworm. Pound the leaves,
and poultice.

LABIATAE

Ocimum basilicum, Linn.

1120. Daun ruku. Kuala Kangsar, 15561, 15999.—Cough.
Pound the leaves and squeeze out the juice: drink it (may be
given to children).

1121. Daun ruku-ruku. Telok Anson, 15636.—Catarrh.
Pound the leaves and poultice the head.

1122. Kemangi. Telok Anson, 15644.—Child-birth. Boil the
leaves, and use the decoction as an ubat meroyan.

1123. Ruku padang. Pekan, 17292.—Cough. Boil the leaves
and drink the decoction; or if preferred, chew the leaves with
betel.

1124. Memali. Karak, 16628.—High fever. Boil the leaves
with the leaves of *Vitis trifolia*, &c., and give the patient the
decoction.

Ocimum canum, Sims

1125. Kemangi. Batu Gajah, 13364.—Child-birth. Boil the
leaves, and use the decoction as an ubat meroyan.

Ocimum sp.

1126. Is cultivated by the Chinese, who use the seeds for
making a cooling medicine, and the leaves for a decoction which
is a cure for coughs (Kedah 13306); and the plant is offered for
sale in Chinese herbalists' shops in Penang (13698).

Hyptis suaveolens, Poit.

1127. Lerkuing. Grik, 13792.—Skin complaints. Pound the
plant, and poultice.

It is stocked in Chinese herbalists' shops in Penang (13690).

Hyptis brevipes, Poit.

1128. Kanching baju. Kuala Kangsar, 14902.—Child-birth.
The leaves are dried and kept in store; when required, they are
boiled and the decoction is used as an ubat meroyan.

Coleus carnosus, Hassk.

1129. Bebangun. Kuala Kangsar, 14912.—Child-birth. Boil the leaves and use the decoction as an ubat meroyan.

1130. Mangun-mangun or magun-magun. Telok Anson, 16005.—Enchantment. Express the juice of the leaves; mix it with rice flour, and expose to ensure the protection of a good spirit for a house that is being built.

? Coleus carnosus, Hassk.

1131. Membangun. Telok Anson, 16154.—Heart disease. Boil the leaves and use the decoction.

1132. Nilam. Pekan, 17227.—Distension of the stomach. Pound the leaves and swallow them. Boil the root and drink the decoction. Both treatments together.

Coleus atropurpureus, Benth.

1133. Daun hati-hati. Taiping, 13272.—Nausea. Boil the leaves and drink the decoction.

1134. Daun hati-hati. Grik, 13647.—Pain about the heart. Pound the plant, and poultice.

1135. Daun hati-hati. Kuala Kangsar, 15562.—Pain about the heart. The same.

1136. Daun hati-hati. Kuala Kangsar, 15985.—Pain in the chest. Pound the leaves with cold rice, and swallow.

1137. Daun salip kechil. Kuala Kangsar, 16004.—Child-birth. Boil the plant, and use the decoction for a hot bath.

1138. Daun hati-hati. Telok Anson, 15945.—Pain about the heart. Boil the plant and drink the decoction.

1139. Daun hati-hati. Telok Anson, 16299.—Indigestion. The same.

1140. Daun hati-hati. Tapah, 13527.—Nausea. The same.

1141. Daun hati-hati. Tanjong Malim, 13500.—Nausea. Pound the plant with leaves of *Justicia uber*, and poultice over the stomach.

1142. Daun hati-hati. Pekan, 17228.—Distension of the stomach. Pound the leaves and swallow them. Boil the root and drink the decoction. It is best to give both treatments at the same time.

1143. Daun hati-hati. Bentong, 16536.—Heartburn and any pain about the heart. Boil the leaves and drink the decoction.

Coleus Blumei, Benth.

1144. Daun hati-hati. Telok Anson, 16273.—Ophthalmia. Boil the leaves with seed of *Nigella sativa* and an onion; drop the decoction into the eyes.

1145. Daun hati-hati. Telok Anson, 15924.—Pain about the heart. Boil the leaves, and give the decoction to drink.

1146. Daun hati-hati. Telok Anson, 10315.—Wasting sickness. The same.

Coleus sp.

1147. Pedangit puteh. Grik, 12525.—Pain at the heart. The same.

Pogostemon Heyneanus, Benth.

1148. Nilam. Kuala Kangsar, 15984.—Cough and asthma. Boil the leaves and drink the decoction.

1149. Nilam. Telok Anson, 15280.—Jaundice. Pound the leaves with rice, and poultice.

Dysophylla auricularia, Blume

1150. Ekor kuching. Batu Gajah, 13381.—Urinary trouble in children. Pound the plant and poultice the abdomen.

1151. Ekor kuching. Tanjong Malim, 14004.—Diarrhoea. Pound the leaves with the leaves of *Polygonum barbatum*, and poultice the abdomen.

1152. Ekor kuching. Raub, 17018.—Coughs. Boil the leaves, and use the decoction as a lotion upon the neck.

1153. Ekor kuching. Raub, 16840.—Stomach ache in children. Pound the plant and poultice the abdomen.

1154. Ekor kuching. Bentong, 16602.—Skin complaints. Pound the leaves, along with the leaves of *Cassia obtusifolia* and of *Leucas zeylanica*, and poultice. See no. 436.

Leucas zeylanica, R. Br.

1155. Ketumbek (elsewhere ketumbit). Telok Anson, 16194.—Ulceration of the nose. Boil the leaves with the seed of *Nigella sativa*, and use the decoction as a lotion.

1156. Ketumbek. Tapah, 13545.—Used for poulticing the head.

1157. Ketumbek. Beserah, 17563.—Worms in children. Pound the leaves with *Pouzolzia indica*, and poultice the abdomen.

1158. Ketumbek. Bentong, 16603.—Skin complaints. Pound the plant with the *Cassia obtusifolia* and of *Dysophylla auricularia*, and poultice. See no. 436.

Gomphostemma crinitum, Wall.

1159. Derita dapor. Grik, 13783.—Swellings in the groin. Pound the leaves with camphor, and poultice.

AMARANTACEAE

Celosia argentea, Linn.

1160. Bayam merah. Bentong, 16461.—Urinary trouble. Boil the leaves with the leaves of *Millettia sericea*, and drink the decoction.

Cyathula prostrata, Blume

1161. Penjarang ayam (elsewhere jarang-jarang). Telok Anson, 15613.—Child-birth. Add the plant to others in making poultices for use after child-birth.

1162. Menjarang. Budu, 15806.—Caterpillar itch. Pound the leaves, and poultice.

1163. Nyarang. Raub, 16832.—Worms. Chew the plant with the leaves of *Caesalpinia Bonduc*; then spit it out upon the child's abdomen.

It is stocked in Chinese herbalists' shops in Penang (13686).

Achyranthes aspera, Linn.

1164. Nyarang songsang. Grik, 12314.—Rheumatism. Pound it and poultice where the pain is.

1165. Nyarang songsang. Grik, 12549. Rheumatism. Pound it along with *Selaginella atroviridis*, and poultice where the pain is.

Alternanthera sessilis, B. Br.

1166. Serapat. Telok Anson, 15609.—Inflammation of the intestine. Boil the plant along with the seed of *Cuminum cyminum*, and drink the decoction.

1167. Keremak. Telok Anson, 16168.—Beri-beri. Boil the plant along with an onion, and foment the whole body.

1168. Kereman. Sungei Patani, 13041. The plant is sold for medicinal use.

It is also stocked in Chinese herbalists' shops in Penang (13683).

POLYGONACEAE

Polygonum tomentosum, Willd.

1169. Johong beraleh. Batu Gajah, 13408.—Purifying the blood (women). The plant is used as a salad at fancy.

Polygonum minus, Huds.

1170. Kesum. Kuala Kangsar, 15559.—Indigestion. Boil the leaves and drink the decoction.

1171. Kesum. Kuala Kangsar, 15559.—Child-birth. Use in the same way after child-birth.

Polygonum barbatum, Linn.

1172. Tebok seludang. Grik, 13766.—Childlessness. Make a decoction: this is swallowed under the idea that it kills an internal worm, the cause of barrenness.

1173. Tebok seludang. Grik, 12363.—Swollen knee. Poultice with it along with asafetida.

1174. Johong beraleh. Telok Anson, 16162.—Child-birth. Boil the leaves and drink the infusion.

1175. Tebok seludang. Tanjong Malim, 14003.—Diarrhoea. Pound the plant and poultice the abdomen.

1176. Panchis-panchis. Tanjong Malim, 14061.—Bot-worms in the skins of goats. Dry the plant and powder: rub the powder into the wounds.

It is stocked in Chinese herbalists' shops in Penang (13668).

Polygonum chinense, Linn.

1177. Semuloh. Tapah, 13989.—Stomach ache. Pound the plant and poultice the abdomen.

Polygonum pedunculare, Wall.

1178. It is stocked in Chinese herbalists' shops in Penang (13685).

BASELLACEAE

Basella alba, Linn.

1179. Remayong. Alor Sta, 10437.—For poultices, boil the leaves.

ARISTOLOCHIACEAE

Apama corymbosa, Soler.

1180. Lerhor (Sakai name). Jor, 14285.—Toothache. Pound the leaves and put them into a hollow tooth.

1181. Maja pahit. Budu, 15812.—Toothache. The same treatment.

It is stocked in Chinese herbalists' shops in Penang (13609).

Apama tomentosa, Soler.

1182. Kemed or kaneb (Sakai). Temengor, 20.—Yaws. Plant pounded and used as a poultice (teste Schebesta).

1183. Serengkong. Bentong, 16530.—Boils. Pound the plant along with *Illigera ? appendiculata*, and poultice boils in the groin.

Thottea ? parviflora, Ridl.

1184. Chudok. Manchis, 16765.—Coughs. Chew the root with betel.

Thottea dependens, Klotzsch

1185. Telinga beruang. Taiping, 10557.—Skin-complaints. Pound the leaves, and poultice.

CYTINACEAE

Brugmansia Lowii, Becc.

1186. Pakma (Sakai name). Jor, 14284.—Pregnancy. The flower is taken by women before child-birth.

PIPERACEAE

Piper argyrites, Ridl.

1187. Sireh rimau puteh. Grik, 12541.—For new-born children. Reduce the plant with *Biophytum adiantoides*, *Hedyotis hispida*, and *Cheilanthes tenuifolia* to ashes, and use the ashes upon the skin.

Piper ribesioides, Wall.

1188. Sireh murai. Kuala Lipis, 15774.—Dropsy and the like. Crush the leaves and rub over the body.

Piper caninum, Blume

1189. Sireh pachat. Tapah, 13987.—Hoarseness. Chew the leaves along with betel.

Piper Chaba, Hunter

1190. Kadok kampong. Kuala Kangsar, 15960.—Possession. Burn the leaves that the smoke may drive evil spirits from the neighbourhood of a new-born infant.

Piper ? Chaba, Hunter

1191. Kadok. Telok Anson, 15918.—Piles. The way of using not recorded.

Piper Betle, Linn.

1192. Kerakap or tunas sireh. Telok Anson, 16191.—Ophthalmia. Infuse the inferior betel leaves known as kerakap, and drop the infusion into the eye.

1193. Sireh melayu (the most-liked race of *P. Betle*). Kuala Kangsar, 15966.—Ulceration of the nose. Chew the leaves and apply to the nose.

Piper stylosum, Miq.

1194. Kadok hutan. Taiping, 13281.—Child-birth. Use the root in confinement, and after it as an ubat meroyan.

Piper porphyrophyllum, N. E. Brown

1195. Sireh harimau. Taiping, 10552.—Child-birth. The same uses.

1196. Sireh rimau. Grik, 12322.—Stomach ache in very small children. Pound the plant with *Biophytum adiantoides*, &c., and poultice. See no. 204.

1197. Sireh rimau. Kuala Lipis, 15775.—Swellings (bengkak salah nama). Pound the leaves, and poultice.

1198. Sireh rimau. Budu, 15795.—Lung complaints. Pound the leaves with broken rice and turmeric, and poultice over the lower end of the breastbone.

1199. Sireh rimau. Raub, 16997.—Leprosy. Rub the leaves upon the place.

Piper Sarmentosum, Roxb.

1200. Sireh dudoh. Tanjong Malim, 14053.—Headache in children. Apply the leaves to the forehead.

It is stocked in Chinese herbalists' shops in Penang (13688).

Piper sp.

1201. Chabei tali (the name belongs to *P. Cubebis*). Kuala Kangsar, 15976.—Child-birth. Boil the leaves, and use the juice as an ubat meroyan.

1202. Sireh jehok gebil. Budu, 15794.—Lung diseases. Pound the leaves with broken rice and turmeric, and poultice.

1203. Setebai. Bentong, 16751.—Stomach ache. Boil the

leaves and drink the decoction: at the same time poultice the abdomen with the leaves.

1204. Setebai (a Piper different from the last). Manchis, 16783.—Disease of the bones. Rub the leaves upon the skin.

MYRISTICACEAE

Myristica fragrans, Linn.

1205. Bunga pala and buah pala. Kuala Kangsar, 14917.—Child-birth. Both the nutmegs and the mace used for flavouring many forms of ubat meroyan.

LAURACEAE

Beilschmiedia pahangensis, Gamble

1206. Medang salah. Pekan, 17278.—Stomach ache. Boil the bark with the bark of a *Mangifera* (pauh, no. 17279), and drink the decoction.

1207. Pinang pergam. Pekan, 17229.—Pain at the heart. Pound the leaves and the root, and poultice.

1208. Tampu rengat. Pekan, 17237.—Dysentery. Boil the root, and drink the decoction when cold.

1209. Medang pungoh. Beserah, 17552.—Swellings. Pound the bark with the leaves of *Gendarussa vulgaris*, &c., and poultice. See no. 1039.

Beilschmiedia ? pahangensis, Gamble

1210. Medang sera. Telok Anson, 16184.—Lung complaints. Method of using not recorded.

? Beilschmiedia pahangensis, Gamble

1211. Rambutan pachat. Pekan, 17225.—Stomach-trouble after child-birth. Boil the bark and drink the decoction.

Cinnamomum iners, Blume (? forma *C. paraneuron*, *Miq.*)

1212. Teja. Kuala Kangsar, 16037.—Child-birth. The leaves and the roots are boiled, and the decoction used as an ubat meroyan.

1213. Sela prawas (Sakai name) and chong keradak. Tapah, 14300.—Use not recorded.

1214. Teja. Raub, 16231.—Child-birth. As no. 1212.

1215. Teja. Raub, 16962.—Rheumatism. Take the leaves and poultice with them.

Cinnamomum iners, Blume

1216. Teja. Grik, 13635.—Malaria. A decoction used.

Cinnamomum ? iners, Blume

1217. Kayu tajam lawang and teja lawang. Grik, 12374, 13726.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

Cinnamomum javanicum, Blume

1218. Ubat kura bengkak. Grik, 13632.—Enlarged spleen. Pound the roots in oil, and apply over the spleen: they blister.

1219. Lawang kechil. Kuala Kangsar, 16028.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

1220. Kayu kapor. Kuala Kangsar, 15547.—Child-birth. Boil the roots, and use as an ubat meroyan.

1221. Teja. Kuala Kangsar, 15963.—Child-birth. The same.

Cinnamomum sp.

1222. Chengkeh hutan. Kuala Kangsar, 16031.—Child-birth. Boil the leaves, and use as an ubat meroyan.

1223. Medang teja. Bentong, 16722.—Pain, rheumatism, &c. Pound the leaves and poultice with them.

Litsea amara, Blume

1224. Medang. Bentong, 16465.—Boils. Pound the leaves with leaves of *Carallia suffruticosa*, and poultice.

Litsea ? spathacea, Gamble

1225. Derahan. Beserah, 17582.—Fever. Pound the leaves and poultice the head. Take the roots; boil, and drink the decoction.

Neolitsea zeylanica, Merrill

1226. Teja betina. Pekan, 17224.—Use not recorded, except that it is a substitute for teja jantan.

? Linderia selangorensis, Ridl.

1227. Kerabu. Bentong, 16531.—Noises in the head. Boil the leaves with the leaves of *Lasianthus stipularis*, and drink the decoction. See no. 755.

? Linderia sp.

1228. Teja. Beserah, 17598.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

HERNANDIACEAE

Illigera ? appendiculata, Blume

1229. Jelor kait and akar perah. Bentong, 16529.—Boils in the groin. Pound the leaves, and poultice.

THYMELAEACEAE

Wikstroemia Ridleyi, Gamble

1230. Depu. Beserah, 17627.—Constipation. Eat the leaves.

LORANTHACEAE

Loranthus ferrugineus, Roxb.

1231. Mendalu api merah. Taiping, 13292.—Child-birth. Boil the leaves and use as an ubat meroyan.

1232. Mendalu api merah. Grik, 12378.—Snake-bite. Pound the leaves and the bark, and poultice.

1233. Dedalu api. Kuala Kangsar, 15951.—Wounds. Pound the stem, and poultice.

1234. Mendalu. Tanjong Malim, 14056.—Fever. Boil the whole plant, and use the decoction for bathing.

1235. Nullu api (for mendalu api). Bentong, 16464.—Beri-beri. Boil the plant with leaves of *Millettia sericea*, and use as a lotion.

Loranthus pentandrus, Linn.

1236. Mendalu api puteh. Taiping, 13294.—Child-birth. Boil the leaves, and use as an ubat meroyan.

Loranthus grandifrons, King

1237. Dedalu api gajah. Budu, 15797.—Ringworm. Pound the leaves with broken rice and turmeric, and poultice.

Elytranthe globosa, Don

1238. Mendalu. Grik, 12457.—Headache. Pound the leaves and poultice the head.

1239. Mendalu. Grik, 12457.—Child-birth. Take the juice and give to drink to promote the discharge of the after-birth.

SANTALACEAE

Henslowia buxifolia, Blume

1240. Setong jundor. Pekan, 17301.—Headache and giddiness. Pound the leaves and poultice.

OPILIACEAE

Champereia Griffithii, Hook. f.

1241. Chiprah. Grik, 13747.—Ulcers. Pound the leaves and roots, and poultice.

Lepionurus sylvestris, Blume

1242. Chiprah. Beserah, 17597.—Headache in children. Pound the root, and poultice.

1243. Chiprah. Pekan, 17241.—Headache. The same.

EUPHORBIACEAE

Euphorbia neriifolia, Linn.

1244. Sudu-sudu. Grik, 13785.—Ear-ache. Squeeze the juice of heated leaves into the ear.

1245. Sudu-sudu. Kuala Kangsar, 15997.—Ear-ache. The same.

1246. Sudu-sudu and sesudu. Telok Anson, 10303, 15630 16274.—Ear-ache. The same. The latex is purgative.

1247. Sudu-sudu. Tapah, 13518.—Ear-ache. The same.

1248. Sudu-sudu. Pekan, 17209.—Ear-ache. The same.

Euphorbia ? heterophylla, Linn.

1249. Pekapa. Alor Sta, 10426.—Ague. Boil the bark and the root, and drink the decoction.

Euphorbia hirta, Linn.

1250. Ara tanah. Kuala Kangsar, 15598.—Sore eyes. Squeeze the milky juice into them.

1251. Daun patiyang. Tapah, 13984.—Dimness of vision. The same treatment.

1252. Ara tanah. Bentong, 16597.—Eyes, all complaints of. The same treatment.

1253. Lanchang. Bentong, 16547.—Bruises. Take the plant and poultice with it.

Euphorbia thymifolia, Burm.

1254. Rumpit jangat. Grik, 13643.—Boils. Pound, and poultice.

1255. Rumpit jangat. Grik, 12312.—Abdominal pain diagnosed as inflammation of the intestines. Boil the plant and drink the decoction.

It is stocked in Chinese herbalists' shops in Penang (13675).

Euphorbia Tirucalli, Linn.

1256. Tentulang. Telok Anson, 16291.—Pains in the bones and joints. Boil the leaves, and foment.

1257. Tulang-tulang. Telok Anson, 15268.—Rheumatism. The same treatment.

Pedilanthus tithymaloides, Poit.

1258. Penawar lipan. Telok Anson, 16276.—Centipede bites. Apply the latex.

1259. Lalipan. Telok Anson, 15634.—Scorpion bites. The same treatment.

1260. Tentulang jantan. Telok Anson, 16155.—Centipede bites. The same treatment.

1261. Pedong. Pekan, 17210.—Leucoderma. The same treatment.

Bridelia stipularis, Blume

1262. Kerenan makan. Telok Anson, 16167.—Chancre. Pound the leaves with the seed of *Nigella sativa* finely, and poultice.

Bridelia monoica, Merr. (*B. tomentosa*, Blume)

1263. Kerenan. Grik, 13744.—Stomach ache. Boil the leaves with the roots of *Rhodamnia cinerea* and the leaves of *Psidium Guyava*, and drink.

1264. Kenedai. Raub, 16821.—High fever. Infuse the leaves with leaves of *Pericampylus incanus*, &c., in cold water, and give the infusion to drink. See no. 72.

Bridelia ? penangiana, Hook. f.

1265. Kenedai. Kuala Lipis, 15770.—Itch. Infuse the leaves in cold water, and use as a lotion.

Phyllanthus Niruri, Linn.

1266. Dukong anak. Grik, 13743.—Ulcers upon the feet. Pound the plants with the leaves of *Ardisia oxyphylla*, and poultice.

1267. Rami buah (for amin buah). Budu, 15805.—Caterpillar itch. Pound the plants, and poultice.

It is stocked in Chinese herbalists' shops in Penang.

Phyllanthus urinaria, Linn.

1268. Amin buah (=ambin buah). Kuala Kangsar, 15557.—Diarrhoea. Boil the plant, and drink the decoction for mild diarrhoea.

1269. Amin buah. Telok Anson, 14344.—Diarrhoea. The same treatment.

1270. Dokong anak. Tapah, 13961.—Fever. Boil the plant and give the decoction to drink.

1271. Dokong anak. Tanjong Malim, 14055.—Loss of appetite in children. Pound the plant in coconut milk and give the milk to drink.

1272. Amin buah. Raub, 16215.—Diarrhoea. Boil the plant and drink the decoction.

1273. Amin buah. Raub, 16202.—Colic. Boil the plant with the root of *Abrus ? pulchellus*, &c., and drink the decoction. See no. 371.

Phyllanthus pulcher, Wall.

1274. Naga buwana. Alor Sta, 10429, 10462.—Gum-boils. Pound the leaves with cold rice and salt, and apply to the gums.

1275. Naga jimat. Grik, 12520.—Malaria. Pound the leaves with the leaves of ?*Cnestis ramiflora*, &c., and poultice.

1276. Naga jimat. Grik, 12520.—Boils. Pound the leaves, and poultice.

1277. Naga jimat. Grik, 12520.—Stomach ache. Boil the leaves, and drink the decoction.

1278. Naga buwana. Kuala Kangsar, 14909.—Swellings. Pound the leaves, and poultice.

1279. Naga buwana. Kuala Kangsar, 15558.—Stomach ache. The same treatment.

1280. Naga buwana. Kuala Kangsar, 15992.—Remittent fever. The same treatment, the poultice applied to the abdomen.

1281. Naga buwana. Telok Anson, 16295, 15864.—Toothache. Pound, and apply to the gums.

1282. Naga buwana. Tapah, 13517.—Stomach ache. Pound, and poultice the abdomen.

1283. Kelurut tanjong. Kuala Lipis, 15761.—Swellings. Pound the leaves, and poultice.

1284. Naga buwana. Pekan, 17300.—Ulceration of the nose. Boil the leaves, and the roots, and poultice.

1285. Kayu puteh. Raub, 16980.—Sore eyes. Pound in cold water and wash the eye with the water.

1286. Semelit patong. Raub, 16817.—Urinary trouble in children. Pound the plant and poultice the abdomen.

1287. Kelurut. Bentong, 16753.—Itch. Pound the leaves with those of *Ageratum conyzoides* and of *Justicia sp.*, and poultice.

Phyllanthus ? reticulatus, Poir.

1288. Kayu tampal besi. Raub, 16972.—Sore throat. Boil the leaves and drink the decoction.

1289. Kayu darah belut. Manchis, 16774.—Asthma. Pound the stem and leaves, and rub them upon the chest.

Phyllanthus frondosus, Wall.

1290. Meroyan putri. Bentong, 16675.—Child-birth. Take the young leaves, and use as an ubat meroyan.

Glochidion littorale, Blume

1291. Daun sau sik (apparently for daun sok-sik). Beserah, 17638.—Stomach ache. Boil the leaves with the root of *Guioa pleuropteris*, and drink the decoction.

Glochidion obscurum, Blume

1292. Daun cheremai. Batu Gajah, 13366.—Diarrhoea. Boil the leaves, and drink.

1293. Bungau. Beserah, 17628.—Stomach ache. Boil the root, and drink.

Glochidion sericeum, Hook. f.

1294. Memputri. Grik, 12529.—Worms. Use the plant in the bath.

Cicca disticha, Linn.

1295. Cheremai. Pekan, 17211.—Coughs. Boil the root and inhale the steam. Also the juice may be drunk.

Emblica pectinata, Ridl.

1296. Tuwalang (for dulang). Bentong, 16542.—Fever. Boil the leaves and drink the decoction.

Breynia discigera, Muell.-Arg.

1297. Katut selaya. Grik, 12505.—Kidney trouble. Pound the plant with leaves of *Gendarussa vulgaris*, and poultice.

1298. Semelit jekok (? for chekok). Telok Anson, 15291.—Kidney trouble. Pound the plant with seeds of *Cuminum cyminum*, and poultice.

Breynia reclinata, Hook. f.

1299. Lortan haji. Telok Anson, 14342.—Swellings. Pound the leaves, and poultice.

1300. Kemanchong. Kuala Lipis, 15784.—Fever in children which returns at night. Pound the leaves, and poultice the abdomen.

1301. Jangi padang. Budu, 15802.—Swellings. Pound the tender leaves with broken rice and turmeric, and poultice.

1302. Asin-asin. Kuala Tembeling, 15843.—Thrush. Pound the leaves and roots, and use the juice for rubbing over the lips and tongue, &c.

? Breynia reclinata, Hook. f.

1303. Akar cheras. Kuala Lipis, 15778.—Swellings. Pound the leaves, and poultice.

1304. Bungau. Raub, 17013.—Swellings. The same.

Breynia rhamnoides, Muell.-Arg.

1305. Semomah. Beserah, 17646.—Child-birth. Pound the leaves, and drink the juice as an ubat meroyan.

Sauropus albicans, Blume

1306. Chekor manis. Beserah, 17555.—Sore eyes. Pound the leaves with the root of *Punica Granatum* and the leaves of *Jasminum Sambac*, and squeeze the juice into the eye. See no. 603.

1307. Chekor manis. Pekan, 17219.—Ulceration of the nose. Pound the leaves with roots of *Ervatamia coronaria*, &c., and sniff up the mixture into the nostrils. See no. 908.

Sauropus parvifolius, Ridl.

1308. Merajah santah. Raub, 16850.—Colic. Boil the leaves with the root of *Abrus ? pulchellus*, &c., and drink the decoction.

Antidesma Ghaesembilla, Gaertn.

1309. Kunchor puteh (for gunchak puteh). Telok Anson, 14348.—Abdominal swellings. Pound the leaves with seed of *Cuminum cyminum*, and poultice.

1310. Kunchow (for gunchak). Telok Anson, 15922.—Skin complaints. Pound the leaves, and poultice.

1311. Guchek. Beserah, 17635.—Headache. Pound the leaves with the leaves of *Urena lobata*, &c., and poultice. See no. 154.

1312. Guchek. Beserah, 17635.—Or it may be pounded with the leaves of *Mussaenda glabra* only, and applied.

Antidesma montanum, Blume

1313. Gunchak gajah. Alor Sta, 10456.—Thrush. Way of using not recorded.

Baccaurea Motleyana, Muell.-Arg.

1314. Rambai. Telok Anson, 15648.—Sore eyes. Pound the bark, and drop the liquid into the eye.

1315. Rambai. Beserah, 17557.—Sore eyes. Pound the

bark with the leaves of *Adenostemma viscosum* and *Mimusops Elengi*, and drop the juice into the eye. See no. 801.

Aleurites moluccana, Willd.

1316. Buah keras. Tanjung Malim, 14068.—Headache. Boil the leaves and apply to the forehead.

Jatropha Curcas, Linn.

1317. Jarak. Grik, 13714.—Rheumatism. Pound the leaves and rub with the juice.

1318. Jarak. Grik, 12467.—Stomach ache in children. Pound the leaves, and poultice.

1319. Jarak melaka. Batu Gajah, 13371.—Circumcision. Apply the juice to the wound.

1320. Jarak pagar. Telok Anson, 15692.—Wounds. Apply the latex.

Croton caudatum, Geisel

1321. Gurah peria. Alor Sta, 10459.—Constipation. Boil the plant and drink the decoction.

1322. Sekebah. Batu Gajah, 13370.—Fever. Pound the leaves with leaves of *Gleichenia linearis*, and poultice.

1323. Tukut takai (elsewhere tukut takal). Beserah, 17548.—Coughs. Eat the pith with betel.

Croton tiglium, Linn.

1324. Jemakian or chemkian. Kuala Kangsar, 15979.—The seeds as a purgative.

Croton argyратum, Blume

1325. Pelah kecil (? for pelangas kecil). Grik, 12536.—Child-birth. Boil the leaves, and drink as an ubat meroyan.

1326. Ubat semelit bayor. Raub, 16849.—Colic. Boil the leaves with the root of *Abrus ? precatorius*, &c., and drink the decoction. See no. 371.

Codiaeum variegatum, Blume

1327. Seginting. Telok Anson, 15619.—Urinary trouble in children. Pound the leaves and poultice the abdomen.

Acalypha siamensis, Oliv.

1328. Te. Beserah, 17606.—Fever. Pound the leaves, and poultice.

Coelodiscus montanus, Muell.-Arg.

1329. Berkuching. Grik, 13631.—Eczema. Pound the leaves, and poultice.

Mallotus macrostachyus, Muell.-Arg.

1330. Mesepat. Kuala Kangsar, 15553.—Wounds. Boil the leaves, and clean wounds with the decoction.

1331. Balek angin. Kuala Tembeling, 16063.—Circumcision. Rub the hairs from the young leaves, and dust these upon the wound.

Mallotus ? macrostachyus, Muell.-Arg.

1332. Balek angin. Raub, 16824.—Fever after child-birth (within a year). Pound the tender leaves, and drink the juice with water.

1333. Nangka kerbau. Karak, 16634.—Boils. Rub the leaves upon the boils.

Mallotus barbatus, Muell.-Arg.

1334. Balek angin. Alor Sta, 10467.—Flatulence. Pound the leaves with black pepper, ginger, and broken rice, and poultice the abdomen.

Mallotus cochinchinensis, Lour.

1335. Mesepat hitam. Tapah, 13530.—Wounds. Boil the leaves, and clean wounds with the decoction.

1336. Balek angin. Beserah, 17637.—Headache. Pound the leaves with those of *Urena lobata*, *Mussaenda glabra*, and *Antidesma Ghaesembilla*, and poultice.

1337. Balek angin. Pekan, 17305.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Mallotus floribundus, Muell.-Arg.

1338. Mahang. Grik, 13762.—Child-birth. Use as an ubat meroyan.

1339. Mempasuh. Grik, 13788.—Stomach ache. Boil the leaves and drink the decoction.

1340. Tampin. Kuala Lipis, 15759.—Puru in children. Boil the leaves and wash the skin with the water.

1341. Maya-maya. Raub, 16206.—High fever. Boil the root and drink the decoction.

1342. Memaya. Karak, 16624.—High fever. Boil the leaves with leaves of *Vitis trifolia*, &c., and drink. See no. 312.

Mallotus philippinensis, Muell.-Arg.

1343. Rambai kuching. Kuala Kangsar, 15593.—To prevent children from urinating when asleep. Use the leaves.

Mallotus anisophyllus, Hook. f.

1344. Kayu kering. Raub, 16954.—Ear-ache. Pound the leaves and drop the liquid into the ear.

Mallotus sp.

1345. Mesepat puteh. Tapah, 13524.—Wounds. Boil the leaves, and clean the wounds with the decoction; also a little of it may be drunk.

Macaranga megalophylla, Muell.-Arg.

1346. Selaru. Tapah, 14296.—Diarrhoea. Boil the bark of the root and drink the decoction.

1347. Menkubong. Raub, 17000.—Dysentery. Boil the root and drink the decoction.

Macaranga triloba, Muell.-Arg.

1348. Mahang. Raub, 16826.—Boils on the head. Pound the leaves, and poultice, alone or with ? *Wendlandia paniculata* and *Smilax Helferi*.

Macaranga Griffithiana, Muell.-Arg.

1349. Mahang. Beserah, 17585.—Fever. Boil the roots and drink the decoction.

1350. Mahang. Bentong, 16616.—Possession. Pound the leaves in water, and wash the face of those who have suffered possession (are delirious, for instance).

Macaranga incisa, Gage

1351. Mahang. Grik, 13752.—Child-birth. Use as an ubat meroyan.

Macaranga ? Hullettii, King

1352. Balek angin. Grik, 12362.—Stomach ache. Boil the leaves and drink the decoction.

Macaranga Tanaria, Muell.-Arg.

1353.—Tampu puteh and tampu hitam. Kuala Kangsar, 15568, 15569.—Wounds. Pound the leaves, and poultice.

Macaranga denticulata, Muell.-Arg.

1354. Mesepat. Telok Anson, 15299.—Wounds. Boil the leaves, and use the decoction for washing wounds.

1355. Balek angin. Bentong, 16661.—Child-birth. Infuse the leaves as an ubat meroyan.

Ricinus communis, Linn.

1356. Jarak berumah. Grik, 12361.—Deafness. Blow into the ear and then insert a bit of the stalk.

1357. Jarak. Bentong, 16618.—Skin diseases. Extract the oil and rub it over the skin.

1358. Jarak. Bentong, 16618.—Rheumatism. Oil the leaves, heat, and apply them. If the leaves stick to the skin, it is considered that they will cure.

A peculiar race is stocked in Chinese herbalists' shops in Penang (13607).

Homonoia riparia, Lour.

1359. Kelêreh. Grik, 12342, 13796.—Skin diseases. Pound the leaves, and poultice. Also, if desired, a decoction may be made and a little of it drunk.

Gelonium glomeratum, Hassk.

1360. Penawar puteh. Beserah, 17594.—Fever. Boil the leaves and drink the decoction.

Baliospermum axillare, Blume

1361. Maharaja lela. Kuala Kangsar, 16048.—Constipation. Boil the leaves and drink the decoction.

Homalanthus populifolius, Grah.

1362. Mumah lapan. Kuala Kangsar, 10348.—Fever. Oil the leaves, and heat them: apply them over the stomach.

URTICACEAE

Trema amboinensis, Blume

1363. Mengkirai. Raub, 16979.—Sore tongue. Boil the root, and drink.

Gironniera hirta, Ridl.

1364. Menangkuh. Raub, 16243.—Child-birth. Boil the roots and use as an ubat meroyan.

Phyllochlamys spinosa, Bureau

1365. Pokok temiyang. Grik, 13777.—Ulcers. Boil the bark, and poultice.

Cold in the head. Burn the bark and inhale the smoke.

Ficus parietalis, Blume

1366. Ara kesinai. Beserah, 17591.—Stomach ache. Boil the root and drink the decoction.

Ficus callicarpa, Miq.

1367. Teriak. Tapah, 13982.—Fever in children. Pound the leaves and poultice the head.

1368. Ipi kelah. Tapah, 13981.—Toothache. The same treatment, poulticing the cheek.

Ficus hispida, Linn.

1369. Seniah. Kuala Kangsar, 14916.—Child-birth. Boil the leaves and use as an ubat meroyan.

1370. Seniyah. Sungei Raya, 13394.—Fever. The same preparation.

1371. Senil. Telok Anson, 16252.—Boils. Take the leaves and poultice with them.

1372. Ara sungei. Pekan, 17218.—Ulceration of the nose. Pound the young leaves with roots of *Ervatamia coronaria*, &c., and sniff into the nostrils. See no. 908.

1373. Ara bombong. Bentong, 16470.—Stomach ache in children. Boil the bark and give the decoction to drink.

1374. Ara bombong. Bentong, 16593.—High fever. Boil the bark with the bark of *Vernonia javanica*, &c., and drink the decoction. See no. 805.

Ficus ? polysyce, Ridl.

1375. Akar serapat. Pekan, 17288.—Child-birth. Boil the root and use as an ubat meroyan.

Ficus alba, Reinwardt

1376. Semelit dadah. Grik, 13624.—Kidney complaints. Boil the leaves and drink the decoction.

Ficus sp.

1377. Ara lempong. Grik, 13787.—To increase the flow of milk. Way of using not recorded.

Artocarpus Kunstleri, Hook. f.

1378. Terap. Grik, 12533.—Ulcers. Poultice with the inner bark.

Artocarpus integrifolia, Linn.

1379. Nangka. Grik, 12518.—Ulcers. Burn the leaves with seeds of maize and coconut shells, and apply the ashes.

1380. Nangka. Bentong, 16591.—High fever. Boil the bark with the bark of *Vernonia javanica*, &c., and drink the decoction. See no. 805.

1381. Nangka bubor. Grik, 12345.—High fever. Boil the root and drink the decoction.

1382. Nangka bubor. Pekan, 17272.—Fever. Boil the root and drink the decoction. If desired, it may be taken with root of *Hibiscus rosa-sinensis*, &c., and the decoction of all together drunk. See no. 165.

Conocephalus amoenus, Hook. f.

1383. Chentawan. Manchis, 16781.—Fever. Pound the leaves and drink the juice; also poultice with the leaves.

Conocephalus ? amoenus, Hook. f.

1384. Semelit papan. Grik, 13625.—Kidney complaints. Boil the leaves and drink the decoction.

1385. Sentawan. Raub, 16848.—Fever. Oil the leaf, heat and apply it to the abdomen.

Conocephalus suaveolens, Blume

1386. Tentawan. Kuala Tembeling, 16065.—Itch. Pound the roots, and poultice.

Conocephalus sp.

1387. Murah (?=muru). Grik, 13751.—Child-birth. Take the leaves and poultice the head.

Hullettia dumosa, King

1388. Ampedai tiang. Kuala Kangsar, 16040.—Abdomen, all diseases of. Boil the leaves and drink the decoction.

1389. Menhim (Sakai name). Tapah, 14283.—Toothache. Apply the gum from the bark to the tooth.

Laportea stimulans, Miq.

1390. Jelatang gajah. Kuala Kangsar, 10340.—Swellings. Pound the roots with a little sulphur and coconut milk, and poultice.

Pellionia Duvauana, N. E. Brown

1391. Sisek keli. Grik, 12545, 13637.—Boils. Pound the plant, and poultice.

1392. Sisek keli. Grik, 12521.—Fever and abdominal pain. Pound the plant with the leaves of ? *Cnestis ramiflora* and of *Phyllanthus pulcher*, and poultice.

1393. Pipi keli. Kuala Kangsar, 15528.—Rheumatism. Boil the plant and drink the decoction.

1394. Pipi keli. Telok Anson, 15943.—Swellings. Pound, and poultice.

1395. Sisek tenggiling. Kuala Tembeling, 15849.—Abdominal pains. Pound, and poultice.

1396. Sisek tenggiling. Raub, 16839.—Abdominal pains. The same.

1397. Sisek tenggiling. Bentong, 16533.—Any severe abdominal complaint diagnosed as inflammation of the intestine. The same.

Elatostema sessile, Forst.

1398. Sisek tenggiling. Bentong, 16534.—Use as a substitute for the last.

Boehmeria nivea, Hook. and Arn.

1399. Rami. Kuala Kangsar, 15580.—Boils. Pound the leaves, and poultice to hasten the ripening.

Pouzolzia indica, Gaudich.

1400. Ubai etek or aubi etek. Telok Anson, 15608, 16288.—Worms. The plant is pounded and applied to the abdomen, and is eaten also.

1401. Gubai. Beserah, 17563.—Worms in children. Pound the plant with the leaves of *Leucas zeylanica*, and poultice the abdomen.

1402. Rubai. Raub, 16834.—Worms. Boil the leaves and drink the decoction, or eat them.

It is stocked in Chinese herbalists' shops in Penang.

CASUARINACEAE

Casuarina equisetifolia, Forst.

1403. Ru. Beserah, 17632.—Swellings. Boil the twigs with leaves of *Citrus decumana*, and use the water for bathing.

SALICACEAE

Salix tetrasperma, Roxb.

1404. Dedalu. Kuala Kangsar, 15965.—Ulceration of the nose. Boil the leaves, and use the decoction cold as a lotion.

1405. Dedalu. Telok Anson, 15938.—Fever. Way of using not recorded.

ORCHIDACEAE

? **Hippeophyllum Scortechinii**, Schlechter.

1406. Pokok setawar bakar perah. Kuala Lipis, 15766.—Ear-ache. Heat the leaves and drop the juice into the ear.

Dendrobium subulatum, Hook. f.

1407. Anggerek (=orchid). Telok Anson, 15279.—Headache. Pound the leaves, and poultice. The Malay name suggests (because it is applied to epiphytic orchids in general) that any one using this treatment would not be particular to use this species of *Dendrobium*.

Dendrobium ? planibulbe, Lindl.

1408. Miga. Kuala Lipis, 15767.—Itch on the neck. Pound the leaves and pseudobulbs, and poultice.

Dendrobium crumenatum, Swartz

1409. Sepuleh tulang. Kuala Kangsar, 16016.—Bewitchment. Use the plant for sprinkling water through the house after a death has occurred in it to keep the spirit from haunting it.

Dendrobium sp.

1410. Sepuleh rumah. Kuala Kangsar, 15534.—Bewitchment. The same.

Spathoglottis plicata, Blume

1411. Wah (Sakai name). Tapah, 14282.—Rheumatism. Boil the plant, and foment with the decoction hot; also drink a little of it.

? Plocoglottis porphyrophylla, Ridl.

1412. Sepuleh dudok (? for sepuleh dudor). Kuala Kangsar, 16015.—Bewitchment. The use under *Dendrobium crumenatum*. See no. 1409.

Cymbidium Finlaysonianum, Lindl.

1413. Sepuleh. Telok Anson, 16296.—Bewitchment. The same.

Vanda Hookeriana, Reichb. f.

1414. Tulang. Telok Anson, 16278.—Pains in the joints. Boil the plant and foment with the decoction.

Aplostelis flabelliformis, Ridl.

1415. Daun sa-helai sa-tahun. Kuala Kangsar, 15540.—Child-birth. Boil the leaf, and use the decoction as an ubat meroyan.

Tropidia curculigoides, Lindl.

1416. Serugat. Telok Anson, 16255.—Diarrhoea. Boil the roots and drink the decoction.

1417. Ranchang hantu. Bentong, 16545.—Malaria. Boil the plant with leaves of an *Ardisia*, and drink the decoction in the cold stage of the fever. See no. 870.

? Cystorchis sp.

1418. An undetermined orchid has been found stocked in a Chinese herbalist's shop in Penang (13605) under the name of cheek seng.

ZINGIBERACEAE

Globba panicoides, Miq.

1419. Haliya hantu or haliya rimbah. Kuala Kangsar, 13280, 13296.—Child-birth. Pound the rhizome, and poultice the abdomen during or after child-birth.

Globba aurantiaca, Miq.

1420. Meroyan berok. Bentong, 16746.—Child-birth. Boil the plant, and drink the decoction as an ubat meroyan.

Hedychium ? longecornutum, Baker

1421. Tepus hinggap, Manchis, 16771.—Worms in children. Boil the plant, and use the decoction in a bath.

? Hedychium coronarium, Koen.

1422. Ganda suli. Kuala Kangsar, 15977.—Indigestion. Boil the leaves and drink the decoction.

1423. Ganda suli. Telok Anson, 15283.—Pain in the abdomen. Eat the leaves with betel.

Kaempferia Galanga, Linn.

1424. Chekor. Grik, 12376.—Swellings. Pound the rhizome, and poultice.

1425. Chekor or chekor jawa. Kuala Kangsar, 15573, 15586.—Fever. Pound leaves and roots with broken rice, and apply, one says to the head, another to any part of the body but the head.

1426. Chekor. Telok Anson, 15627, 15911.—Fever. The same treatment.

1427. Chekor. Telok Anson, 16266.—Sore throat. The same treatment.

1428. Chekor. Telok Anson, 16300.—Cough. Eat leaves and rhizome with betel.

1429. Chekor. Tapah, 13955.—All diseases. Boil the rhizome and use as a hot fomentation.

1430. Chekor. Tanjong Malim, 14031.—Rheumatism. Boil the rhizome with that of *Curcuma domestica* and of *Acorus Calamus*, and use the decoction as a hot fomentation.

Gastrochilus pandurata, Ridl.

1431. Temu kunchi. Kuala Kangsar, 14906.—Child-birth. Boil the rhizome and foment with it.

1432. Temu kunchi. Telok Anson, 15272.—Stomach ache. Pound the rhizome and eat it.

Gastrochilus sp.

1433. Tepus sa-helai sa-tahun. Grik, 13629.—Child-birth. Boil the rhizome or leaves, and use the decoction as an ubat meroyan.

1434. Chemangan. Kuala Kangsar, 14915.—Child-birth. The same.

Curcuma domestica, Valetton

1435. Kunyit. Grik, 12337.—To promote a flow of milk. Pound the rhizome with leaves of *Jasminum sambac*, and poultice the breasts.

1436. Kunyit. Kuala Kangsar, 14913.—Child-birth. Boil the rhizome, and use the decoction as an ubat meroyan.

1437. Kunyit. Telok Anson, 15605.—Child-birth. Pound the leaves and the roots, and bandage upon the abdomen after child-birth. A Zingiber may be mixed with it.

1438. Kunyit betul. Tanjong Malim, 14039.—Cracked feet. Pound the rhizome with tubers of *Dioscorea hispida* and benzoin, and poultice the feet.

1439. Kunyit. Bentong, 16478.—Colic in children. Boil the rhizome with an onion and a tuber of garlic, and give the decoction to drink.

Curcuma xanthorrhiza, Roxb.

1440. Temu lawak. Telok Anson, 16197.—Indigestion. Boil the rhizome with rhizomes of *Zingiber officinale* and *Z. Cassumunar* and a few pepper-corns, and drink.

1441. Temu lawak. Telok Anson, 16197.—Rheumatism. The same.

Curcuma ? xanthorrhiza, Roxb.

1442. Temu raya. Batu Gajah, 13412.—Child-birth. Boil the plant and use the decoction as a wash.

Curcuma sp.

1443. Temu. Tapah, 13963.—Child-birth. Boil the rhizome, and use the decoction as an ubat meroyan.

1444. Temu lilin. Tapah, 13960.—Child-birth. The same.

Costus speciosus, Smith

1445. Setawar hutan. Kuala Kangsar, 15529.—Fever. Pound the leaves in cold water, and use the water for cooling the head.

1446. Setawar hutan. Batu Gajah, 13373.—Fever. Boil the leaves, and wash the body with the decoction while hot.

1447. Setawar hutan. Telok Anson, 15859, 15907.—Cough. Eat the rhizome with betel.

1448. Tabar (Sakai name). Tapah, 14298.—Fever. Boil the leaves, and wash the body with the hot decoction after the fever has broken.

1449. Setawar hutan. Tapah, 13975.—Leprosy. Scrape the stem, and poultice with the scrapings.

1450. Setawar hutan. Tanjong Malim, 14028.—Small-pox. Boil the plant with leaves of *Psophocarpus tetragonolobus*, of *Stachyphrynium sp.* and of *Drymoglossum heterophyllum*, and make a wash for application to the skin.

1451. Setawar. Bentong, 16590.—High fever. Boil this with

bark of *Vernonia javanica*, &c., and drink the decoction when cold, and spray it over the whole body. See no. 805.

Zingiber officinale, Rose.

1452. Haliya. Grik, 12379.—Tonic. The rhizome is eaten.

1453. Haliya. Kuala Kangsar, 15952.—Stomach ache. Boil the rhizome and drink the decoction.

1454. Haliya merah. Kuala Kangsar, 14903.—Child-birth. Boil the plant, and use the decoction as an ubat meroyan.

1455. Kunyiit terus. Batu Gajah, 13385.—Fever. Boil the plant and bathe in the decoction.

1456. Kunyiit terus. Tapah, 13956.—Fever. The same.

1457. Kunyiit terus. Tanjong Malim, 14032.—Rheumatism, &c. Boil the rhizome with rhizomes of *Kaempferia Galanga* and of *Acorus Calamus*, and foment with the decoction.

1458. Haliya. Kuala Tembeling, 15847.—Ague in children. Pound the leaves with the leaves of *Acorus Calamus* in water, and sprinkle the water upon the child's face.

1459. Haliya. Beserah, 17577.—Stomach trouble. Eat a little of the leaves daily.

Zingiber officinale, Rose. var.

1460. Haliya bara. Batu Gajah, 13385.—Fever. Boil the rhizome, and use the decoction in the bath.

1461. Haliya bara. Telok Anson, 16198.—Indigestion. Boil the rhizome with those of *Curcuma xanthorrhiza* and *Zingiber Cassumunar*, and drink.

Zingiber officinale, Rose. var.

1462. Haliya padi. Tanjong Malim, 14065.—Boil the rhizome with the rhizomes of *Zingiber ? Cassumunar* and of *Acorus Calamus*, and bathe in the decoction.

Zingiber officinale, Rose. var.

1463. Haliya udang. Telok Anson, 15626.—Headache. Pound the leaves, and poultice.

1464. Haliya udang. Telok Anson, 15283.—Rheumatism. Eat the leaves with betel.

Zingiber ? officinale, Rose.

1465. Kerjak (Sakai name). Tapah, 14272.—Headache. Pound the leaves, and poultice.

Zingiber spectabile, Griff.

1466. Tepus haliya. Tanjong Malim, 14036.—Swellings, including beri-beri. Pound the leaves, and poultice.

1467. Chadak. Tanjong Malim, 14044.—Inflamed eyelids. Infuse any part of the plant in cold water, and drop the infusion into the eye.

Zingiber Cassumunar, Roxb.

1468. Bolai. Grik, 12320.—Worms in children. Way of using not recorded.

1469. Kunyit terus merah. Kuala Kangsar, 15954.—Convulsions. Suspend the rhizome round the neck of a child.

1470. Kunyit bonglai. Tapah, 13964, 13965.—Child-birth. Boil the plant, and use the decoction internally.

1471. Kunyit bolai. Tanjong Malim, 14066.—Boil the rhizome with those of *Zingiber officinale*, var. 'Haliya padi' and of *Acorus Calamus*, and bathe in the decoction.

1472. Bolai. Beserah, 17551.—Swellings. Pound the rhizome with *Gendarussa vulgaris*, and poultice.

1473. Bolai. Pekan, 17281.—Stomach ache. Boil the leaves with black pepper-corns and bark of *Mangifera sp.* 'pauh' and of *Beilschmiedia pahangensis*, and drink the decoction.

1474. Kunyit bolai. Bentong, 16474.—Ague in children. Take the rhizome with that of *Acorus Calamus*.

Zingiber Ottensii, Valetton

1475. Bolai hitam. Taiping, 13300.—Child-birth. Pound the rhizome, and poultice with it after child-birth.

1476. Berseh hitam. Grik, 13712.—Child-birth. The same.

1477. Kunyit terus hitam. Kuala Kangsar, 14905.—Child-birth. Boil the plant and use the decoctions as an ubat meroyan.

1478. Kunyit hitam. Batu Gajah, 13421.—Child-birth. Pound the rhizome and poultice with it after child-birth.

1479. Kunyit terus hitam. Telok Anson, 15287.—Child-birth. The same; and the leaves may be used also.

Zingiber aromaticum, Valetton

1480. Lempoyang. Taiping, 13252.—Child-birth. The same, using the rhizome.

Zingiber ? chrysostachys, Ridl.

1481. Lempui. Grik, 13705. Fever. The same treatment.

Amomum kepulaga, Sprague and Burkill (A. Cardamomum, *auctt.*, not of Linnaeus in 1753).

1482. It is used for flavouring medicines, and is eaten alone for cough or after child-birth. The fruits are to be had in Malay villages under the name pelaga, but not the plants.

Phaeomeria imperialis, Lindl.

1483. Kantan. Telok Anson, 15293.—Wounds. Boil the leaves, and clean the wounds with the decoction.

1484. Kantan. Tanjong Malim, 14002.—Ear-ache. Boil the fruit, and drop the decoction into the ear.

? Elettariopsis sp.

1485. Tepus wangi. Bentong, 16734, 16747.—Child-birth. Boil the plant, and use the decoction as an ubat meroyan.

Languas conchigera, Burkill (*Alpinia conchigera*, *Griff.*)

1486. Lengkuas kechil. Taiping, 13266.—Rheumatism. Take all parts of the plant and apply.

1487. Lengkuas padang. Telok Anson, 15602.—Child-birth. Pound the leaves and poultice the abdomen.

Languas ? conchigera, Burkill

1488. Lengkanan. Alor Sta, 10433.—Dysentery. Method of use not recorded.

Languas Galanga, Burkill (*Alpinia Galanga*, *Swartz*)

1489. Lengkuas. Kuala Kangsar, 15989.—Child-birth. Boil the leaves, and use the water for a lotion.

Languas scabra, Burkill (*Alpinia scabra*, *Benth.*)

1490. Lengkuas. Tapah, 13954.—Child-birth. Boil the leaves, and use the water for a lotion.

Languas ? scabra, Burkill

1491. Lengkuas raya. Batu Gajah, 13416.—Vertigo. Heat the leaves by means of hot stones, and apply them to the abdomen.

Languas ? melanocarpa, Burkill (*Alpinia melanocarpa*, *Ridl.*)

1492. Meroyan siamang. Bentong, 16748.—Child-birth. Boil the plant, and use the decoction as an ubat meroyan.

Languas sp.

1493. Kekêni. Grik, 13711.—Fever. Way of using not recorded.

1494. Tepus belalah. Grik, 13623.—Sore tongue. Boil the leaves, and use the decoction as a gargle.

1495. Tepoi darah. Bentong, 16678.—Bleeding after child-birth. The same preparation as in 1492.

MARANTACEAE

Stachyphrynium Jagoranum, K. Schum.

1496. Lerek. Manhis, 16773.—Child-birth. Boil the plant with *Hedychium ? longecornutum* and the root of 'kemalan', and use as an ubat meroyan.

Stachyphrynium ? parvum, Ridl.

1497. Lerek tikus. Grik, 13626.—Excess of urine in children. Boil the leaves; give the decoction to drink, and poultice externally with the lees.

Stachyphrynium sp.

1498. Keladi bemban. Tanjong Malim, 14029.—Small-pox. Boil the tubers with leaves of *Psophocarpus tetragonolobus*, &c., and use the decoction as a lotion. See *Psophocarpus*, no. 425.

MUSACEAE

Musa paradisiaca, Linn.

1499. Pisang. Telok Anson.—Circumcision and like wounds. Infuse unripe bananas and the leaves of *Garcinia Mangostana*; thicken with benzoin, and apply.

AMARYLLIDACEAE

Curculigo ? latifolia, Dryand.

1500. Lumbah. Bentong, 16472.—Sore eyes. Boil the leaves with the root of *Hibiscus rosa-sinensis*; and drop the decoction into the eye.

1501. Lembu (for lumbah). Karak, 16639.—Too frequent menses. Eat the root with betel.

Curculigo sp.

1502. Lemboh. Raub, 17008.—Loss of appetite. Eat the fruit. It makes everything taste sweet by a curious action upon the taste-buds of the tongue.

Belamcanda chinensis, DC.

1503. Pokok kipas. Kuala Kangsar, 14901.—Child-birth. Boil the leaves and root, and use the decoction in the bath.

Crinum asiaticum, Linn.

1504. Rumput tembaga suasa. Telok Anson, 15897.—Use not recorded.

1505. Bawang tanah. Pekan, 17276.—Swollen joints. Oil the leaf, warm it, and bind it round the joint.

Crinum defixum, Ker

1506. Tembaga suasa. Kuala Kangsar, 15565.—Hydrocele. The same treatment.

1507. Tembaga suasa. Kuala Kangsar, 16002.—Fever and stiff neck. The same treatment.

Crinum sp.

1508. Tembaga suasa. Batu Gajah, 13409.—Colic. The same treatment, applied to the abdomen.

1509. Tembaga suasa. Tapah, 13522.—Swellings. The same treatment.

1510. Bakong. Tanjong Malim, 13497.—Headache. Pound the leaves with leaves of *Hibiscus rosa-sinensis*, &c., and poultice. See no. 161.

Eurycles amboinensis, Lindl. (*E. sylvestris*, *Salisb.*)

1511. Sapenoh. Kuala Kangsar, 16017, 15567.—Possession. Take the leaves and sprinkle water with them about the house to ensure that a spirit shall not haunt it.

1512. Sapenoh. Telok Anson, 16152.—Possession. The same.

BROMELIACEAE

Ananas comosus, Merr. (*A. sativus*, *Schultes*)

1513. Nanas hijau. Telok Anson, 15607.—Venereal diseases.

Boil the leaves, mix the decoction with white sugar, and drink.

TACCACEAE

Tacca cristata, Jack

1514. Keladi murai. Bentong, 16596.—Caterpillar itch. Pound the tuber, and poultice.

DIOSCOREACEAE

Dioscorea hispida, Dennst.

1515. Ubi arak. Telok Anson, 15298.—Yaws on the feet (puru lapak). Boil the leaves, and use the decoction as a lotion.

1516. Ubi arak. Tapah, 13976.—Sores on the feet. Rasp the tuber, and mix with a little lime or a little benzoin, and poultice.

1517. Ubi arak. Tanjong Malim, 14037.—Sores on the feet. Rasp the tuber, and mix it with a little turmeric; poultice.

ROXBURGHACEAE

Stichoneuron caudatum, Ridl.

1518. Kayu mati hidup. Grik, 12456.—Tonic. Eat the leaves with betel.

LILIACEAE

Peliosanthes sp.

1519. Seranggat. Telok Anson, 15888.—Diarrhoea. Way of using not recorded.

Sansevieria trifasciata, Prain

1520. Lidah buaya. Tapah, 13958.—Itch. Boil the leaves, and use the decoction as a fomentation.

Dianella ensifolia, Redouté

1521. Akar siak. Batu Gajah, 13425.—Child-birth. Boil the roots, and use as an ubat meroyan.

1522. Chi-chiak (for siak-siak). Bentong, 16549.—Wounds. Pound the leaves with the leaves of *Ardisia ? lanceolata*, and poultice.

Dracaena ? conferta, Ridl.

1523. Pandan hutan. Karak, 16621.—Child-birth. Boil the leaves with the roots of *Hedyotis capitellata* and the leaves of *Didymocarpus crinita*, and use the decoction as an ubat meroyan.

Dracaena graminifolia, Wall.

1524. Rumpit julong. Grik, 12526.—Poisoning. Boil the leaves and drink the decoction.

Dracaena congesta, Ridl.

1525. Jenjuang. Taiping, 13279.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

1526. Daun tapak leman (for tapak suleiman). Grik, 13718.—Rheumatism. Boil the leaves, and use the decoction for a fomentation.

1527. Rajah kayu. Grik, 12365.—Ulcers. The same treatment; but roots may be used as well as leaves.

Dracaena ? congesta, Ridl.

1528. Tapuh. Grik, 13720.—Worms. Method of use not recorded.

Smilax calophylla, Wall.

1529. Pokok tembaga suasa. Kuala Kangsar, 16039.—Swellings. Smear the leaves with coconut oil; heat them, and apply.

1530. Tongkat ali. Tanjong Malim, 14040.—Tonic (sexual). Eat the rhizome with betel.

Smilax ? calophylla, Wall.

1531. Batang sedawai. Manchis, 16775.—Tonic (sexual). Boil the rhizome and drink the decoction.

Smilax myosotiflora, DC.

1532. Akar ding. Raub, 16992.—Syphilis. Eat the leaves and the fruit.

1533. Tanding. Manchis, 16784.—Tonic (sexual). Eat the rhizome.

Smilax Helferi, A.DC.

1534. Banar babi. Raub, 16828.—Boils on the head. Boil the plant with leaves of ? *Wendlandia paniculata* and *Macaranga triloba*, and poultice.

Smilax sp.

1535. Lada hitam hutan. Kuala Kangsar, 16036.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

PONTEDERIACEAE

Monochoria vaginalis, Presl

1536. Kelayar (elsewhere chachang layar). Bentong, 16594. Boils. Pound the leaves with turmeric, and poultice boils in the groin after they have commenced to discharge.

COMMELINACEAE

Floscopa scandens, Lour.

1537. Johong beraleh. Kuala Kangsar, 14920.—Child-birth. Boil the whole plant, and use it as an ubat meroyan along with other plants.

1538. Awo-awo (=aur-aur). Telok Anson, 15628.—Sore eyes. Squeeze the stem between the fingers, and drop the juice into the eye.

1539. Kerakap sireh. Telok Anson, 16283.—*Ophthalmia*. The same treatment.

1540. Hawar-hawar (=aur-aur). Telok Anson, 15925.—Broken bones. Method of use not recorded.

Forrestia gracilis, Ridl.

1541. Tebu kera. Raub, 16976.—Pains in the body. Boil the plant and drink the decoction.

PALMAE

Areca Catechu, Linn.

1542. Pinang. Grik, 12460.—Fever (bewitchment). Pound the leaves in water, and sprinkle the head of the patient.

1543. Pinang. Grik. Poisoning. Take the juice from the stump of a palm, rice, and the egg of a black fowl; cook together and swallow.

1544. Pinang. Telok Anson, 16177.—Dysentery. Boil the root and give the decoction to drink.

1545. Pinang. Telok Anson, 16279.—Diarrhoea in children. Boil fully grown leaves, and use the water in a bath.

1546. Pinang. Tanjong Malim, 14016.—Dysentery. Boil the root with certain other plants and give the decoction to drink.

1547. Pinang. Tanjong Malim, 14051.—Stomach complaints. Dry the leaves and powder them with the leaves of *Atalantia Roxburghiana* and of *Citrus aurantifolia*, and swallow.

1548. Pinang. Bentong, 16586.—Gonorrhoea. Boil the nuts with roots of *Capsicum annuum*, &c., and drink. See no. 954.

1549. Pinang. Bentong, 16486.—Pains in the bones. Take the leaves, with the leaves of *Delima sarmentosa*, &c., and exorcise the disease by beating the body with them. See no. 5.

Cocos nucifera, Linn.

1550. Nyior. Grik, 12461.—Fever (bewitchment). Pound the leaves in water, and sprinkle the head of the patient.

1551. Nyior. Telok Anson, 16172.—Syphilis and gonorrhoea, &c. Pound the root, and poultice.

1552. Nyior. Tapah, 13980.—Diarrhoea. Administer the milk from the nut.

1553. Nyior. Tapah. Circumcision. Scrape the inside of the shell and poultice the wound with it.

Pinanga disticha, Blume

1554. Pinang penawar. Batu Gajah, 13404.—Stomach ache and as an antidote to poisons ingested. Take the seeds.

Oncosperma ? horrida, Scheff.

1555. Nibong. Beserah, 17618.—Fever. Boil the root and drink the decoction.

Didymosperma hastatum, Becc.

1556. Meriding. Beserah, 17620.—Fever. Boil the root and drink the decoction.

1557. Meriding. Beserah, 17560.—Loss of appetite. Roast the cabbage with a little salt, and eat it.

1558. Tukas (elsewhere tukus). Manchis, 16780.—Fever in children. Boil the root, and use the decoction in the bath.

Licuala triphylla, Griff.

1559. Palas. Raub, 16959.—Nausea. Pound the crown in cold water, and drink.

Daemonorrhops didymophyllus, Becc.

1560. Buah jerenang. Manchis, 16792.—The resin is medicinal for diarrhoea.

PANDANACEAE

Pandanus ? Klossii, Ridl.

1561. Mengkuang, or (in Sakai) hakek jehun. Kuala Lipis, 15753.—Child-birth. Boil the crown, and give to drink immediately after child-birth.

Pandanus ? aurantiacus, Ridl.

1562. Mengkuang prah or (in Sakai) hakek preh. Kuala Lipis, 15754.—Child-birth. The same treatment.

Pandanus sp.

1563. Pandan. Tapah, 13952.—Anaemia. Boil the leaves, and use the decoction as a hot lotion.

1564. Pandan bau. Tanjong Malim, 14013.—Syphilis. Boil the leaves with roots of *Solanum ferox* and galls of *Quercus infectoria*, and drink.

1565. Mengkuang. Bentong, 16587.—Gonorrhoea. Boil the roots with roots of *Capsicum annuum*, *Areca Catechu* and *Scleria sumatrensis*, and drink.

Pandans are stocked by Chinese herbalists in the Peninsula.

ARACEAE

Arisaema sp.

1566. Lekeh (for likir). Raub, 16973.—Malaria. Boil the plant, and use the decoction in a bath during the cold stage.

Colocasia esculentum, Schott (*C. antiquorum*, Schott)

1567. Keladi udang. Beserah, 17633.—Snake-bite. Pound the tuber, and poultice.

Xanthosoma violaceum, Schott

1568. Birah hitam. Kuala Kangsar, 15987.—High fever. Spread the leaves over the bed, that the sick man may lie on them.

1569. Birah hitam. Bentong, 16452.—High fever. Boil the plant, and use the decoction for bathing.

Homalomena sagittifolia, Jungh.

1570. Kelemoyak. Grik, 13782.—Distension of the stomach. Pound the shoots, and poultice.

Homalomena coerulescens, Jungh.

1571. Kemoyan. Tanjong Malim, 14038.—Sore feet. Pound the rhizome with tubers of *Dioscorea hispida* and turmeric, and poultice.

1572. Kemoyan. Budu, 15800.—Fever. Boil the rhizome and the leaves, and drink the decoction.

Homalomena, either the one or the other of the two last spp.

1573. Kemoyan. Raub, 16205.—Colic. Boil the rhizome with root of *Abrus ? pulchellus*, &c., and drink the decoction. See no. 371.

1574. Kemoyang. Bentong, 16453.—Fever. Boil the rhizome and drink the decoction: poultice with the leaves.

1575. Kemoyang. Karak, 16638.—Stomach trouble. Burn the rhizome and swallow the ashes.

Homalomena purpurascens, Schott

1576. Geli (Sakai name). Raub, 16951.—Loss of voice. Boil the rhizome, and use the decoction cold.

Homalomena Griffithii, Hook. f.

1577. Rumput gatal. Raub, 16974.—? Lumbago. Boil the plant, and poultice.

Pothos scandens, Linn.

1578. Seginting. Kuala Kangsar, 15560, 15994.—Convulsions and epilepsy. Pound the leaves in cold water, and use the water for bathing.

CYPERACEAE

Kyllinga brevifolia, Rottb.

1579. Sekepet burit. Telok Anson, 15917.—Diarrhoea. Eat the leaves with betel.

1580. Katob perenggan (? katup perenggan). Telok Anson, 15621.—Diarrhoea. The same.

Fimbristylis aestivalis, Vahl

1581. Rumput salah pemakai. Bentong, 16800.—Skin complaints. Pound the leaves with the leaves of *Cassia alata*, &c., and poultice. See no. 452.

Fimbristylis miliacea, Vahl

1582. Rumput bukit. Batu Gajah, 13377.—Fever. Used as an external application.

Fimbristylis ? asperrima, Boeckl.

1583. Siamet gunong. Bentong, 16668.—Child-birth. Used as an ubat meroyan.

Scleria lithosperma, Swartz

1584. Salip besar and salip kecil. Kuala Kangsar, 16024, 16023.—Child-birth. Boil the roots, and use the decoction as an ubat meroyan.

Scleria levis, Retz.

1585. Sialit dudok. Batu Gajah, 13387.—Coughs. Eat the seeds with betel.

Scleria ? multifoliolata, Boeckl.

1586. Rumpit sesayong. Grik, 13723.—Root medicinal. Use not recorded.

Scleria sumatrensis, Retz.

1587. Sialit. Bentong, 16586.—Gonorrhoea. Boil the roots with roots of *Capsicum annuum*, &c., and drink the decoction. See no. 954.

GRAMINEAE

Zea mays, Linn.

1588. Jagong. Grik, 12364.—Stomach ache. Boil the pith of the cob in water, and drink the decoction.

Imperata arundinacea, Cyrillo.

1589. Lalang. Grik, 12513.—Rheumatism. Burn the runners, and administer the ashes internally.

1590. Lalang. Bentong, 16614.—Diarrhoea. Boil the runners with leaves of *Mezoneuron sumatranum*, and drink the decoction.

Runners of this grass are stocked in Chinese herbalists' shops in Penang.

Saccharum arundinaceum, Retz.

1591. Tebu salah. Tapah, 13959.—Boils. An internal medicine.

Pogonatherum saccharoideum, Beauv.

1592. Rumpit sembor batu. Batu Gajah, 13365.—Skin diseases. Pound the whole plant and poultice with it.

1593. Rumpit sumbu buta (? badak). Kuala Kangsar, 10345.—Skin diseases. Burn the plant and rub the ashes upon the skin.

Chrysopogon aciculatus, Trin.

1594. Kemuchut (elsewhere kemunchup). Grik, 12512.—Rheumatism. Burn the plant with *Imperata arundinacea*, and swallow the ashes.

Cymbopogon citratus, Stapf

1595. Serai makan. Pekan, 17208.—Kidney trouble. Boil the shoots with the shoots of a *Schizostachyum*, and drink the decoction morning by morning.

Paspalum sp.

1596. Rumput benta minyak. Batu Gajah, 13388.—Colic. Boil the plant and drink the decoction.

? Paspalum sp.

1597. Rumput lidah rimau. Grik, 12511.—Bewitchment. Take the grass and plait it into a ring, through which pass the body, and the evil spirits cannot follow.

1598. Rumput lidah rimau. Grik, 13790.—Syphilis. Boil the plant with a little alum; give the decoction to drink.

Stenotaphrum Helferi, Munro

1599. Dadalipan. Grik, 12346, 12377, 12462.—Child-birth. Boil the plant, and administer the decoction as an ubat meroyan. Some say that it prevents any consequent digestive troubles; some that it prevents lockjaw.

1600. Dadalipan. Taiping, 13291.—Child-birth. Boil the plant, and administer to stop a flow of blood.

Panicum sarmentosum, Roxb.

1601. Terupong (elsewhere kerubong). Grik, 12307.—Irregular menses. Pound the plant with *Setaria plicata* and *Gigantochloa Scortechinii*, and drink the juice.

? Panicum sp.

1602. Daun benta. Telok Anson, 15643.—Heartburn. Boil the leaves and drink the infusion.

Setaria plicata, T. Cooke

1603. Lachang. Grik, 12306, 13761.—Irregular menses. Boil the plant, either alone or with *Panicum sarmentosum* and *Gigantochloa Scortechinii*, and drink the decoction.

Phragmites communis, Trin.

1604. Tebu salah. Telok Anson, 15273.—Varicose veins. Pound the stem, and rub the juice over the skin above the veins.

Eleusine indica, Gaertn. f.

1605. Sambau. Kuala Kangsar, 16025.—Child-birth. Pound the leaves, and give the juice to drink to promote the discharge of the after-birth.

Lophatherum gracile, Brongn.

1606. Rumput bulu. Grik, 13768.—Tonic. Eat the roots.

1607. Rumput bulu. Raub, 16983.—Chancre. The same.

Leptaspis urceolata, R. Br.

1608. Lanchong. Budu, 15801.—Child-birth. Boil the root, and drink the decoction as an ubat meroyan.

1609. Pepinang. Raub, 16235.—Child-birth. The same.

1610. Sinai anjing. Manhis, 16757.—Tonic to induce fertility. The same.

Bambusa ? Wrayi, Stapf

1611. Buloh gading. Alor Sta, 10454.—Gonorrhoea. Pound the young shoot, and poultice.

1612. Buloh gading. Grik, 12380.—Bewitchment. Plant the bamboo about the rice crops. They will not be destroyed by beetles.

Gigantochloa Scortechinii, Gamble

1613. Buloh hauw. Grik, 12305.—Irregular menses. Boil the leaves with leaves of *Panicum sarmentosum* and *Setaria plicata*, and drink the decoction.

Schizostachyum sp.

1614. Buloh. Pekan, 17207.—Kidney trouble. Boil the sprouts with *Cymbopogon citratus*, and drink the decoction. However, it is probable that a variety of bamboos may be used in this prescription.

GNETACEAE

Gnetum ? longispica, Ridl.

1615. Asam anyang. Batu Gajah, 13402.—Yaws in children. Applied externally.

Gnetum tenuifolium, Ridl.

1616. Serapat akar. Batu Gajah, 13375.—Delayed menses. The seeds are eaten.

1617. Telinak. Raub, 16216.—Child-birth. Boil the root, and use the decoction as an ubat meroyan.

GLEICHENIACEAE

Gleichenia linearis, Clarke

1618. Resam. Batu Gajah, 13371.—Fever. Pound the leaves with the leaves of *Croton caudatum*, and poultice.

1619. Resam. Telok Anson, 15620.—Fever. Boil the leaves with rice-water, and use the decoction for a fomentation.

1620. Resam. Raub, 16820.—High fever. Infuse the tender leaves with those of *Pericampylus incanus* and *Merremia vitiifolia* in water for a night, and give to drink on the next morning.

1621. Resam. Kuala Lipis, 15783.—Fever. Pound the leaves and poultice the forehead.

1622. Resam. Pekan, 17212.—Fever. Boil the leaves with the leaves of *Gossypium brasiliense*, &c., and drink sparingly of the decoction when cold. See no. 120.

1623. Resam. Bentong, 16455.—Fever. Boil the leaves with the leaves of *Nephelium mutabile*, and bathe the whole body with the decoction.

1624. Resam. Karak, 16626.—High fever. Boil the leaves with the leaves of *Vitis trifolia*, &c., and give to the patient to drink.

POLYPODIACEAE

Adiantum lunulatum, Burm.

1625. Paku sisek or paku mega. Kuala Kangsar, 10342.—Swellings in the neck. Pound the leaves, and poultice.

Adiantum caudatum, Linn.

1626. Paku siap-siap. Kuala Kangsar, 15575.—Pain in the chest. Boil the leaves and the roots, and drink the decoction.

Blechnum orientale, Linn.

1627. Paku lipan. Batu Gajah, 13380.—Boils. Pound the leaves, and poultice.

Asplenium Nidus, Smith

1628. Semun. Grik, 13730.—Fever. Pound the leaves in cold water, and apply the water to the head.

1629. Selimbar. Kuala Lipis, 15749.—Child-birth. Infuse in cold water, and drink in labour.

Anisogonium esculentum, Presl

1630. Paku. Grik, 12459.—Fever. Pound the leaves in water, and sprinkle the water over the head of the patient.

1631. Paku tanjong. Raub.—Child-birth. A decoction as an ubat meroyan.

? Nephrodium heterocarpum, Blume

1632. Paku. Raub, 17016.—Discoloration of the skin. Rub the leaves upon the skin.

Pleopeltis viridis, Moore

1633. Keluwah. Grik, 12354.—Fever. Pound the leaves in water, and sprinkle the water over the head of the patient. The name suggests by means of the mouth.

Cyclophorus adnascens, Desv.

1634. Tetumpang. Telok Anson, 15887.—Dysentery. Method of use not recorded.

Cyclophorus acrostichoides, Presl

1635. Suloi (Sakai name). Kuala Lipis, 15784.—Child-birth. Pound the leaves in cold water, and drink the water. A treatment used by Sakai only.

Drynaria quercifolia, Linn.

1636. Kepala tupai. Grik, 12458.—Fever. Pound the leaves in water, and sprinkle the water over the head of the patient.

Drynaria quercifolia, Linn., or **D. sparsisora**, Moore

1637. Kepala tupai. Telok Anson, 14148.—Swellings. Pound the leaves, and poultice.

Drymoglossum piloselloides, Presl

1638. Akar petek. Grik, 12463.—Headache. Pound the leaves and apply to the head.

1639. Sebebeh (elsewhere paku sebeneh). Tanjong Malim, 14025.—Small-pox. Boil the leaves with those of *Psophocarpus tetragonolobus*, &c., and use the decoction as a lotion upon the skin.

Ceropteris calomelanos, Kaulf.

1640. Paku ragi. Kuala Kangsar, 10344.—Dysentery. Boil the root and drink the decoction.

Taenitis blechnoides, Swartz

1641. Meroyan paku or meroyan dawai. Bentong, 16667.—Child-birth. Boil the leaves, and use the decoction as an ubat meroyan.

Platyserium biforme, Blume

1642. Semun bidadari. Grik, 13618.—Enlarged spleen. Burn the plant and rub the ashes over the body.

Stenochlaena palustris, Bedd.

1643. Akar lemidi. Grik, 12464.—Stomach ache. Boil the leaves and drink the decoction.

1644. Paku lemidang. Telok Anson, 15282.—Remittent fever. The same treatment.

1645. Paku memiding. Telok Anson, 16164.—High fever. Boil the leaves and use the decoction as a lotion.

1646. Paku midang. Beserah, 17473.—Fever. Pound the leaves with the root of *Gossypium brasiliense*, &c., and drink the juice. See no. 120.

Acrostichum aureum, Linn.

1647. Umbi peye. Alor Sta, 10431.—Diarrhoea. Drink a decoction.

1648. Pebisi. Telok Anson, 15288.—Boils. Pound the leaves, and poultice.

Ceratopteris thalictroides, Brongn.

1649. Paku roman. Grik, 12550.—Skin complaints. Pound the leaves, and poultice.

MARATTIACEAE

Angiopteris evecta, Hoffm.

1650. Paku gajah. Kuala Kangsar, 10343.—Tonic after a miscarriage. Boil the roots and drink the decoction.

1651. Paku gajah. Telok Anson, 16257.—Coughs. Pound the plant and drink the juice.

SCHIZAEACEAE

Lygodium scandens, Swartz

1652. Daun ribu. Grik, 12353.—High fever. Boil the leaves and use the decoction as a lotion.

1653. Daun ribu. Telok Anson, 13550.—Swellings. The same treatment.

1654. Ribu-ribu nasi. Telok Anson, 15853.—Measles and eruptive skin complaints. Pound the leaves, and poultice.

1655. Ribu rimau. Pekan, 17232.—Kayap. Pound the leaves, and poultice.

1656. Ribu-ribu. Bentong, 16457.—Coughs. Infuse the leaves with the leaves of *Averrhoa Bilimbi* and *Carallia suffruticosa* in coconut milk, and drink cold.

It is stocked in Chinese herbalists' shops in Penang (13700).

Lygodium flexuosum, Swartz

1657. Ribu-ribu kechil. Alor Sta, 10428.—Ringworm. As a poultice.

1658. Ribu-ribu. Beserah, 17574.—Fever. Pound the leaves with the root of *Gossypium brasiliense*, &c., and drink the juice. See no. 120.

OPHIOGLOSSACEAE

Helminthostachys zeylanica, Linn.

1659. Akar tunjok langit. Taiping, 13251.—Tonic. Pound the rhizome, and eat it with betel.

1660. Akar tunjok langit. Grik, 12326, 13708.—Tonic. The same.

1661. Akat tunjok langit. Telok Anson, 15650.—Tonic, used by women at their menses.

1662. Duri kabu. Telok Anson, 15893.—Fever. Method of using not recorded.

1663. Jelai (Sakai name). Tapah, 14295.—Syphilis. Method of using not recorded.

It is stocked in Chinese herbalists' shops up and down the Peninsula.

SELAGINELLACEAE

Selaginella atroviridis, Spring

1664. Paku jambul merak. Taiping, 13293.—Stomach ache. Boil the plant and drink the decoction.

1665. Daun ekor merak. Grik, 12547.—Rheumatism. Pound the plant with *Cleome viscosa*, and poultice.

1666. Daun ekor merak. Grik, 12547.—Rheumatism. Pound the plant with *Achyranthes aspera*, and poultice.

1667. Daun ekor merak. Grik, 12547.—Bubo in the groin. Pound the plant with *Cardiospermum Halicacabum*, and poultice.

1668. Daun ekor merak. Grik, 12547.—Asthma. Pound the plant and poultice the whole body.

Selaginella caudata, Spring

1669. Paku merak. Bentong, 16537.—Vertigo. Pound the plant and poultice the head.

Selaginella illustris, Ridl.

1670. Paku batu, and ekor merak. Bentong, 16736, 16740.—Child-birth. Boil the plant, and use the decoction as an ubat meroyan.

Selaginella Wallichii, Spring

1671. Paku merak. Manchis, 16766.—Child-birth. The same treatment.

Selaginella Willdenowii, Baker

1672. Paku merak. Raub, 16818.—High fever. Infuse the plant with leaves of *Pericampylus incanus*, &c., in cold water, and give the infusion to drink. See no. 72.

LYCOPODIACEAE

Lycopodium cernuum, Linn.

1673. Rumpit kenarus. Raub, 16956.—Beri-beri. Boil the plant, and use the decoction cold for washing.

HYMENOMYCETES

Polystictus rhinocerotis, Cooke

1674. Susu rimau. Bentong, 16652.—Coughs. Eat it with betel.

Fungus rhizomorphs.

1675. Taleb (Sakai name) or akar batu. Tapah, 14294.—Possession. Twine the rhizomorphs into bracelets or necklaces, worn to ward off evil spirits.

AN INDEX TO THE MALAY VERNACULAR NAMES,
WITH COMMENTS

By I. H. BURKILL

- [akar = climber; kayu = wood; pokok = tree; rumput = grass;
ubat = medicine]
- aging-aging**, = urang-aring, *Eclipta alba*,—802.
- aguh**, Apocynaceae which have round fleshy fruits, as *Willughbeia* and *Hunteria*. In 902 a *Willughbeia*: in 903 *Leuconotis eugenifolius*.
- akar batu** (rock root), fungus rhizomorphs,—1675.
- akar beranak gajah** (big climbing birthwort), *Goniothalamus macrophyllus*,—39.
- akar bukit**, several species of the family Anonaceae, and in 54 one undetermined.
- akar bumi** (root of the world), *Rennellia paniculata*,—736.
- akar pahit** (bitter creeper), *Cyclea laxiflora*,—77.
- ambin buah** and **amin buah**, well-known names for *Phyllanthus urinaria*,—1268, 1269 and 1273, connected with the verb mengambin (to carry on the back) and denoting the position of the flowers under the stems.
- ampenai tiang**, *Hullettia dumosa*,—1388. **mempenai** is more usual than **ampenai**. It is applied to diverse plants.
- anggerek**, epiphytic orchids; in 1407 for *Dendrobium subulatum*.
- ara** (*Ficus*), very rarely used for other plants than *Ficus*, a noteworthy exception being ara tanah for *Euphorbia hirta*. Why the Malays, as undoubtedly they do, should classify it as an ara, is not obvious. Twice the name ara was applied to a *Grewia*, and once to *Ageratum*, and in all three its use seems to have been by mistake:
- ara batu** (rock ara), *Ageratum conyzoides*,—788.
- ara bombong** (swollen fig), *Ficus hispida*,—1374.
- ara dani** (speckled ara), *Grewia paniculata*,—198.
- ara kesinai**, *Ficus parietalis*,—1366.
- ara lempong** (light wood fig), *Ficus sp.*,—1377.
- ara lumut** (mud ara), *Grewia paniculata*,—194.
- ara sungei** (river fig), *Ficus hispida*,—1372.
- ara tanah** (ground ara), *Euphorbia hirta*,—1250-1252.
- asam** (a sour relish):
- asam anyang**, *Gnetum ? longispica*,—1615.
- asam jawa** (Java asam), *Tamarindus indica*,—459-460.
- asam kumbang**, in 869 *Ardisia sp.*, but the name is not always so applied.
- asam papan** (asam with the flat stem), *Vitis novemfolia*,—316.

- asam riang**, *Vitis hastata*,—308. See riang.
- asam susok** (spur asam), *Rubus alceifolius*,—495.
- asam susor**, *Hibiscus sabdariffa*,—155.
- asin-asin**, Euphorbiaceae of the genera *Sauropus*, *Breynia*, and *Phyllanthus*. In 1302 for *Breynia reclinata*.
- ati-ati**, see hati-hati.
- aur-aur** or **awo-awo** or rumput **awo**, for *Commelina nudiflora* and allied plants. In 1538 for *Floscopa scandens*.
- pokok bajang beranak**. Bajang is a familiar spirit generated in blood spilled in child-birth. The plant called pokok bajang beranak is *Schefflera affinis*,—633, one of the 'rempah ratus' or hundred ingredients administered at the time of child-birth, and to these the Malays frequently attach fancy names, only known locally.
- bakong**, a name for *Crinum asiaticum*,—1510, known through all western Malaysia.
- akar belah** (misfortune creeper), *Rourea humilis*, 357.
- balek adap**, the common name for the genus *Mussaenda* in Malay, walek adap in Javanese,—691–695.
- balek angin**, species of *Mallotus* and *Macaranga*, which have leaves white behind, sometimes applied to a few other plants with similar leaves. Its use extends to the east of Java. *Mallotus barbatus*,—1334. *Mallotus cochinchinensis*, 1336–1337. *Mallotus macrostachyus*,—1331–1332. *Macaranga denticulata*,—1335. *Macaranga* ? *Hullettii*,—1352. *Coscinium Blumeanum*,—70.
- banar babi** (pig's banar), *Smilax Helferi*,—1534. Banar or chanar denotes such plants as *Smilax* and some species of *Dioscorea* in Sundanese, and may be heard sometimes in the Malay Peninsula.
- ubat barah** (boil medicine), *Lasianthus stipularis*,—755.
- pokok barek sisek puteh** (variegated plant with white scales), *Desmodium triflorum*,—411.
- batai**, a few trees of the Leguminosae. Its use, as in 402 for *Derris dalbergioides*, seems irregular until one remembers that this species is a tree and not a climber, as are most of the species of its genus.
- batang lada**, for lada-lada, *Ervatamia peduncularis*, 909. See under lada.
- batang sedawai**, *Smilax* ? *calophylla*, 1531. See dawai.
- bawang tanah** (ground onion), *Crinum asiaticum*,—1505. An unusual name.
- bayam** (spinach):
- bayam beraleh**, at Raub for *Cyrtandromoea grandis*,—979; and at Budu for an undeterminable *Cyrtandra*,—984–985.
- bayam merah** (red spinach), *Celosia cristata*, 1160.
- bayam rusa** (deer's spinach), in Pahang for *Melochia*

corchorifolia, 183–184, but applied otherwise in other parts of the Peninsula, e. g. to *Corchorus* and to *Cyathula*.

bayor, common to Sundanese and Malay for *Pterospermum* and certain allies. In 175–178 for *Pt. blumeanum* and an undetermined species, the latter being **bayor rimba** (virgin-forest bayor).

bebangun or **bangun-bangun**, **membangun**, **mangun-mangun**, *Coleus carnosus*,—1129–1131. Another form is **raja bangun**. In 982 *Cyrtandra cupulata* is a substitute for the *Coleus*.

bebaru is *Hibiscus tiliaceus*,—170. **Baru** is more common: it indicates that the plant gives fibre, and is known as far east as Soemba. In Timor it becomes **bauk**.

beberak, a name indicating that the plant to which it is given has a foul smell, denotes certain Rubiaceae, and in 754 is applied to *Chasalia curviflora*, which being allied to them is used as a substitute. The name is confused in the villages with the next.

beberas is a well-known name for species of *Aporosa*. In 751–752, perhaps from use of the plant in poulticing or perhaps by error for beberak, it is applied to *Chasalia curviflora*. As **beberas nasi** it is *Ardisia colorata* in 855.

bebuas is *Premna* and some rather similar shrubs. In 1074 *Premna pyramidata*, and in 105 *Memecylon dichotomum*. **Bebuas akar** in 105, for *Flacourtia jangomas* perhaps is from *beberak* as akar **temberak**, is also used for this plant.

bebulu, certain ovate-leaved shrubs or small trees, including *Ardisia ? crenata*, —863, and ? *Urophyllum glabrum*,—698.

bedara is sanskritic, originally denoting *Zizyphus jujuba*. As widara it still denotes it in Java; but this fruit-tree being rare in the Malay Peninsula, the word is used for a variety of trees with roundish fruits of moderate size; and in this way **bedara tiong**, in 875, is *Payena lucida*. **Bedara laut** should be treated as an entirely distinct name: it indicates those bitter plants whose roots or other parts are used to cure snake-bites, *Strychnos*, *Eurycoma*, and others.

bekak or **bikir**, pinnate-leaved trees, not naturally related to each other, the chief *Oroxylum indicum*,—986–990: **bikir angkup** and **bekak kampong** are also its names. The closely allied *Pajanelia Rheedei* is **bekak gunong** (mountain bekak). **Bekak rengat** (bekak for gripes), *Schefflera affine*, —634, is quite unrelated.

belalang puak, *Pittosporum ferrugineum*,—92. **Belalai puak** has also been recorded for this tree.

akar **belang** (either variegated creeper, or creeper for treating the skin disease belang), *Melothria sp.*,—621.

- belat**, *Ixora grandifolia*,—716.
- belimbing**, *Averrhoa Bilimbi*,—206–209, and *A. Carambola*,—210–213. As **belimbing hutan** (wild belimbing) *Connaropsis ? macrophylla*,—215.
- beluru**, *Entada*. In 481 it is apparently *E. spiralis* (E. Schefferi, Ridley).
- benta** denotes certain grasses. In 1602 it appears to indicate a *Panicum*, and in 1596 a *Paspalum*.
- berambong** = berembang, q.v.
- beratai**, *Derris dalbergioides*,—403, the same as batai, q.v.
- berêksa** and **berêksah**, sanskritic, originally denoting *Cassia fistula*, but this tree being rare in the Malay Peninsula, it is used for similar arboreous Cassias, as *C. nodosa*,—426.
- berembang** is a name invariably applied to trees, and in this form indicates haunted, but **berembang**, **berombong**, **merembang**, **merimbong** and **merombong** are interchanged. **Berembang** indicates *Sonneratia acida* in southern Sumatra as well as in the Malay Peninsula, and seems to be the central form of this plant name. In 599 it stands for the similar *S. Griffithii*, and in 805 as **berambong**, for *Vernonia javanica*. No fewer than sixteen genera, chiefly unrelated to each other, are said to possess the name in one form or another, *Adina* for instance in four forms.
- berêmi**, small herbs as *Curanga*, *Herpestis* and *Limnophila* of Scrophulariaceae. In 970 it stands for *Curanga amara*.
- berkerak** (the dirty plant), *Saprosma Scortechinii*,—760. Kerak-kerak is a word for the scraps of food which adhere to the cooking-pot, turn sour and smell: *Saprosma*, as its botanical name also implies, has a vile smell.
- berkuching** (the catkin-ed), *Coelodiscus montanus*,—1329.
- berkunyit** or **merkunyit**, **kunyit-kunyit** or **kekunyit**, species of Menispermaceae on account of their yellow wood. See kunyit.
- berseh hitam** (black cleanser), scarcely a good plant-name, but used for *Elephantopus scaber*,—766, and *Zingiber Ottensii*,—1476, when these, each having wider-known names, are two of the rempah ratus or hundred simples used in child-birth. The rootstock of the first is black, and so is the flesh of the rhizome of the second.
- bertangwali**, corrupt, for *Tinospora crispa*,—61. Petawali is usual; beratowali occurs in Java.
- bertimun tikus**, *Gymnopetalum cochinchinense*,—615. Cf. metimun.
- beti-beti**, a name requiring investigation. In 1075, a *Calli-carpa*, apparently *C. longifolia*.
- betik**, well known in Malaya and Sumatra for *Carica Papaya*,—625–627.

- akar **beting**, apparently for **akar bintang**, in 290 for a *Hippocratea*.
- biak**, in the Malay Peninsula, but not beyond, for *Mitragyne speciosa*,—643–645.
- bintang beraleh** (shooting star), *Cardiospermum Halicacabum*,—322.
- birah** is a name used through Malaysia for such Aroids as *Colocasia* and *Alocasia*. **Birah hitam** (black birah) is applied to *Xanthosoma violaceum*,—1568–1569.
- ubat **bisa hati** (medicine for poison at the heart), *Ardisia littoralis*,—850.
- bolai** or **bonglai**, very well known through Malaya for *Zingiber Cassumunar*,—1469–1475: the allied *Z. Ottensii*, with a black rhizome is **bolai hitam**,—1476. But there is another bolai or bonglai, the tree *Oroxylum indicum*. Apparently this tree, to the south of Perak, is rarely bolai, but bekak or bikir.
- buah keras** (the hard fruit), *Aleurites moluccana*,—1316.
- bubut**, *Clerodendron villosum*,—1095.
- bulang** and **bulanggan** are names used alike for *Gmelina villosa*,—1076–1080, and *Canthium horridum*,—737; but chiefly for the first.
- buloh** (bamboo): in 1614 for a *Schizostachyum*; **buloh gading** for *Bambusa ? Wrayi*,—1611–1612; and **buloh hauw** for *Gigantochloa Scortechinii*,—1613.
- kayu **bulu**, *Hedyotis congesta*,—689.
- bunga** (flower):
- bunga china** (chinese flower) *Gardenia florida*,—700–709; and on account of the close similarity of its double flowers *Ervatamia coronaria*,—908: more rarely such a plant as *Solanum verbascifolium*,—946.
 - bunga raya** (big flower) is *Hibiscus rosa-sinensis*,—157–165.
 - bunga siam** (siamese flower) is *Acacia farnesiana*,—486.
 - bunga tanjong** (headland flower) is *Mimusops Elengi*,—876–882, from Achin to the Moluccas.
 - bunga tunjong** is properly the Waterlily, and the name as given to *Asclepias curassavica* in 922 must be regarded as misplaced.
- bungau**, certain Euphorbiaceae, e.g. *Glochidion obscurum*,—1293, and ? *Breynia reclinata*,—1304.
- bungor** or **bungur**, both in Malay and Sundanese denotes species of *Lagerstroemia*. As sterile specimens of this genus are difficult to discriminate, 590–597 are only partially determined. In 597 one is called **bongor betul** (true bongor), and in 595 one is called **bongor melukut** (rice-chaff bongor).
- chabai**, sanskritic, for long pepper, and extended with qualifying words to a few other plants. In 904 **chabai hutan**

(woodland chabai) for *Kopsia larutensis*, but until this use is confirmed it must be considered incorrect. In 1201 **chabai tali** is used for an undetermined pepper: the name, meaning rope chabai, belongs to *Helicteres isora*, the fruits of which are twisted rope-like.

daun **chabang tiga** (trefoil), for several plants. In 216 for *Evodia latifolia*.

chadak, *Zingiber spectabile*,—1468.

chapa, *Blumea balsamifera*,—811–829; and in 767–768 applied to *Elephantopus scaber*.

charek putri (princess' charek); charek denotes certain species of *Vitis*, and charek putri in 303 is the pretty *V. cinnamomea*.

chekor, *Kaempferia Galanga*,—1424–1430. It becomes cheker in Sundanese, chekir in the Lesser Sunda islands, chekur in Bali, cheku in Celebes, &c.

chekor manis (sweet chekor) is a name for certain Euphorbiaceae, such as *Phyllanthus reticulatus* and *Sauropus albicans*. In 1306–1307 it is the latter.

chemangan, a name not met with elsewhere than at Kuala Kangsar, for a *Gastrochilus*,—1434.

chemêmar or **chemamah**, *Micromelum hirsutum*,—227–228, and the allied *Clausena excavata*,—230.

chemkian or **jemakian**, *Croton Tiglium*,—1331. Other forms of it are **chemekiyan** and **chemengkiyan**.

chempa, *Elaeocarpus ?obtusus*,—202. This is mentioned in Wilkinson's Dictionary as for an unidentified plant.

chempaka, sanskritic, for *Michelia Champaca*,—10–11.

chenderai, *Grewia paniculata*,—191–197. Its application in 656 to *Coptosapelta flavescens*, appears to be an error.

chenderong hari and **jenduang hari**, *Vernonia cinerea*,—807–808: also **chongchong hari**, in 806. These three variants came from Telok Anson, and the origin of the name is possibly Chinese, as **chundong ari** applied at Raub to *Erigeron linifolium* is near to the Java-Chinese name for the latter plant, chong-hin-chau.

chengkam harimau (tiger's grip), *Trevesia cheirantha*,—638.

tapak rimau (tiger's footmark) is a more usual name.

chengkeh hutan (wild cloves), *Cinnamomum sp.*,—1222.

chengkering, *Hedyotis glabra*,—684. It has been said that this name belongs to species of *Erythrina*, but it belongs to both when used for poulticing the abscess called chengkering.

chentawan, **sentawan** and **tentawan**, the last the commonest, for several woody climbers. In 1383 it is for *Conocephalus amoenus*, see tentawan.

cheraka is *Plumbago*. **Cheraka-cheraka** (bastard cheraka) is a species of *Eranthemum*,—1024, with some resemblance to *Plumbago*.

- cheras**, *Phyllanthus reclinatus*,—1303, perhaps a form of the next, for *P. frondosus* is **cherek hantu**.
- cherek**, **cheret** and **chirit** (severe diarrhoea) gives names to several plants used in treating it; the chief *Micromelum hirsutum*, 222–226, and 229. **Secherek** is a common form of it. It has become fixed to a sufficient extent for other pinnate-leaved similar trees to share the name; but not so fixed as to prevent various quite unlike trees from obtaining it too, e.g., species of *Diospyros*, *Maba*, *Gnetum*, &c.
- cheremai**, *Cicca disticha*,—1295; and in 1292 *Glochidion obscurum* of the same affinity.
- chichah**, *Stereospermum fimbriatum*,—1001–1006.
- chichang** or **chinchang**, *Allophylus ternatus*,—323.
- chichiak** or **siak-siak**, q.v., *Dianella ensifolia*,—1522.
- chiku**, a Philippine name adopted for the American *Achras Zapota*,—871, in ultimate origin Mexican.
- chili besar**, *Capsicum annum*,—954.
- akar chinas**, *Combretum ? sundaicum*,—517.
- chiprah**, a form of **chemperai**; for *Champereia Griffithii*,—1241, and *Lepionurus sylvestris*,—1242–1243.
- chiput-chiput**, *Myxopyrum nervosum*,—897.
- chong-chong hari**, see **chenderong hari**.
- chong churat**, *Hedyotis capitellata*,—671, probably for **chong cherek**.
- chong kait**, *Zizyphus elegans*,—298. **Kait** refers to the hooked prickles.
- chong keradak**, *Dissochaeta gracilis*,—575, and *Cinnamomum iners*,—1213.
- chuchor atap**, *Baekia* and *Leptospermum*, the leaves of which are used medicinally, and stocked dry in drug shops. It happens that the leaves of *Leucopogon malayanus* are extremely like those of *Leptospermum flavescens*, and the name may be extended to it, as in 833.
- chudok**, *Thottea ? parviflora*,—1184.
- chuk**, a Sakai word for latex, and in 926 applied to *Hoya*.
- chundong ari**, see **chenderong hari**.
- dada kura** (tortoise breast), perhaps better **dadah kura** (tortoise's medicine chest), fairly well known for *Fagraea racemosa*,—929; but not so well known as **sepuleh**.
- rumput **dadalipan** (centipede grass), *Stenotaphrum Helferii*,—1599–1600.
- dadap**, the *Erythras*; in 389–390 for *Erythrina indica*.
- dakelin**, *Eclipta alba*,—800.
- dani** or **redani**, *Quisqualis densiflora*,—520–521. **Ara dani** has also been heard.
- darah**, *Barringtonia racemosa*,—551, probably for **pokok darat** (shore tree).

- pokok darah belut** (eel's blood plant), in 1289 *Phyllanthus ?reticulatus*. The name has been recorded for the unlike *Mezoneuron sumatranum*.
- daun** (a leaf):
- daun esek nanak** (leaf for curing esek nanak, a skin complaint), *Uvaria sp.*,—15; but in this place it is for an abdominal disorder.
- daun payong** (umbrella leaf), a well-known name for *Bio-phytum*; in 204–205 for *B. adiantoides*. The name is met with in Sumatra as well.
- daun tuba** (leaf tuba), *Diospyros Wallichii*,—884; a well-known name for a few species of *Diospyros* the leaves of which serve as a fish poison.
- dawah**, *Eclipta alba*,—801.
- dawai** (wire); **dawai-dawai**, **dedawai**, and **sedawai** denote certain wiry plants such as *Smilax*. **Batang sedawai** is *S. ?calophylla*,—1531. Secondly they denote certain bushes with tough stems, such as the species of *Zizyphus*. Further, the names are given to a few unrelated plants, so that we obtain **sedawai hitam**,—582, for *Memecylon ? minutiflorum*, and **sedawai puteh**,—114, for a *Calo-phyllum*, neither being apt.
- dedalu**. The chief application is to the mistletoes; and that the Malays should include *Hydnophytum formicarum* along with them is not surprising: they have in that failed only in recognizing the difference between epiphytism and parasitism. But they give the name to *Salix*, which is quite incongruous. In 1233 **dedalu api** is *Loranthus ferrugineus*; and in 1404–1405 **dedalu** is *Salix tetrasperma*.
- dedaup**, the Bauhinias; in 458 *Bauhinia bidentata*.
- delima**, sanskritic, for *Punica Granatum*,—600–603.
- depu**, *Wikstroemia Ridleyi*,—1230. See Gimlette, Malay poisons, 1929, p. 222.
- derahan**, from pendarahan, a name covering several Myristicas, and in 1225 a *Litsea*.
- derajang** or **teradang** or **terajang**, for terentang, *Lepisanthes Kunstleri*,—329.
- derita dapor** (support of the hearth), *Gomphostemma crinitum*,—1159. The name suggests that the plant may be put under the clay in constructing a hearth, but that it is so used remains unrecorded.
- akar ding** or **tanding**, *Smilax myosotiflora*,—1532–1533.
- dukong anak** (the child pick-a-back); for species of the Euphorbiaceae, such as *Phyllanthus Niruri*,—1266, and *P. urinaria*,—1270–1271, with fruits under the horizontal branches, essentially the same in meaning and application as *ambin buah*, q.v.

duri kabu in 1662 is attached to *Helminthostachys zeylanica*, but cannot belong to it.

durian (the thorny fruit), *Durio zibethinus*; and from its similar fruit, *Anona muricata*: this having come to the Malays via the west, is **durian bengala** (Bengal durian) and **durian maki** (Mecca durian),—21–24.

ekor (a tail):

ekor kucing (cat's tail): for several different plants: *Didymocarpus crinita*,—976; *Dysophylla auricularia*,—1150; *Heliotropium indicum*,—937; *Uraria crinita*,—407: and a longer list of plants so named might be made from other sources.

ekor merak (peacock's tail), a more or less fixed name for the species of *Selaginella*, from the iridescence which they often possess. In 1666–1670 it stands for *S. atroviridis* and *S. illustris*. Substituted for ekor merak sometimes is **paku merak** (peacock's fern), which stands for *S. illustris*, *S. caudata*, *S. Wallichii*, and *S. Willdenowii*. Also **paku jambul merak** (peacock's crest fern) stands for *S. atroviridis*,—1664.

ekor serangot, *Flacourtia jangomas*,—102.

ekor tupai (squirrel's tail), *Justicia betonica*,—1043.

daun ekor bukit. Two plants were obtained from the same midwife with this name; one **daun ekor bukit derimba** (virgin forest ekor bukit), *Gomphandra salicifolia*,—284, the other **daun ekor bukit kampong** (village ekor bukit), *Uraria micrantha*,—16.

gambir (gambier):

gambir badak (rhinoceros' gambier), *Maesa ramentacea*,—837.

gambir batu (rock gambier), *Psychotria ? rhinocerotis*,—743.

ganding or **gandang**, *Carallia*. **Ganding hutan** (wild ganding) in 883 is applied to *Diospyros graciliflora*, but it is suspected as the treatment recommended seems scarcely right.

gatal is itch, and **daun gatal** is *Laportea* which causes irritation; **rumpot gatal** (itch grass) is *Homalomena Griffithii*,—1577, which used as a poultice is a rubefacient.

gehar, *Xylopiya ferruginea*,—57.

gelang, for *Portulaca*: *P. oleacea* in 94. It is a name common to Malay and Sundanese. **Daun gelang** used for *Micromelum hirsutum*,—225 is an unusual name, and can scarcely have any direct connexion with the other application of gelang.

geli (tickling), *Homalomena purpurascens*,—1576. The name from a Sakai, but Malays use it for other aroids.

gelugor or **asam gelugor**, *Garcinia atroviridis*,—109–110.

gelugor tawar (insipid gelugor), *Gonostylus Maingayi*,—203.

gemotan pachat, *Rinorea Kunstleriana*,—87.

gerigi, *Connaropsis sericea*,—214.

geronggang or **geronggong**, for *Cratoxylon*. For *C. formosum* in 97, as **geronggang betina**.

getang denotes certain Compositae, such as *Spilanthes acmella*. In 795 it is the related *Synedrella nodiflora*.

getangguri = senanguri or seliguri, q.v.

gilik, *Psychotria sarmentosa*,—740. Probably a Sakai word.

gorek and **gorek-gorek**, the woody climber, *Caesalpinia bonducella*,—469–474; and in 464 the rather similar *Mezoneuron sumatranum*.

guchek, **gunchak**, **gunchiak** and sometimes **gunchian** are applied to *Antidesma*. In 1309–1310 they are transformed into **kunchor** and **kunchow**, and stand for *A. ghaesembilla*. As **gunchak gajah** (elephant or big guchek) 1313 is *A. montanum*.

gundak api, *Vitis cinnamomea*,—301.

gurah in Sumatra and the Malay Peninsula is *Sapium indicum*.

gurah peria (bitter pumpkin gurah), *Croton caudatum*,—1321.

hahu-hahu, *Boschia Griffithii*, which 174 seems to be.

hakek, a Sakai name for *Pandanus*:

hakek jehun, *Pandanus* ? *Klossii*,—1561.

hakek preh, *Pandanus* ? *aurantiacus*,—1562.

haliya (ginger). The Malays recognize three varieties of *Zingiber officinale*, **haliya bara**,—1460–1461; **haliya hudang**,—1463–1464; and **haliya padi**,—1462.

haliya hantu (ghost or wild ginger) and **haliya rimba** (virgin forest ginger) are *Globba panicoides*,—1419.

rumpu halyor or **rumpu halir**, *Ruellia repens*,—1012–1013.

hati-hati (heart-like, from the leaves), a widely-spread name for *Coleus atropurpureus*,—1133–1143, and *Coleus Blumei*,—1144–1146.

hawar-hawar, *Floscopa scandens*,—1540, a form of aur-aur, q.v.

huka haga, ? *Pellacalyx* sp.,—512.

inai (henna), *Lawsonia inermis*,—583–589. Inai comes from the arabic, and in 589 the plant is **inai parsi** (persian henna). The dyeing of finger-nails, &c., as done by henna, can be done equally by means of the flowers of *Impatiens balsamina*, and its allies. (See Burkill in Journ. As. Soc. Bengal, N.S. 3, 1907, p. 565.) This leads to the name **inai paya** for *Hydrocera angustifolia*, which is almost an *Impatiens*: and from *Hydrocera inai paya* has been passed on to sundry marsh herbs which are useless for dyeing, e.g.

Jussiaea linifolia,—605, and *Hygrophila angustifolia*,—1016.

ipi kelah, *Ficus callicarpa*,—1368.

jagong, through Malaysia for *Zea Mays*, the maize plant,—1588. *Sorghum* is also a jagong, but with a qualifying word.

jaing or **jeing**, *Rhodamnia trinervia*,—522–525.

rumpit **jalang** (wild grass), *Ageratum conyzoides*,—775.

jambu, sanskritic, denoting *Eugenia*, and to *Eugenia* is added very naturally *Psidium*.

jambu ayer (water jambu), *Eugenia ? chlorantha*,—535, and *E. ? urceolata*,—539.

jambu ayer mawar (rose-water jambu), *E. Jambos*,—531.

jambu berêksa (tree-cassia jambu), *Psidium Guyava*,—544–546.

jambu biji (seedy jambu), the same,—541–548.

jambu bubul, *E. malaccensis*,—532.

jambu kling (jambu of the colour of the skin of a Tamil), *E. malaccensis*, var.—533.

jambu padang (field jambu), *Psidium Guyava*,—548.

jambu putih (white jambu), *Eugenia pendens*,—534.

janggi padang, *Breynia reclinata*,—1301.

janggus or **gajus**, *Anacardium occidentale*,—353.

jangkak, *Xylopiia ferruginea*,—53, a form of jangkang which is applied to several allied plants.

jarak, the castor-oil plant, *Ricinus communis*, from southern Sumatra to Bali, and probably farther, and with qualifying words extending to other members of the Euphorbiaceae. Poisonous properties cause *Plumbago* to be classed as jarak, for **daun jarak** is *Plumbago zeylanica*: jarak, unqualified, denotes *Ricinus communis*,—1357–1358: in 1317–1318 it is *Jatropha Curcas*. Also there are the following three qualified names:

jarak rumah (domestic jarak), *Ricinus communis*,—1356.

jarak melaka (Malacca jarak), *Jatropha Curcas*,—1319.

jarak pagar (hedge jarak), the same,—1320.

jarang-jarang, see penjarang.

jaras, *Coptosapelta flavescens*,—655.

jari (a digit):

jari buaya (crocodile's toes), *Trichosanthes Wallichiana*,—612.

jari chichak (house lizard's toes), *Vandellia crustacea*,—965, and *Bonnaya brachiata*,—971.

jarum, or **nyarum**, **jarum-jarum** or **nyarum-nyarum**, and **senyarum**: names for a group of shrubs of the Rubiaceae, including *Pavetta*, *Ixora*, and *Chasalia*; and into it are sometimes placed unrelated plants as *Leptonychia*. In the above pages for *Pavetta indica*,—719–723; *Ixora Lobbii*,—

710; *Chasalia curviflora*,—753; and for *Leptonychia glabra* of the Sterculiaceae,—189, and an *Ardisia* of the Myrsinaceae,—870. The name refers to the style and stigma or else to the bud looking like the needle of a balance.

jelai. The application is uncertain. In 850 it stands for *Maeseramentacea*; in 1663 for *Helminthostachys zeylanica*: elsewhere than in the above pages it is *Aphania paucijuga*. In Borneo **jele** and **jelai** are the grain crops, *Coix lachrymajobi* and *Zea mays* (Job's tears and maize), and **henjelai**, **menjelai** and **kedelai** belong to *Coix* in the Peninsula.

kelas, *Eurycoma longifolia*,—262.

jelatang, the stinging nettles. *Laportea stimulans* being that which takes the largest place in the life of the Malays is generally **jelatang**, no further word being necessary; but in 1390 it is **jelatang gajah** (elephant or big nettle).

jelita, *Corchorus capsularis*,—199–201, from the Bengali nalita.

jelor kait, *Illigera ? appendiculata*,—1229.

jelutan, *Lagerstroemia sp.*,—596.

jemerah or **jemerelang**, for various Leguminosae: in 393 for *Millettia serica*.

jenduang hari, see chenderong hari.

jenjarum, see jarum.

jenjuang or **senjuang**, the genera *Dracaena* and *Cordyline*. In 1525 for *Dracaena congesta*.

jenlidah, *Jussiaea erecta*,—606.

jeragor, a variant of johor, *Cassia siamea*,—430.

jering, for *Pithecolobium lobatum* in Sumatra, the Peninsula, and Java,—488–489.

jering atap, *Leucopogon malayanus*,—833 is a mistake for **choreng atap**.

jerok, a generic name for the fruits of *Citrus*, which in 115 as **jerok merah** (red jerok) and **jerok putih** (white jerok) stands for *Eurya acuminata*.

jerun, *Sida rhombifolia*,—128–137.

jirak, recorded for three diverse trees, possessing in common pinnate leaves: the chief jirak seems to be *Heynea trijuga*. In 991 for *Oroxylum indicum*.

jitan for *Willughbeia*: it becomes **jitahan** in Sumatra. In 899–901 it stands for an undetermined *Willughbeia*.

johong beraleh (spell moving), for *Polygonum tomentosum*,—1169, and *Floscopa scandens*,—1537.

rumpun **julong**, *Dracaena graminifolia*,—1524. **Julong** means first-fruits: it enters into the names of a great variety of plants, and research is desirable into its uses.

kabut, used by Sakai in Pahang, in 60 for an Anonacea; in 983 for *Cyrtandra cupulata*; and as **meroyan kabut** in 279–280 for *Chailletia Griffithii*.

- kacham** or **kecham**, for plants of the Myrsinaceae, e.g. species of *Maesa*, *Embelia* and *Ardisia*, but rare. It has also been attributed to an *Eugenia*. In 868 it stands for an *Ardisia*.
- kachang** (a bean):
- kachang bendi**, the second word from Hindi, *Hibiscus esculentus*,—156.
- kachang belimbing** (ridged bean), *Psophocarpus tetragonolobus*,—425.
- kachang kayu** (tree bean), *Cajanus indicus*,—420–424.
- kachang paleh** (? false bean), *Mucuna biplicata*,—388.
- kachang parang** (sword bean), *Canavalia gladiata*,—386.
- kachang perut ayam** (fowl's gut bean), *Vigna catianga*,—382.
- kachang sepalit**, *Phaseolus calcaratus*,—381.
- kachip fatimah** or **kachit fatimah** (Fatimah's betel scissors), for several plants used in child-bed, and for that reason dedicated to Fatimah. *Labisia potherina* is the chief of them, —841–846. **Kachip patimah**,—842, **selusoh fatimah**,—849, and **rumput sitti fatimah**,—844, are other names for it. This plant is common through the Peninsula, but if not handy a substitute is found: thus it is that the name is passed on to *Sonerila nidularia* in 569 and to *Phyllagathis rotundifolia* in 571–572.
- kadok**, *Piper longum*, and with a qualifying word for other peppers. As **kado-kado** it reaches the Moluccas. **Kadok kampong**, *Piper Chaba*,—1190–1191.
- akar **kait-kait** or akar **kekait** (barbed climber), for the genus *Uncaria*, common to Malay and Sundanese. In 650–651 it stands for *Uncaria ferrea*, and in 652 for an undetermined *Uncaria*. The application of the name to the allied *Wendlandia paniculata*, 661, is scarcely justified, as it is not barbed.
- kanching baju** (coat button), for plants with a flower-head suggesting a coat button: usually for *Bidens pilosa*,—793–794: in 1128 for *Hyptis brevipes*.
- kandarusa**, for gandarusa, q.v.
- kandis**, a name for various *Garcinias*. In 111 for *Garcinia Gaudichaudii*.
- kanep**, see kemed.
- kangkong**, the vegetable *Ipomoea aquatica*.
- kangkong putri** (princess' kankong), *Neptunia oleracea*,—479.
- kankatang** (bastard katang), *Oroxylum indicum*,—999, from its slight resemblance to *Cynometra* which is katang.
- kantan**, *Phaeomeria imperialis*,—1483–1484.
- kapas** and **kapuah** (cotton). There is only one species of the genus *Gossypium* at all common in the Malay Peninsula, namely *G. brasiliense*,—118–122.
- kapas hantu** (ghost or wild cotton) outside the Peninsula is

a name for *Abroma fastuosa*; but in the Peninsula it is more commonly applied to *Hibiscus abelmoschus*,—166–169.

kapor, both lime and camphor. **Kayu kapor**, *Cinnamomum javanicum*,—1220.

ubat karang-karang, several unlike plants, which are used medicinally in treating the form of syphilis, which is called karang-karang, a drug-name, rather than a plant-name. In 366–368 it denotes *Cnestis ramiflora*.

kasai, *Pometia pinnata*,—343–347. But the Malay is not so completely conversant with this tree as to restrict the name to it.

kata and **katak** are names which among the Malays seem to have three applications: one in which they appear also as **kertak** and **keretak**, indicates chestnuts of the genus *Castanopsis*; the second, which appears commonly as otak, indicates *Buchanania*; the third is applied to the genera *Callicarpa*, *Geunsia*, &c. In the above pages the name as kata kera is applied only to the third group of plants, and 1064–1065 indicating *Callicarpa arborea*, or 1073 an unidentified *Callicarpa*.

kateh murai, *Hedyotis glabra*,—683.

kati lima, see sekati lima.

katob perenggan (? for katup perenggan), *Kyllinga brevifolia*,—1580.

katut selaya, *Breynia discigera*, 1297.

kayu (wood):

kayu beduri, *Coscinium Blumeianum*,—68.

kayu busok (fetid wood) in 429 denotes *Cassia nodosa*, but incorrectly, busok as a familiar word having been substituted for the unrecognized sanskritic berêksa. This is an illustration of the way in which so many plant-names are made.

kayu kepialu (fever wood), *Vernonia javanica*,—804.

kayu kering (dry wood), *Mallotus anisophyllus*,—1344.

kayu lada (pepper wood), *Ervatamia cylindrocarpa*,—911.
See lada.

kayu mata hari (sun wood), *Dissochaeta annulata*,—576.

kayu metah (glistening wood), *Anplectrum glaucum*,—577.

kayu putih (white wood), *Phyllanthus pulcher*,—1285.

kayu singa (lion's wood), *Abroma augusta*,—185, which is also **kuku singa**.

kechubong, *Datura fastuosa*,—959–961. It extends at least to Bali. The Malays recognize a few other plants as kinds of kechubong, qualifying this name with a word to find a name for them. It is noteworthy that the character linking them together is not the poisonousness, but the possession of large white or pale lilac tubular flowers, and other eye-characters of *Datura*.

kedudok, see *sendudok*.

kekabu or **kekabau**, *Eriodendron anfractuosum*,—123–127.

kekait, see *kait-kait*.

kekapol, *Hoya ? diversifolia*,—925.

kekara or **kara-kara**, *Desmodium heterophyllum*,—414. **Kachang kara** the allied *Dolichos lablab*.

kekêni, *Languas sp.*, 1493.

kekunyit or **kunyit-kunyit**. Species of the Menispermaceae with the yellow substance, berberine, in their stems have this name, *kunyit* meaning turmeric. **Kekunyit** denotes *Coscinium Blumeanum* in 69, and *Fibraurea chloroleuca* in 66. **Berkunyit**, for what seems to be a *Tiliacora*,—71, is essentially the same word.

keladi, widely used in the first place for *Colocasia esculentum* (*C. antiquorum*); and indeed Dr. K. Heyne attributes the name for eastern Malaysia to no other plant. The Malays qualifying it by another word denote various tuberous plants by it.

keladi bemban (keladi like *Donax*), *Stachyphrynium sp.*,—1498.

keladi hudang (shrimp keladi), *Colocasia esculentum*,—1567.

keladi murai (magpie-robin's keladi), *Tacca cristata*,—1514.

pokok kelambu, *Scoparia dulcis*,—972.

kelampi, **kelampayan** and **kelapayan**, sanskritic, *Anthocephalus indicus*,—647–649.

kelampong puyoh, *Solanum nigrum*,—944.

kelap, *Symplocos rubiginosa*,—885, a Sakai word.

kelat, a generic name for *Eugenia*, and similar trees, very abundantly used in the Malay Peninsula and in southern Sumatra; but scarcely known farther away. In 537 it is used for *Eugenia lineata*.

kelat puteh in 350 is *Mischocarpus Lessertianus*; but to call this tree a *kelat* is rather an outrage upon the word.

kelayar, *Monochoria vaginalis*,—1536. The name means connected with a sail. **Chabang layar** is another name for the plant.

kelemoyang, **kelemoyak**, **kemoyang** and **kemoyan**, well-known names for species of *Homalomena*,—1570–1575.

kelêreh, *Homonoia riparia*,—1359.

ubat kelurut tanjong, *Phyllanthus pulcher*,—1283. *Kelurut* is a chancre.

keluwah,? *Nephrodium heterocarpum*,—1633; not truly a plant-name, but the method of using it medicinally.

kemad or **kaneb**, *Apama tomentosa*,—1182. A Sakai name.

keman ayer and **keman gajah**, *Neptunia oleracea*,—479–480.

Keman hantu is also this plant.

kemanchong is a name requiring investigation. A Malay employed by Mr. Ridley in Pahang attached it to a specimen of *Dysoxylon angustifolium*, and other writers, when taking it up, have printed it kamanjong and kemanjong. In 1300 it denotes *Breynia reclinata*.

kemangi, *Ocimum basilicum*,—122, and allied scented plants. A fragrant Cinnamon is **medang kemangi**—the central idea of the name being the giving of an aroma to food. Not all varieties of *O. basilicum* are mild enough for use with food, and those that are not, are not kemangi.

kembang (an opening bud) is a word much more abundantly used in Java than in the Malay Peninsula, and is generally applied to showy flowers which are cultivated as ornaments.

kembang lohor (the bud which opens at noon), *Abutilon indicum*,—148.

kembut, see kentut.

kemoyang and **kemoyan**, see kelemoyang.

kempas or **kumpas** is applied to several woody plants, and one of them is *Koompassia malaccensis*,—453.

kemuchut or **kemunchup**, the Love-grass, *Chrysopogon aciculatus*,—1594.

rumput **kenarus**, *Lycopodium cernuum*,—1673.

kendudok, see sendudok.

kenedai, *Bridelia* and some allied plants. In 1264–1265 it is *B. monoica* and *B. ? penangiana*.

kentut, **kentut-kentut** or **seKentut**, plants with a most objectionable faecal smell, in the first place *Paederia foetida*,—762, and in the second place species of *Saprosma* as *S. glomerulatum*,—759, and *Lasianthus*, as in *L. filiformis*,—758.

kepala tupai (squirrel's head), *Drynaria quercifolia* and *D. sparsisora*,—1636–1637.

kepayang, for certain largish fruits with seeds that contain oil, chiefly *Pangium edule*, and the species of *Hydnocarpus*. It is also used for the Cucurbit, *Hodgsonia capniocarpa*, and various other plants. The sanskritic name kelampayan, curtailed in Malay to kelapayan and kepayan, is confused by the village Malays, and thus **kepayang ayer** for *Nauclea purpurascens* and *Gardenia tentaculata* is obtained. Dr. Gimlette considers that *Hodgsonia* should be **kelapayang**, instead of kepayang, another confusion having occurred. Where in 315 it is attributed to *Vitis novemfolia*, the similarity of the name **akar kum papan** is recognizable, and apparently there is a fourth confusion. In Mr. J. G. Watson's List of Malay Plant Names (Malayan Forest Records, no. 5, 1928) the name kepayang is shown to have a different application in Sarawak.

- kerabu**, ascribed to several unlike plants: in 1227 it is a Lauraceous plant, appearing to be *Lindera selangorensis*.
- kerak** (the particles of food which stick to and make dirty a cooking-pot) gives a name to various plants, notably to Scrophulariaceous plants of *Torenia*, *Vandellia* and *Bonnaya*, known as **rumput kerak nasi**. In 966 *Torenia polygonoides* carries this name. Among other plants to which rumput kerak-kerak has been assigned is *Staurogyne setigera*, and to name it thus is easily understood; but **rumput kerak-kerak** for *Hydrocotyle asiatica* appears unnatural, and perhaps is an echo of the Javanese name **kerok batok**.
- kerakap** denotes the inferior leaves on the betel vine, *Piper betle*, to which a medicinal value is attributed. The use of **kerakap sireh** in 1539 for *Floscopa scandens* seems questionable. Kerekap in 100 for *Flacourtia jangomas*, is for kerukup.
- kerayong** is a form of kedaong which belongs to *Parkia*, but has become a name for various plants among the Malays, e.g. a *Peltophorum*,—463. **Keranji kepayang** appears in Mr. Watson's list for *Cynometra*, and in this case the second half of the word is a confusion (see kepayang above) with kerayong or kedaong.
- kerekoh** or **kerukup**, *Flacourtia jangomas*,—104. Kerekap may be used at times for kerukup.
- keremak**, small herbaceous plants, among which is *Alternanthera sessilis*,—1167–1168. The country folk of Kedah say **kereman** for keremak. In Java the name becomes keremi.
- keremak batu**, *Hygrophila quadrivalvis*,—1018.
- kerenan**, certain species of the Euphorbiaceae, including *Briodelia stipularis* and *B. monoica*,—1262–1263.
- keretok babi**, *Uraria crinita*,—405–406.
- kerjak**, *Zingiber ? officinale*,—1466, a Sakai name.
- kesimbuk** and **kesimbukan**, *Saprosma*; in 761 for *S. ternatum*. In Java the name is applied to *Paederia foetida*, which has similar uses.
- kesum**, certain species of *Polygonum*; in 1170–1171 for *P. minus*.
- ketapi** or **kechapi**, *Sandoricum nervosum*,—272, a name which extends eastward to Madura.
- ketumbeh**, **ketumbak** or **ketumbit**, *Leucas* in Malaya, but is applied to a few other herbaceous plants used like it for poulticing. In 1155–1158 it is *L. zeylanica*. Its origin is Indian apparently, but not via Sanskrit.
- pokok kipas** (fan plant), *Belamcanda chinensis*,—1503, on account of the arrangement of the equitant leaves; and for the same reason *Philydrum lanuginosum*.

- kopok**, *Anplectrum divaricatum*,—578.
- korat nasi**, *Desmodium capitatum*,—416.
- korat tanah**, *Uraria lagopoides*,—410.
- kotum**, *Mitragyne speciosa*,—656.
- bunga kuau chermin** (peacock-pheasant flower), *Peristrophe tinctoria*,—1054.
- kuat**, a well-established name for *Archytaea Vahlia*,—117.
- kuku** (a claw):
- kuku gerda** (Garuda's claw), *Sida sp.*,—146, an unreasonable name.
- kuku singa** (lion's claw), *Abroma augusta*,—186.
- kuku tupai** (squirrel's claw), *Caesalpinia bonduc*,—472.
- This name is used for other species of *Caesalpinia* also.
- kulau**, *Cnestis ramiflora*,—367.
- ubat kulit** (skin medicine), *Jussiaea repens*,—604.
- akar kum papan**, *Vitis novemfolia*,—314. Kum is doubtless for lakum, a noun applied to *Vitis*, and papan means a plank, this species having a flat stem.
- kunchor** or **kunchow** is not a form of kunchur, the very well-known name for *Kaempferia galanga*, but is a local form of **gunchiak** or **gunchian**, *Antidesma ghaesembilla*,—1309–1310.
- kundor**, in Malay and Sundanese, and changed but little in some other languages of Malaysia, *Benincasa cerifera*,—622.
- kunyit**, a word connected very intimately with kuning (yellow), and denoting the turmeric plant, *Curcuma domestica*,—1435–1439, and as **kunyit terus**, *Zingiber officinale*,—1455–1457.
- kunyit bolai** or **kunyit bonglai**, *Zingiber Cassumunar*,—1471–1475.
- kunyit terus hitam** (black turmeric), *Zingiber Ottensii*,—1477–1479.
- kunyit terus merah**, *Zingiber Cassumunar*,—1470. Berkunyit, q.v., means the plant which is as it were of turmeric.
- ubat kura bengkak** (medicine for fever with inflammation), *Cinnamomum javanicum*,—1218.
- ubat kurap** (ringworm medicine) in 1047 is *Rhinacanthus communis*, and **ubat kurap bukit** is an undetermined related plant,—1059.
- labu ayer**, *Cucurbita pepo*,—623, a well-known name.
- lachang**, *Setaria plicata*,—1603. As lanchuran this name in Java indicates several other grasses.
- lada** (pepper, but not strictly; for it is applied to several other aromatic and sharp-tasted plants). Duplicated as **lada-lada** or **lelada** (bastard pepper), it is a general name for the genus *Ervatamia*,—910.
- lada barau** (barau bird's pepper), *Brucea sumatrana*,—256.
- lada hitam hutan** (black jungle pepper), *Smilax sp.*,—1535.

- lada hutan** (jungle pepper), *Goniothalmus macrophyllus*,—40.
lada pahit (bitter pepper), *Brucea sumatrana*,—251–257.
lada-lada, *Ervatamia malaccensis*,—910.
batang lada (stick pepper), *Ervatamia peduncularis*,—909.
kayu lada (wood pepper), *Ervatamia cylindrocarpa*,—911.
lalang, Malay and Sundanese, for certain tall grasses, chiefly *Imperata arundinacea*,—1589–1590.
pokok **lalipan** or pokok **halipan** (centipede plant), *Pedilanthus tithymaloides*,—1259, from the arrangement of the leaves and the curve of the stem; and used by suggestion as a medicine for centipede bites. It is also **penawar lipan** (centipede neutralizer),—1258.
lampin badak or **lampang badak** or **lelamping badak**, *Clerodendron disparifolium*,—1084.
lanchang, *Euphorbia hirta*,—1253.
rumput **lanchong**, *Leptaspis urceolata*,—1608.
langsar, *Lansium domesticum*, from Sumatra to Celebes,—274–276.
langsar hutan (jungle langsar), *Erycibe ? aenea*,—938, the fruit having a slight resemblance to the langsar.
larak or **larat**, usually applied to Anonaceae; but village Malays at times confuse it with jarak and lerek, q.v.
larak, *Uvaria micrantha*,—17.
larak api (fire larak), *Melodorum ? lanuginosum*,—50–51.
larak hutan (jungle larak), *Polyalthia hypoleuca*,—36.
larak kucing (cat's larak), *Oxymitra latifolia*,—45; also akar larak, an Anonacea, undetermined,—58.
lawang enters into the names of aromatic substances such as mace, bunga lawang, and cinnamon bark, kulit lawang. It is widely used in plant-names in Malaysia. In these pages **lawang kecil** is *Cinnamomum javanicum*,—1219 and **kayu teja lawang** in *Cinnamomum ? iners*,—1217.
lawang hutan, given for *Zizyphus ? Kunstleri*,—297, is a name to be accepted with caution; and lawang ascribed to an *Anona* is a mistake for **lonang**, see nona.
legundi or **lenggundi**, sanskritic, *Vitex trifolia*,—1100–1108. Its use extends to Celebes and Java and the Philippines; but the Malays are apt to admit a number of plants similar to the *Vitex* into their genus legundi.
leguni, not to be confused with legundi, but, judging by the plants to which it is applied, belonging to the group of names around seliguri, q.v. In 132 it stands for *Sida rhombifolia*, and in 419 for *Desmodium gyrans*.
lekek or **likir**, *Amorphophallus* and its allies, which make a part of the food of the jungle tribes. *Arisaema* is included,—1566.
lelayang (the swallow-like plant, from the shape of the leaves on its climbing stems), *Adenia ? populifolia*,—607. It is

to be remembered that kepayang might suggest lelayang, for a climber with some characters in common with *Hodgsonia capniocarpa*, such as *Adenia* is.

lelemak, see lemak.

lelimau, see limau.

lemak (fat), a word used in the names of various plants, like minyak (oil).

lemak batu (rock lemak), *Didymocarpus crinita*,—977, and *Cyrtandra pilosa*,—981.

lemak ketam (crab's fat), *Melochia corchorifolia*,—179–182.

lemak pahit (bitter fat), *Millettia sericea*,—395.

lemak-lemak or **lelemak**, *Connarus oligophyllus*,—356.

lembegah, rembegah or **rameya**, *Calotropis gigantea*,—923–924.

paku lemiding, or lemidi, or memiding, or miding, the climbing fern, *Stenochlaena palustris*,—1643–1646.

lempedu or **hempedu** (gall):

lempedu tanah (ground gall), *Curanga fel-terrae* (C. amara),—967–969.

lempoyang, certain species of *Zingiber*, which are more aromatic than the common ginger. In 1480 it is *Z. aromaticum*.

lempui, *Zingiber ? chrysostachys*,—1481, for lempoyang.

lengkuas, lengkuwas, lengkuwa and **lengkanan**, well-known names for the genus *Languas* (*Alpinia*):

lengkuas kechil (little lengkuas), *Languas conchigera*,—1486.

lengkuas padang (field lengkuas), the same,—1487.

lengkuas raya (big lengkuas), *Languas ? scabra*,—1491.

lengkuas, both *Languas Galanga* and *L. scabra*,—1489–1491.

lengkanan, *Languas ? conchigera*,—1488.

leniyah, apparently = *neriah*, *Canarium*,—31. **Lenia berok** has been recorded for the unrelated genus *Xanthophyllum*, and in that case must be regarded as a mistake for minyak berok.

lerek, the Marantaceous genera *Phrynium* and *Stachyphrynium*, a name liable to be confused with larak, q.v. In 1496 it is *Stachyphrynium Jagorianum*, and as **lerek tikus** (mouse or little lerek) apparently *S. parvum*,—1497.

lerhor, *Apama corymbosa*,—1180, a Sakai name.

lerkuing, *Hyptis suaveolens*,—1127.

letup-letup, a name for *Physalis*, because its berry is 'shut up' within its calyx. Secondarily for *Passiflora foetida* on account of the resemblance in the fruit. In 955–957 it stands for *Physalis minima*.

kayu lichin (smooth wood), *Psychotria sp.*,—750.

lidah (a tongue):

lidah buwaya (crocodile tongue), *Allomorphia malaccensis*,—563, and *Sansevieria zeylanica*,—1520.

- lidah kucing** (cat's tongue), *Anplectrum divaricatum*,—578.
rumput lidah rimau (tiger's tongue grass), ?*Paspalum* sp.,—1597.
- lidah tióng** (bulbul's tongue), *Hedyotis hispida*,—687–688.
- limau** (a Citrus fruit):
- limau besar** (big citrus), *Citrus decumana*,—250.
limau hantu (ghost's or wild citrus), *Citrus hystrix*,—242.
limau kapas (cottony lime), *Citrus medica*, var.,—248.
limau mata kerbau (buffalo-eye citrus), *Citrus medica*,—249.
limau nipis (thin-skinned citrus), *Citrus aurantifolia*, the true lime,—243–247.
limau paġar (hedge citrus), *Atalantia Roxburghiana*,—241.
limau-limau or **lelimau** (bastard citrus), in 59 is used for one of the Anonaceae, possibly quite irregularly.
- lipah** (perhaps meaning spreading, of a poultice), *Polytrema vulgare*,—1048.
- lok kemala hakim**, a grandiloquent substitute for the somewhat vulgar rumput tahi babi (pig's dung grass). Lok apparently stands for lolok (pearl) and the whole name means the physician's talismanic pearl. The plant thus named is *Adenostemma viscosum*,—786.
- lonang**, *Anona reticulata*,—27. **nonah** is the usual word, and is nearer to the original Mexican than lonang. Logan, three-quarters of a century ago, recorded the intermediate **lonah**.
- lortan haji**, in 400 denoting *Dalbergia tamarindifolia* and in 1299 *Breynia reclinata*. Dr. K. Heyne states that **lorogan haji** in Java is an *Equisetum*.
- ubat luka** (wound medicine), *Canthium horridum*,—738.
- lumbah, lemboh** and **lembu**, *Curculigo*, becoming **lemba** in Sundanese, and extended to various terrestrial orchids. In 1500–1502 it stands for a plant which almost certainly is *C. latifolia*.
- kayu lumbor**, *Alsodeia Kunstleriana*,—88, perhaps for lampar = spreading.
- kayu lupa dahan** in 854 stands for *Ardisia colorata*. Mr. Watson records the name for *Arthrophyllum ovalifolium*, and the two are only similar in dimensions.
- pokok lutut ayam** (the fowl's knee-joint tree) in 1017 stands for *Hygrophila quadrivalvis*. Mr. Watson records the name for the very unlike plants *Ardisia lanceolata* and *A. Ridleyi*.
- luwi**, 1115, seems to be a *Vitex*.
- mahang**, for *Macaranga* in the Peninsula and in southern Sumatra. It is rarely used for plants of another genus, but in 1338 denotes the allied *Mallotus floribundus*. In 1348–1351 it stands for *Macaranga triloba*, *M. Griffithiana*, and *M. incisa*.
- maharaja lela**, certain Euphorbiaceae, e. g. *Trigoniastrum hypoleucum*, and in 1361 *Baliospermum axillare*.

- mahmud pantai**, for *maman pantai*, q.v.
- maja** or **manja** (from the Persian) enters into the names of several well-known *materia medica*. **Maja pahit**, which should designate the dried mature fruits of *Terminalia chebula*, is *Apama corymbosa* in 1181.
- malapari**, *Pongamia glabra*, in the Peninsula and in Sumatra. In 462 another tree of the same family, Leguminosae, namely *Afzelia retusa*. In 398 what appears to be *Millettia Hemsleyana* is called **mempari**, which must be considered as an attempt at the same name.
- mala pudak**, *Peristrophe tinctoria*, 1056. Pudak is perhaps for puding.
- mali-mali** or **memali**, species of *Leea*, and some other plants. In 317-321 it stands for *Leea gigantea*, *L. ? sambucina*, and *L. Curtisii*. Its application in 1124 to *Ocimum basilicum* is probably erroneous.
- maloh**, see melor.
- rumpul malu-malu** or **memalu** (the modest grass), *Mimosa pudica*,—482-485.
- maman** in Malaya and **mamang** in Java is *Gynandropsis* and species of *Cleome* similar to *Gynandropsis*. Maman may designate the wild *G. pentaphylla*,—84-85, as well as the showy garden *G. speciosa*: when it is desired to distinguish the two the former becomes **maman hantu** (ghost or wild maman). **maman pantai** (maman of the edge of the forest) is *Cleome viscosa*,—79, and **mahmud pantai**,—82, is a distortion of it.
- maman kurai** in 973 is *Aeschynanthus ? marmorata*.
- mambul**, *Millettia sericea*,—396-397.
- manggis**, *Garcinia mangostana*, the mangosteen,—108. Of its genus no species more nearly resembles it than *G. Hombroniana*, and this is **manggis hutan** (wild mangosteen),—107. Rarely is the name manggis extended beyond these two, but in **tampang manggis**,—112, we have an unidentified *Garcinia*.
- mangun-mangun**, **magun-magun**, **bangun-bangun**, **be-bangun** and **membangun**, *Coleus carnosus*,—1129-1131. The variability of the name shows that it is not a common one in the mouths of Malays, and not understood. It appears also as **raja bangun**.
- mata** (an eye):
- mata ayam** (fowl's eye, from the round red berries), *Ixora sp.*,—717, and *Ardisia crenata*,—858-862.
- mata etek** (duck's eye), *Ardisia oxyphylla*,—851-852.
- pokok mati hidup** (death to life tree). In 1518 applied to *Stichoneuron caudatum*. The name has been recorded also for *Aneilema* and *Portulaca*.

- matichang** (doubtless for mati chaching, meaning death to worms), *Mezoneuron sumatranum*,—465.
- maya-maya** or **memaya**, some Euphorbiaceae. The meaning of the word has not been recognized. It is recorded for *Mallotus floribundus*,—1341-1342, and elsewhere for a *Macaranga* and a *Sapium*. **mayang-mayang** or **mema-yang** (the plant with sheaths) is quite a different name.
- mechanduk** (? for mengjanggot), *Paramignya* sp.,—238.
- medang** (a laurel and any similar tree):
- medang**, *Litsea amara*,—1224, and *Lasianthus villosus*,—757.
 - medang ketiwang**, *Evodia malayana*,—217.
 - medang melukut** (rice chaff medang), *Sida carpinifolia*,—145.
 - medang ubat bisul** (boil medicine medang), *Uvaria* sp.,—19.
 - medang punggok** (brown owl medang), *Beilschmiedia pahangensis*,—1209.
 - medang salah** (? false medang), the same,—1206, and also *Uvaria purpurea*,—12.
 - medang sa-nanak** (pustule medang), *Uvaria ? purpurea*,—14.
 - medang sera**, *Beilschmiedia ? pahangensis*,—1210.
 - medang teja**, *Cinnamomum* sp.,—1223.
- melada** (peppery), *Capparis micracantha*,—86, and *Brucea sumatrana*,—251. Compare some of the uses of lada.
- melian**, ascribed to three quite unlike plants. In 1008 it is *Thunbergia laurifolia*.
- melor, meloh** and **maloh**, jasmine and chiefly *Jasminum Sambac*,—886-892.
- melor hutan** (wild jasmine), *Canthium aciculatum*,—739, which has suggestively similar flowers.
 - melor susun** (chaplet jasmine), *Jasminum Sambac*.—886. See susun.
- memali**, see mali-mali.
- memalu**, see malu-malu.
- memaya**, see maya-maya.
- membangun**, see mangun-mangun.
- membatu**, for a dozen diverse trees. **membatu puteh**, *Geunsia farinosa*,—1063.
- memechah mangkok**, *Hedyotis capitellata*,—666.
- memidin**, see lemiding.
- mempari**, see malapari.
- mempat** and **mempitis**, *Cratoxylon*,—98.
- mempelas**, *Delima sarmentosa*, and its close allies. It is *Delima sarmentosa* in 1-5, *Tetracera Assa* in 7, and *T. fragrans* in 8. In the form **ampelas** and as **ampelas lichin** (smooth mempelas) it is *T. Assa* in 6.

- mempoyan, empoyan, or poyan** is properly *Rhodamnia cinerea*, as in 524–527; but at times is used for other plants.
- memputri**, probably for **meroyan putri**, *Glochidion sericeum*,—1294.
- menangkuh**, *Gironniera hirta*,—1364. Perhaps it should be mengungkai, meaning (the medicine) for unloosening (from possession).
- mendalu**, see dedalu.
- mengala hutan**, *Polyalthia Beccarii*,—35.
- mengkirai** for *Trema amboinensis*,—1363, seems to be well known. Its use for *Ilex cymosa*,—287, is apparently in error, mesira being meant.
- mengkuang**, *Pandanus* and certain species of the sedge *Mapania* which possess sufficient resemblance. Of the pandans it usually denotes the large species, which are the more useful, and this is interesting as they are those least like Mapanias, except in not being sought for scent. Two species of *Pandanus* are mentioned in the pages above, neither precisely determined, one,—1561, seemed to be *P. Klossi*, and the other,—1562, called **mengkuang prah**, seemed to be *P. aurantiacus*.
- mengkudu**, *Morinda*, known to the eastward as far as the Moluccas,—723–735. Of the two Malayan common species that which is in gardens and village shrubberies, *M. citrifolia*, is **mengkudu besar** (big mengkudu), and that always wild, *M. elliptica*, is **mengkudu kecil** (little mengkudu).
- menhim**, *Hullettia dumosa*,—1389, a Sakai name.
- menjarang**, or **penjarang** or **jarang-jarang**, *Cyathula prostrata*,—1162. **nyarang** in 1163 stands for jarang, and is the same plant.
- menkubong**, *Macaranga megalophylla*,—1347.
- mentiong**, recorded hitherto only for certain plants of the Rubiaceae; but in 466 it is attached to *Mezoneuron sumatranum*.
- mentiyaga malam** (? mentiyaram malam), *Santiria ? longifolia*,—267.
- merajah** or **meraga**, a name belonging to *Canthium didymum*; but **merajah santah** in 1308 denotes the unlike *Sauropus parvifolius*.
- rumput **meranti**, *Physalis minima*,—956.
- merbau** denotes certain trees of the Leguminosae: in 362–363 is used for what appears to be a *Rourea* of the family Connaraceae somewhat similar in foliage.
- merensa**, *Connarus oligophyllus*,—355.
- meriding** or **meridin**, *Didymosperma hastata*,—1556–1557. This, more familiar as **beridin**, is usually *Caryota mitis*, which is not dissimilar.

- meriku**, ? *Salacia grandiflora*,—293.
- meringan**, *Desmodium gangeticum*,—417. Mr. Watson has recorded **ingan** as the name of an undetermined *Desmodium*.
- meroyan** is used in Pahang for any of the 'rempah ratus' or hundred ingredients which are infused for the dosing of a woman after child-birth: elsewhere the word is not used quite so freely. In the pages above the following are named:
- meroyan angin** (wind meroyan), ? *Xylopiya malayana*,—52.
- meroyan berok** (baboon meroyan), *Globba aurantiaca*,—1420.
- meroyan dawai** (wiry meroyan), *Taenitis blechnoides*,—1641.
- meroyan kabut** (weariness meroyan), *Chailletia Griffithii*,—279.
- meroyan kerbau** (buffalo's meroyan), *Didymocarpus crinita*,—978.
- meroyan kuching** (cat's meroyan), *Hedyotis capitellata*,—679–680.
- meroyan otak**, *Uvaria purpurea*,—13.
- meroyan paku** (fern meroyan), *Taenitis blechnoides*,—1641.
- meroyan panas** (hot meroyan), *Cyrtandra pendula*,—980.
- meroyan puteh** (white meroyan), *Hedyotis capitellata*,—678.
- meroyan puteri** (princess' meroyan), *Phyllanthus frondosus*,—1290.
- meroyan sakat** (vexation meroyan), *Psychotria stipulacea*,—749.
- meroyan siamang** (ape's meroyan), *Languas ? melanocarpa*,—1492.
- meroyan ungu** (purple meroyan), Anonacea,—55.
- mertajam**, *Erioglossum edule*,—324–326; **terajam**,—327–328, is the same.
- merulai**, an unusual form of bolai, q.v., for *Oroxylum indicum*,—993.
- mesai kuching** (cat's whiskers) is often given to the garden plant *Orthosiphon stamineus*: but in 774 it is given to *Ageratum conyzoides*.
- meseapat**, certain species of *Macaranga*, e.g. in 1354 it is *M. denticulata*. From *Macaranga* it may be extended to the allied genus *Mallotus*, e.g. *Mallotus macrostachyus*,—1330; and as **meseapat hitam** (black meseapat) denotes *Mallotus cochinchinensis*,—1335.
- mesirah**, *Ilex cymosa*,—285–286, and by extension for several other woody plants. By way of distinguishing *I. cymosa* among them it is **mesirah bukit** and **mesirah puteh**.
- kayu **metah**, *Anplectrum glabrum*,—577.
- metimun** (the plant which bears cucumbers), *Cucumis sativus*;
metimun tikus (mouse or small cucumber-bearer), *Cyclea laxiflora*,—74.

mian batu, *Labisia pothoina*,—847: the name came from a Sakai, whose 'mian' may have represented meroyan.

miga, *Dendrobium ? planibulbe*,—1408, perhaps for daun **mekga** (ulcer leaf).

minyak (oil):

minyak berok (baboon's oil), a well-known name for the species of *Xanthophyllum*,—93.

ubat mulas (colic medicine), *Clerodendron serratum*,—1088.

mumah lapan, *Homalanthus populifolius*,—1362. **moya**, a similar name to mumah, has been ascribed to this plant.

muntah bumi (vomit of the world), *Eurycoma longifolia*,—266. This plant has a great reputation among occult remedies and such a name as the above is a consequence:

petala bumi (layers of the world) is of the same nature. Apparently both are rare.

murah, *Conocarpus sp.*,—1387.

nadoh, *Alsodeia sp.*,—90.

naga buwana (dragon of the world) and **naga jimat** (talisman dragon), names not uncommon for *Phyllanthus pulcher*,—1274–1284.

nanas hijau, a green pineapple, *Ananas comosa*,—1513. The word nanas came from America.

angka, *Artocarpus integra*,—1379–1380, used throughout most of Malaysia: in 1381–1382 as **angka bubor**. The sour-sop, *Anona muricata*, may also be called angka.

angka kerbau (buffalo's angka) in 1333 seems to be *Mallotus macrostachyus*.

nasi (cooked rice): **nasi-nasi** a name for a number of plants, perhaps given for diverse reasons. In 872–873 it is given to *Sideroxylon ferrugineum*. **nasi-nasi betina**, or in brief **nasi betina** in 73, is *Stephania rotunda*.

nenering, apparently for a *Caesalpinia*,—476–477.

nerapi, *Glycosmis*: in 219 for *G. puberula*.

neriah, *Canarium odoratum*, 30. Apparently the same word as **nyirah**, which is recorded for the allied *Uvaria purpurea*.

nibong, *Oncosperma tigillaria*, and in 1555 for the very similar *O. ? horrida*.

nilam, the patchouli plant, *Pogostemon spp.*, and to a lesser extent some similar plants. In 1148–1149 *P. Heyneanus*, and in 1132 apparently *Coleus carnosus*.

akar noh papan, and **akar noh keroh**, *Vitis Lawsoni*,—304–305.

nona kapri or **nonah kapri**, a completely accepted name for *Anona reticulata*,—25–26. **nona** had its origin in a Mexican word.

nullu api, a form of dedalu api or mendalu api; and in 1235 for *Loranthus ferrugineus*.

- nyarang, menjarang, and penjarang**, *Cyathula prostrata*,—1161–1163.
- nyarang songsang**, *Achyranthes aspera*,—1164–1165.
- nyarum**, see jarum.
- nyior**, the coconut, *Cocos nucifera*,—1550–1553.
- nyireh**, *Carapa*, a name extending to Java; as nyiri in 277–278 standing for *Carapa moluccensis*.
- nyolang padang**, *Archytaea VahlII*,—116: **iyang** and **riang** are more correct.
- orang aring**, *Eclipta alba*,—803; and in Java or Sumatra to certain other plants as well. As its origin is not evident to the Malays it is rather variable in form.
- otak hudang**: well known and applied to *Buchanania sessilifolia* and *B. lucida*. In 351 it is the latter.
- pagar anak** is more particularly *Ixonanthes reticulata* than any other tree, but is applied to several woody plants; in 32–33 it is *Desmos chinensis* and perhaps another *Desmos*.
- paha ayam** (fowl's thigh, probably from the colour), *Peristrophe acuminata*,—1052.
- pahliman** (? for peliman), *Sida rhombifolia*,—138.
- daun pakan**, a name for various climbers, which make the woof (pakan) of the forest. In 302 for *Vitis cinnamomea*.
- pakma**, *Brugmansia Lowii*,—1186. A century ago Blume described as *Rafflesia patma* a Javanese parasite of the same order as this *Brugmansia*, the name *patma* being Javanese for it. To hear in 1924 from the mouth of a Sakai in the hills above Tapah essentially the same word applied to an allied plant, was most interesting. European botanists rarely see these parasites because it is only just at the time of flowering when they can be observed; but doubtless the Sakai who live year by year in the forests are very familiar with them, and need to name their 'pakma' oftener than at first sight seems likely. The distribution of these two names should be worked out.
- paku** (a fern): unqualified the word may denote that fern which is most eaten by the Malays, namely *Anisogonium esculentum*,—1630. In 1632 it is ?*Nephrodium heterocarpum*.
- paku batu** (rock fern), *Selaginella illustris*,—1670.
- paku gajah** (elephant or big fern), *Angiopteris evecta*,—1650–1651.
- paku jambul merak** (peacock's crest fern), *Selaginella atroviridis*,—1664.
- paku lemidng**, see lemidng.
- paku lipan** (centipede fern), *Blechnum orientale*,—1627.
- paku mega** (fleecy cloud fern), *Adiantum lunulatum*,—1625.

- paku memiding**, see lemiding.
- paku merak** (peacock's fern), *Selaginella caudata*, *S. Wallichii* and *S. Willdenowii*.
- paku miding**, see lemiding.
- paku ragi** (? painted fern), *Ceropteris calomelanos*,—1640.
- paku roman** (stubble fern), *Ceratopteris thalictroides*,—1649.
- paku siap-siap**, *Adiantum caudatum*,—1626.
- paku sisek** (scale fern), *Adiantum lunulatum*,—1625.
- paku tanjong** (headland fern), *Anisogonium esculentum*,—1631.
- pala**, the nutmeg, *Myristica fragrans*,—1205; buah pala, the nut and bunga pala, the mace.
- pala hutan** (wild nutmeg) is in 296 used for *Zizyphus* ? *Kunstleri*, probably in error for **pialu hutan**.
- palas**, all palms of the genus *Licuala*. In 1559 it stands for *L. triphylla*.
- rumput **palis** (grass that is shy, perhaps from the attitude of the flowers), *Labisia pothoina*,—845.
- panak** belongs to *Tetramerista glabra*: **panak rimba** in 239 is *Paramignya* sp.
- panas belukar**, *Calophyllum* ? *Kunstleri*,—113.
- panchis-panchis**, *Polygonum barbatum*,—1176.
- pandan**, *Pandanus* spp. and sometimes *Dracaena* spp. No. 1563 is an undetermined *Pandanus*.
- pandan bouw** (scented pandan), *Pandanus* sp.,—1564.
- pandan hutan** (wild pandan), *Dracaena* ? *conferta*,—1523.
- patah bubul** and **patah gogoh**, *Hedyotis capitellata*,—673-675.
- patawali** or **petawali**, *Tinospora crispa*,—63-65.
- patiyang**, or in Java **patikan**, *Euphorbia hirta*,—1251. The same name is applied in 138 to *Sida rhombifolia*, which is also **pahlimau**, perhaps irregularly.
- patok tuwah** in 1007 and 1011 is *Thunbergia laurifolia* and the extremely similar *T. grandiflora*: in 1014 it is *Ruellia repens* which has similar flowers but does not climb. As the last is an introduced plant, the name belongs to *Thunbergia*. It occurs also as **tuwah** and **ketuwah**.
- patong urat** (probably for patah urat, i. e. broken muscles, or else for tampong urat), *Dunbaria Scortechinii*,—374.
- pebisi**, *Acrostichum aureum*,—1648.
- pechah periok** (broken cooking-pot), species of *Ixora*, *Chasalia* and some allied plants of the Rubiaceae. The origin of the name is probably in the earthenware colour of *Ixora* flowers. In 712 it is *Ixora stricta* and in 718 an undetermined *Ixora*.
- pedangit**, *Coleus* sp.,—1147.
- pedong**, *Pedilanthus tithymaloides*,—1261.
- pegaga**, in Java **pegagan**, for *Hydrocotyle asiatica*,—628-632.

pekan. This word is not precisely fixed in usage, and pekan flowers may come from several sources, but chiefly the species of *Jasminum*, with white scattered star-like flowers, such as *J. bifarium*,—895, and *J. ?Curtisii*,—893. The flowers of *Azima tetraacantha*, because they resemble those of these jasmines, earn for it the name of pekan,—898. *Memecylon ?amplexicaule* obtains the name in 581: it has white flowers. In 139 the name is used for the quite dissimilar plant *Sida rhombifolia* which has yellow flowers.

pekan mata hari (sun pekan), *Gmelina ?villosa*,—1078, a name difficult to understand.

pekapa, *Euphorbia ?heterophylla*,—1249. Kapa is shivering and the plant is used to cure ague.

pelaga or in Java **kepulaga**, the Javanese round cardamon from *Amomum kepulaga* (A. cardamomum, *auctt.*, non Linn.), which is imported into the Malay Peninsula,—1482.

pelangas or **pelangeh** or **pelah**, usually species of the Euphorbiaceous genus *Aporosa*, in Malaya and also in Java. In the above pages its use,—874, for *Sideroxylon ferrugineum* seems to be a mistake.

pelah besar (big pelah), *Goniothalamus Scortechinii*,—42.

pelah kecil (small pelah), *Croton argyратum*,—1325.

akar pelihara (the cherisher creeper), *Justicia sp.*,—1045.

pelong has two rather distinct applications: one to *Microstemon velutina*,—354, and the closely allied similar *Pentaspadon officinalis*; the other application to the tree Vernonias.

peluroh, *Ardisia ?Ridleyi*,—864, ascribed also to *Lepidagathis longifolia*.

pemati ulat, *Uraria crinita*,—408, indicating its use as an insecticide.

akar penak, *Ventilago ?oblongifolia*,—300.

penawar (the neutralizer), a word in the name of many simples; and though it may be used alone to indicate particular plants, there seem to be none really entitled to be called 'penawar' without a qualifying word. In the above pages *Portulaca pilosa* is designated penawar: it is a plant which the Chinese have encouraged in various parts of the Peninsula, and want of sufficient familiarity with it among the Malays might account for its inadequate name.

penawar demum panas (neutralizer of fever), *Leptonychia glabra*,—188.

penawar lipan (neutralizer of centipede poison), *Pedilanthus tithymaloides*,—1258.

penawar pahit (bitter neutralizer), *Eurycoma longifolia*,—264. This application is very well fixed.

penawar putih (white neutralizer), the same,—263, and also *Gelonium glomerulatum*,—1360.

- pencholam** or **kecholam**, *Clerodendron disparifolium*,—1085.
- pengechut**, *Rourea humilis*,—359. Kechut = shrivelled, referring to the wrinkled pod.
- penjarang** or **menjarang** or **jarang-jarang**, *Cyathula prostrata*,—1161. The application of penjarang in 856 to *Ardisia colorata* seems to be an error.
- penujuh**, *Ixora ? stricta*,—714.
- pepangil** (the summoner, of spirits), *Clerodendron paniculatum*,—1096.
- peparu**, as applied by Malays, is probably used where there is something in their appearance suggestive of the lungs: all the plants so named are small, and all the names have been obtained in northern Perak:
- peparu**, *Ophiorrhiza communis*,—662–663; the fruit forked.
- peparu bendang** (peparu of wet rice fields), *Desmodium heterophyllum*,—413.
- peparu hitam** (black peparu), *Polytrema vulgare*,—1049.
- pepara** or **para-para** (sooty) is quite a different name, given to *Rhynchospora aurea* and other sedges very subject to the attacks of black fungi.
- pepinang**, *Leptaspis urceolata*,—1609. The name **rumput pinang** has been attributed to a sedge: *Leptaspis* is a grass.
- perachet ulam**. Perachet is a name of *Ervatamia malaccensis*. Perachet ulam (seasoning perachet) in 1083 is *Clerodendron disparifolium*. **pencholam** is a name for this *Clerodendron* and it is clear that the village Malay who used perachet ulam for it, ought to have said pencholam.
- perah**, a variety of climbers, a few shrubs, and it has been attributed to a sedge. In the last case perah is an error for pepara (see under peparu). Perah in 1229 is the climber *Illigera ? appendiculata*.
- petai**, the Malay flavouring got from *Parkia*, and so the species of *Parkia*, with a qualifying word for various allied plants:
- petai belalang** (grasshopper's petai) is several allied plants, including *Pithecolobium ? angulatum*,—490, and *P. clypearia*,—491–493.
- petai-petai** (bastard petai), is *Rourea ? similis* in 361.
- petala bumi** (folds of the world), indicating magic uses; and in 265 *Eurycoma longifolia*, or in 358 *Rourea humilis* (? by substitution).
- petaling**, *Ochanostachys amentacea*,—281–282. The Malays, however, are apt to give the name to several other trees with entire leaves and good timber.
- petawali**, **putarwali** or **patau wali**, *Tinospora crispa*,—63–65.
- akar petek**, *Drymoglossum piloselloides*,—1639.
- piat**, *Premna pyramidata*,—1075.
- pinang**, *Areca Catechu* and its fruit,—1542–1549. The name

- pinang penawar** or pinang which is the neutralizer (of poison) is applied to *Pinanga disticha* and *Actinorhytis Calapparia*, and pinang enters into the names of several other palms. It enters also into the names of several unrelated trees the fruits of which may be eaten by birds or animals; thus we get **pinang pergam** or pigeon's pinang, *Beilschmiedia pahangensis*,—1207 being one of them; and **pinang kera** or monkey's pinang, *Dioclea reflexa*,—385 being this. Again the word enters into the names of certain plants whose seeds are red, e.g. *Agelaea* and certain other members of the Connaraceae. **pinang baik** or excellent pinang is a name for certain trees with excellent timber; and any characters that they have in common with *Areca* are so indistinct that the origin of the name is obscure.
- In 1207 *Maesa ramentacea* is kayu **pinang bujong**.
- pinjarut**, *Psychotria rostrata*,—742. *Penyarum* is perhaps the right word.
- pipi keli** (gills of keli fish) or **sisek keli** (scale of the keli fish), are names for *Pellionia Duvauana*, equally with **sisek teng-giling** (anteater's scale),—1391-1397.
- pisang**, a banana: **pisang-pisang** (sham bananas), the Anonaceae from the shape of the fruits. Of this family *Uvaria sp.* is **pisang-pisang keruing**. The use of pisang-pisang to denote the Anonaceae seems to be local.
- pokok gajah beranak** (tree of the elephant that is bringing forth), *Barringtonia acutangula*,—549.
- popong** appears to stand in 387 for a *Spatholobus*. The name as **popong raya** has been recorded for *Adinandra macrantha*, of the same family; but also for quite unrelated plants.
- posok**, for an undetermined Acanthacea,—1060.
- puding**, applied to several plants with variegated leaves, as *Graptophyllum hortense* and *Codiaeum variegatum*. This is so in Sumatra as well as in the Malay Peninsula. *Graptophyllum hortense* bears the name in 1057-1058. From a certain measure of resemblance *Justicia uber* obtains it in 1044. **puding hitam** is *Allomorpha alata*,—566. There is no obvious reason why *Maesa ramentacea* should bear the name as in 838.
- pulai** in Malay and Sundanese for *Alstonia scholaris* and allied species,—915-918. **pulai puteh** (white pulai) is *A. spathulata*.
- pulasan**, *Nephelium mutabile*,—339-342. But **akar pulasan** in 101 for *Flacourtia jangomas* is a name quite unexpected.
- puleh** stands for **sepuleh**, *Fagraea racemosa*,—928.
- pulot** (glutinous rice): **pulot-pulot** or **pepulot**, certain mucilaginous plants, that which most frequently bears it being

Urena lobata,—149. In 784 it is given to *Adenostemma viscosum*.

punai is the green pigeon, and the following two plants are associated in their names with it:

punai bintang, *Polyalthia sp.*,—37.

punai tanah, *Acrotrema costatum*,—9. Both names came from Bentong in Pahang.

putat, *Barringtonia*: **putat kedal** (putat used for the skin complaint called kedal), *Barringtonia racemosa*,—530.

raja (counter-sign for spells):

raja bangun, *Bryophyllum calycinum* in 500, but the name is apparently one of those for *Coleus carnosus*. See mangun.

raja beraleh (removing counter-sign), *Salacia sp.*,—295. Cf. johong beraleh.

raja kayu, *Dracaena congesta*,—1527. Other species of *Dracaena* share the name.

rambai, *Baccaurea Motleyana*,—1314–1315.

rambai kucing (cat's rambai), *Mallotus philippinensis*,—1343.

rambutan, *Nephelium lappaceum*. Several allied wild plants are called by the Malays **rambutan pachat** (leech's rambutan), both within the genus *Nephelium* and within the genus *Xerospermum*, and as well species of *Aglaia*, *Mischocarpus* and *Arytera*. In 1211 it is used for a plant really remote, namely *Beilschmiedia pahangensis*.

rami, *Boehmeria nivea*, and with a qualifying word, some other fibre plants. Its use as **rami buah** in 1267 for *Phyllanthus Niruri* came about by confusing the words amin and rami.

ranchang belongs to a few plants, e.g. *Smilax calophylla* and *Freycinetia malaccensis*, which are **ranchang besi** (iron ranchang). In 1417 *Tropidia curculigoides* is **ranchang hantu** (ghost or wild ranchang).

akar ratus or perhaps better **akar daun ratus**, from its hundred bracts), *Justicia bracteata*,—1042.

redani or **dani**, *Quisqualis indica*,—519–520.

remayong, *Basella alba*,—1179.

rembiga or **lembiga**, *Calotropis gigantea*: in 923 **remiga**.

ubat rennyut (medicine for the throbbing of a boil, &c.), *Hedyotis capitellata*,—669.

rengkoh, *Alsodeia echinocarpa*,—89.

renting, *Caesalpinia bonduc*,—468.

resam, an Arabic word meaning to delineate, which has become the common Malay name for the fern *Gleichenia linearis*,—1619–1624. This fern furnishes the native pens of Malaysia, and an export of them to India.

ubat restong (ulceration medicine) is a name which, erroneously as **ubat setong**, is used in the interior of Pahang for a

- Menisperm,—78. **restong kelapa** is a well-established name for the species of *Ervatamia*, and other lacticiferous plants which are used in treating the disease restong; 914 is an *Ervatamia*.
- riang** or **riang-riang**, species of *Vitis* which have rather succulent stems. From the genus *Vitis* it is extended to the similarly succulent genus *Begonia*, but only in quite a limited degree. However, it is also used for some other plants. In 306–309 it denotes *Vitis repens* and *V. hastata*, and in 624 *Begonia isoptera*.
- ribu** and **ribu-ribu**, used for quite diverse plants. **kayu ribu**, for instance, in southern Sumatra is *Anisophyllea disticha*, and in the Malay Peninsula *A. Scortechinii*. In 360 it is a *Rourea*, apparently *R. similis*, and in 365 it is the allied *Cnestis ramiflora*, the two being distinguished as male and female or big and little. *Rourea* and *Cnestis* do not possess any very obvious characters in common with *Anisophyllea*. Still more commonly **ribu-ribu** is used to indicate the ferns *Lygodium scandens* and *L. flexuosum*, and this is the case not only in the Malay Peninsula,—e. g. 1652–1658, but in Sumatra. In the Moluccas another fern *Helminthostachys* of very different appearance is called **ribu-ribu**. The applications of this name require further elucidation.
- ru** or **eru**, *Casuarina equisetifolia*,—1403. It is used as far to the eastward as the Moluccas.
- rukam** in the first place indicates *Flacourtia rukam*, as in 99, not only in Malay, but in Sundanese and Javanese. In the second place it means other species of *Flacourtia* and also sometimes, with a qualifying word, species of *Scolopia* and *Ximения*.
- ruku** or **ruku-ruku**, primarily the basil, *Ocimum basilicum*,—1120–1121, but extended over several allied plants. However, its use for a *Lepisanthes*,—330, would seem to be an error.
- rumput** (a grass or a herb):
- rumput anak temot** (trembling child grass), *Borreria hispida*,—763.
 - rumput bukit** (hill grass), *Fimbristylis miliacea*,—1582.
 - rumput bulu** (hair grass), *Lophatherum gracile*,—1606–1607.
 - rumput jangat** (glue grass), *Euphorbia thymifolia*,—1254–1255.
 - rumput lumor** (poultice grass), *Ophiorrhiza singaporensis*,—664.
 - rumput rimau** (tiger grass), *Mimosa pudica*,—485.
- saga**, of arabic origin, connected with the system of weighing by the use of the seeds of *Abrus* and *Adenanthera*. *Abrus* as the lesser is **saga kechil**,—370; and it is also **saga akar** (climbing saga), the other being a tree.

- daun **sa-hilai sa-tahun** (a leaf a year), a good descriptive name for *Aplostelis flabelliformis*,—1415.
- sakar**, apparently for a *Zizyphus*,—299.
- salah** (false):
- medang salah hutan**, *Melodorum ? fulgens*,—46.
 - rumput salah pemakai**, *Fimbristylis aestivalis*,—1581.
- salang suwang**, *Pentaphragma begoniifolium*,—832. Malays confuse salang and sulong (q.v.).
- salip**, *Scleria lithosperma*,—1585. **sialit** and **siamit** are names for sedges, which may have had a common origin with this; but **salip kechil** for *Coleus atropurpureus*,—1137, appears to be a mistake.
- samak** (tanning): kulit samak is generally the bark of species of *Eugenia* which can be used to tan. In 538 it is *E. polyantha*. There is a **samak penangok**,—454 in the above pages, and it is apparently *Dialium laurinum*.
- sambau**, *Eleusine indica* in Malay and Sundanese,—1605.
- sampur hantu**, *Sindora*,—461, extending beyond the Peninsula.
- sampu** (decline) is in the names of several plants used medicinally, e.g. *Coptosapelta flavescens*,—659.
- daun **sangsara** (anguish leaf), *Solanum verbascifolium*,—947.
- daun **sapenoh**, *Eurycles sylvestris*,—1511–1512, a plant to which magic properties are attributed.
- sapu leman** (Solomon's poultice), *Sida rhombifolia*,—144. It seems to be an unusual name.
- sausik**, apparently = **daun soksik** (rustling leaf), *Glochidion littorale*,—1291.
- sawai**, *Aeschynanthus sp.*,—974.
- sebalai** or **balai**, *Aralidium pinnatifidum*,—641–642, a well-known name; but the connexion between the plant and a building (balai) has not been made clear.
- paku **sebebeh**, apparently = the paku sebeneh of certain name-lists, *Drymoglossum piloselloides*,—1639 (beneh = seed).
- sebereteh** (the treatment for reteh, a skin-complaint), *Coptosapelta flavescens*,—654–660; and sebereteh kayu, *Fagraea racemosa*,—935.
- sebongbong**, *Elephantopus scaber*,—771.
- sebueh** (producing foam, a name used for several plants of very diverse appearances), for *Hedyotis capitellata*,—670. Other species of the genus receive the name.
- secherek** (for diarrhoea), see cherek.
- sedawai** (wiry), see dawai.
- seginting**, *Pothos scandens*,—1578, and *Codiaeum variegatum*,—1327.
- sejumbok**, *Plantago major*,—836.
- sekati lima** (blood money), as a plant-name *Aganosma mar-*

ginata,—920. Cantley's collector, Alvins, who wrote the name s'kacha lima, attributed it to *Clerodendron deflexum*. Again in 919 it is given to an *Urceola*. There is perhaps some interesting folk-lore regarding sakti or supernatural power behind it.

kayu **sekatok**, *Zanthoxylon hirtellum*,—218.

sekebah, attributed to three distinct plants. In 392 to *Millettia sericea*; in 1321 to *Croton caudatum*, and elsewhere than in these pages to *Indigofera suffruticosa*. The word indicates that the plant so called is used to induce perspiration in breaking fevers; and it is thus no true plant-name.

sekedok, *Ageratum conyzoides*,—776. It is interesting that this name appears to have in it the more or less obsolete word kedadak (see Wilkinson's Malay Dictionary).

sekembang, *Hedyotis capitellata*,—682 (? from kembang, indicating swelling up of mucilage by taking up water).

sekontut, *Lasianthus filiformis*,—758. See kentut.

rumpit **sekepet burit**, *Kyllinga brevifolia*,—1579, in allusion to its use for diarrhoea.

sekeras akar, *Polytrema vulgare*,—1050.

sekinchah, *Leptonychia glabra*,—190.

sekinchut, *Uvaria* sp.,—20.

sekitam or **sekitan**, *Hedyotis capitellata*,—676–677.

sekobang, a name obtained at Raub in Pahang, for *Fagraea racemosa*,—931, and as **sekobang kecil** (little sekobang) for *Anaxagorea Scortechinii*,—38.

sekujuh, *Eugenia lineata*,—536.

sela prawas, *Cinnamomum javanicum*,—1213. A Sakai name.

selada, *Psychotria montana*,—744–746. As the medicinal uses ascribed to this plant suggest those of *Ervatamia*, which is lelada, perhaps the *Psychotria* is a substitute for it.

selak kerebok, *Bauhinia ?Griffithiana*,—457. It suggests **tapak kerbau**, an excellent descriptive name from the leaves.

selaru (possessing kino), *Macaranga megalophylla*,—556.

seleguri, *Sida rhombifolia*, varying to senanguri, senguri, senduri, china guri, and gettanguri,—129–143.

selepat tungau (louse plaster), *Mikania scandens*,—773. Another use of this name is probably to be found in 943, *Ipomoea sagittifolia*, as **selepat tunggul**, which name is unlikely.

selimbar, a name for various Rubiaceae, &c., but in 1639 applied to the fern *Asplenium Nidus*.

selimbut, *Anona* sp.,—29.

selusoh, a generic name for all the drugs, medicines, and charms which the Malays use for facilitating delivery in child-birth. *Pygeum ?persimile* is given the name in 494.

- selusoh fatimah** = kachit fatimah, *Labisia pothoina*,—849. **selusoh semang** is *Melodorum lanuginosum*,—49, and *Leptonychia glabra*,—187.
- sembong, sembang, or semboh**, *Blumea balsamifera*,—822–829, and sometimes nearly allied plants. Sembong is used in many parts of Malaysia.
- sembor** (a medicine which is chewed to be spat over the patient): **rumput sembor batu** is *Pogonatherum saccharoideum*,—1592. This grass is called **rumput sumbu buota** in 1593, a name certainly corrupt.
- ubat **semelit** or ubat **sembelit** (indigestion medicine), a name for many quite unrelated plants. Dr. K. Heyne in his list of plant-names for the Dutch Indies (Nuttige Planten Ned.-Indië, 1927, p. ccv.) quotes from Malaya two plants only under the name 'semilat', namely *Rourea fulgens* and *R. rugosa*. Others can be added, and in the pages above these are found:
- semelit**, *Hedyotis capitellata*,—672, and *Psychotria montana*,—745.
- semelit bayor**, *Croton argyratus*,—1326.
- semelit dadeh** (curds semelit), *Ficus alba*,—1376.
- semelit jalin** (Galen's semelit), *Abrus precatorius*,—371.
- semelit jangkar** (spreading semelit), *Dalbergia tamarindifolia*,—399.
- semelit jekok**, *Breynia discigera*,—1298.
- semelit papan** (plank semelit), *Conocephalus ? amoenus*,—1384.
- semelit patong**, *Phyllanthus pulcher*,—1286.
- semomah**, *Breynia rhamnoides*,—1305.
- semuleh**, doubtless an error for semelit, *Hedyotis capitellata*,—667–668.
- semuloh**, equally an error. In 1177 it stands for *Polygonum chinense*.
- semun**, certain epiphytic ferns, e.g. *Asplenium nidus*,—1628; and **semun bidadari**, *Platyserium coronarium*,—1642.
- semuru**, *Clausena excavata*,—231–233.
- semutêga**, *Coptosapelta flavescens*,—653.
- sena**, a word brought eastwards by the Arabs, and belonging to imported *Cassia* leaves. In Malaya and also in India it is common to say Mecca senna, by way of praise: moreover *Pterocarpus indicus*,—401, is also sena, but by abbreviation from **angšana**.
- senagu**, *Micromelum hirsutum*,—221.
- senaguri, senanguri** and **senduri**, see seliguri.
- senarong kambing**, *Ageratum conyzoides*,—777. The noun senarong compares the plant with *Helicteres* which is **men-darong**, or **narong**.

sendudok or **kendudok**, many Melastomaceae; it varies to **senudok**, **kedudok**, &c. The species of *Melastoma* have the first claim to it, especially *M. malabathricum*, *M. decemfidum*, and *M. polyanthum*,—558–562. In 565 it is given to *Allomorphia exigua* and in 574 to *Marumia nemorosa*. All the following, which possess the name with a qualifying word, belong to the Melastomaceae:

kedudok cherang (forest-opening sendudok), *Blastus Cogniauxii*,—567.

kendudok halus (slender sendudok), *Anplectrum sp.*,—579.

kedudok hutan (wild sendudok), *Allomorphia exigua*,—564; and also *Blastus Cogniauxii*,—567.

sendudok rimba (virgin forest sendudok), *Blastus Cogniauxii*,—568.

seniah, **seniyeh** and **senil**, *Ficus hispida*,—1369–1371.

sentawan, see *tentawan*.

sentol, *Sandoricum indicum*, used to the eastwards at least to Bali, and in the Malay of the further coasts,—268–271.

senyamok, *Guioa pleuropteris*, which is also **kelentit nyamok**,—348–349. **akar nyamok** seems to be unconnected and belongs to plants of the family Connaraceae.

senyarum, for *nyarum-nyarum*, see *jarum*.

sepanjang, the dye-wood and dye-plant *Caesalpinia sappan*,—475.

sepantan, *Desmodium gangeticum*,—418.

sepuleh (restorative) applied to two groups of plants. In the first place to species of *Fagraea*, which are trees or shrubs; and it is probable that a Malay when asked for *sepuleh* would present them. In these pages the name is applied to *Fagraea racemosa* in 927–934. Secondly, *sepuleh* is used as the name for certain orchids used in magic.

sepuleh, *Cymbidium Finlaysonianum*,—1413.

sepuleh dudok, ? *Plocoglottis porphyrophylla*,—1412.

sepuleh rumah (house *sepuleh*), *Dendrobium sp.*,—1410.

sepuleh tulang (bones *sepuleh*), *Dendrobium crumenatum*,—1409.

serai, the fragrant *Cymbopogon* grasses: **serai makan**, *C. citratus* which is used in food,—1594.

seranam, *Ruellia repens*,—1015.

serapat in Singapore and in Borneo denotes species of *Urceola*: but up-country Malays indicate by it a number of very different twining plants which are equally laticiferous.

serapat akar, *Hippocratea ? indica*,—289, *Salacia grandiflora*,—291–292, and erroneously as **sireh iput**, *S. flavescens*,—294, and also *Gnetum tenuifolium*,—1610.

akar serapat was not given to a climber at all, but to two trees, *Cratoxylon polyanthum*,—96, and *Ficus ? polysiye*,—

- 1375, the latter milky. Serapat, ascribed to *Alternanthera sessilis*,—1166, is regarded as an error for keremak.
- seranggat**, *Peliosanthes* sp.,—1519. Apparently this word appears as **serangga** in Wilkinson's Malay Dictionary.
- seredang** and **seregang**, the latter the more correct, *Trevesia cheirantha*,—639, and *Schefflera heterophylla*,—635.
- serengan**, several plants of the family Leguminosae, the chief among them being *Flemingia strobilifera*,—376–379. As **serengan hutan** (wild serengan) it may be *Uraria crinita*,—409, and as **serengan kecil** (little serengan) *Desmodium pulchellum*,—415. In 570 **serengan kerbau** (buffalo's serengan) it is used for the very unlike *Sonerila nidularia*.
- serengkong**, *Apama tomentosa*,—1183. Rengkong is the wind-pipe, and the name describes the long fruit.
- serikam**, *Urophyllum hirsutum*,—697.
- serugat**, *Tropidia curculigoides*,—1416.
- sesalang**, see salang.
- rumput **sesayang**, *Scleria ? multifoliata*,—1386. The name **sayang tikus** has been recorded for the grass *Leptaspis urceolata*.
- setandok** in 521 is for ?*Quisqualis*; but seems to be a misapplied name.
- setawar**, for several medicinal plants, but more for *Costus speciosus* than for any other, which is **setawar benar** (true setawar). *Kalanchoe laciniata*,—501–504, and *Bryophyllum calycinum* are setawar of second rank. **setawar** and **penawar** have a common root, but cover different groups of plants. In the above pages the following are mentioned:
- setawar bakar perah** (setawar for heating and squeezing). ?*Hippeophyllum Scortechinii*,—1406.
- setawar hutan** (jungle setawar), *Costus speciosus*,—1445.
- setawar kampong** (village setawar), *Kalanchoe laciniata*,—502.
- setawar padang** (field setawar), *Bryophyllum calycinum*,—499.
- setawar sakelian bisa** (setawar for all poisons), *Barleria lupulina*,—1022–1023.
- setawarular** (snake's setawar), *Peristrophe acuminata*,—1051.
- setebai** (for sechabai), *Piper* spp.,—1203–1204.
- setengok**, *Otophora resecta*,—333.
- setong** or **restong** (ulceration of the nose): **setong jundor**, *Henslowia buxifolia*,—1240.
- setumpok**, *Clerodendron fragrans*,—1097–1099.
- akar **siak** or akar **siak-siak**, *Dianella ensifolia*,—1521. In Pahang the name may become **chi-chiak**,—1522.
- sialit**, sedges of the genus *Scleria*; in 1587 it stands for *S. suma-*

- trensis*: as **sialit dudok** *S. levis* in 1585. **Salip** seems to be a form of the word sialit.
- siamet gunung**, *Fimbristylis ? asperrima*,—1583. Siamet for sialit.
- sikjot**, *Aglaiia salicifolia*,—273.
- sinai anjing**, *Leptaspis urceolata*,—1610.
- sireh**, the betel vine, *Piper betle*, several parts of which are considered medicinal; and the leaf is used as a wrapper for medicines. **kerakap** is a word for the inferior leaves which are medicinally used; and **tunas sireh**,—1201, denotes the young leaves. Sireh is also used in the names of other peppers.
- sireh dudoh**, *Piper sarmentosum*,—1200.
- sireh jehok gebil**, *Piper sp.*,—1202.
- sireh melayu**, *Piper betle*,—1193.
- sireh murai** (magpie-robin's sireh), *Piper ribesioides*,—1188.
- sireh pachat** (leech's sireh), *Piper caninum*,—1189.
- sireh rimau** or **sireh harimau** (tiger's sireh), *Piper porphyrophyllum*,—1194–1199.
- sireh rimau puteh** (white tiger's sireh), *Piper argenteum*,—1187. The village Malay seems at times to confuse plant-names beginning with sisek (a scale) with those beginning with sireh, as is certainly the case in the following:
- sireh nyireh**, *Ardisia sp.*,—867.
- sireh padang**, *Ardisia sp.*,—853.
- sireh puyu**, *Ardisia crenata*,—861.
- sisek** (a scale):
- sisek keli** (keli fish scale), *Pellionia Duvaiana*,—1391–1393.
- sisek puyu** (puyu fish scale), *Ardisia sp.*,—866, and *Carallia suffruticosa*,—508.
- sisek tenggiling** (anteater's scale), *Pellionia Duvaiana*,—1395–1397; *Elatostema sessile*,—1398; and *Desmodium triflorum*,—412. The last is sold in the drug-shops of Java as **sisek belok**.
- sitam**, *Anonacea*,—56.
- rumpit sitti fatimah** (our lady Fatimah's grass), *Labisia pothoina*,—844.
- songsong** and **susong**, *Combretum*: in 513–516 for *C. ? acuminatum*.
- sudu** (a spoon): **sudu-sudu**, a name for the succulent species of *Euphorbia*, of which the commonest in the Peninsula may be *E. neriifolia*,—1244–1248.
- daun sulaiman** (Solomon's leaf), *Hedyotis capitellata*,—665.
- sulong**, sometimes **sulang** or **salang**, and rarely **selang**, is a name belonging to the same group of Rubiaceae as tulang-tulang and gading-gading. It is clear from the association of these names that sulong and the other three names given

after it suggest teeth, mainly the rhinoceros' tooth of fabled medicinal value, though the fourth name means a cross, which is exactly what the flowers of Rubiaceae exhibit. The name is applied in 711 to *Ixora Lobbii*, and in 747 to *Psychotria stipulacea*. In the form **salang-salang** or **sesalang** (bastard sulong or tusk) it is a *Psychotria*, no. 748. **sulang rusa** (deer's tooth) is *Alangium uniloculare*.

suloi, *Cyclophorus acrostichoides*,—1635.

sumbu (a wick) is used in the names of some sedges and grasses; **sumbu buta** for *Pogonatherum saccharoideum*,—1595, may stand for sumbu badak (rhinoceros' horn), but this is not clear.

sungkai, *Peronema canescens*,—1116—1119.

suntang, *Chickrassia tabularis*. In 255 **suntang hutan** (jungle suntang) denotes *Brucea sumatrana*, both being fever medicines and having similar leaves.

susok (a spur): **susok ayam** (cock's spur), for certain spinous plants, in 235 for *Luwunga scandens*, in 236—240 for a *Paramignya*. But susok ayam in 906 for an *Ervatamia* is an error in which susok should be susun.

susu (breast): **susu rimau** (tiger's breast) for various fungi, and in 1674 for *Polystictus rhinocerotis*.

susun (arranged in rows), coupled with kelapa (a coconut) as **susun kelapa** for *Ervatamia*. In 907 *E. coronaria*, and in 913 an undetermined *Ervatamia*. Erroneously, apparently, it is ascribed to *Cnestis ramiflora* in 364; and twice susok was heard for susun.

tabar, a Sakai corruption of **setawar**, *Costus speciosus*,—1448. **pokok tadah mata hari** (tree which intercepts the sun), *Labisia pothoina*,—848.

tahi (dung) has two meanings when in plant-names—(1) of worthlessness, and (2) of habitat: the latter is the more usual, and the plants in which it occurs are village weeds:

tahi ayam (fowls' droppings), *Lantana aculeata*,—1061.

tahi babi (pigs' dung), *Adenostemma viscosum*,—779—792, and *Stachytarpheta jamaicensis*,—1062.

kayu tajam lawang, *Cinnamomum ?iners*,—1217, for **teja lawang**.

taleb, fungus rhizomorphs,—1675, a Sakai name.

tambun tasek, **taman tasek**, **timba tasek**, **tinjau tasek**, **tenjal tasek**, **tinjal tasek** and **tunjat**, peculiar names for *Clerodendron serratum*, which is a plant of open country, not of lakes (tasek; but Wilkinson states that the original meaning of tasek was probably the sea),—1086—1094.

kayu tampal besi, see the next.

tampang for species of *Artocarpus* is a name which is known in Sumatra, the Malay Peninsula, and western Borneo: **tam-**

pang besi is apparently not of common origin with it, and is applied primarily to species of *Callicarpa*, e.g. *C. longifolia*,—1066–1070, and as **tampang besi merah** (red tampang besi), *C. cana*,—1072. **tampal besi** (tampal meaning plastering) is sometimes substituted; but with doubtful propriety. In 1288, *Phyllanthus ? reticulatus* is called kayu tampal besi, probably by a transfer of the name from *Callicarpa*.

tampin (leaf wrapper) belongs to several Euphorbiaceae, and is interchanged with **tampu**. In 1340 it is *Mallotus floribundus*. Sometimes **tampin** is substituted for **tempinis**.

tampong is sometimes used for **tampang**; but otherwise medically in **tampong urat**, which is *Dunbaria Scortechinii*,—372–375, and *Pueraria phaseoloides*,—383. **tampong tulang** is another plant name in which it means lameness.

tampu = **tampin** in **tampu hitam** and **tampu puteh** for *Macaranga tanaria*,—1353. But **tampu rengat** (tampu for gripes) seems to possess little in common: it is *Mezoneuron sumatranum*,—467, *Rubus alceifolius*,—496–498, and *Beilschmiedia pahangensis*,—1208.

tanding or akar **ding**, *Smilax myosotifolia*,—1533.

tangkai jerami, *Peristrophe acuminata*,—1053.

tapak (an impression):

tapak badak (rhinoceros' footprint), *Trevesia cheirantha*,—640.

tapak etek (duck's footprint), the same,—636.

tapak gajah (elephant's footprint), *Phyllagathis rotundifolia*,—573.

tapak leman (Solomon's seal), *Elephantopus scaber*,—772.

tapak murai (magpie-robin's footprint), *Justicia sp.*,—1046.

tapak rimau (tiger's footprint), *Trevesia cheirantha*,—637.

tapak sulaiman (Solomon's seal), *Elephantopus scaber*,—764–765.

tapuh, *Dracaena ? congesta*,—1528.

taring (a tusk): **taring pelandok** (mouse-deer's tusk), used very inconsistently. In 283 it is for *Gomphandra ? affine*.

tarum (indigo). In 391 for *Indigofera suffruticosa*. **tarum siam** (Siamese indigo) is appropriately *Strobilanthes flaccidifolius*,—1019. In 975 as **tarum hutan** (jungle indigo) it stands for *Didissandra frutescens*, which is not a dye plant.

tasek pechuri, *Justicia Neesiana*,—1041.

te (tea), *Acalypha siamensis*,—1328, from which is made a kind of tea.

tebok seludang, descriptive of the leaf-sheaths, *Polygonum barbatum*,—1172–1175.

tebu (sugar-cane):

tebu kera (monkey's sugar-cane), *Forrestia gracilis*,—1541.

- tebu salah** ((false sugar-cane), *Saccharum arundinaceum*,—1592, and *Phragmites communis*,—1604. Because of its sweet root, *Albizzia myriophylla* is **akar tebu gajah** (elephant or big sugar-cane climber),—487.
- teja** (cinnamon). In 1212–1215 teja is *Cinnamomum para-neuron*; in 1216 *C. iners*; in 1221 *C. javanicum*; in 1228 for what appears to be a *Lindera*. As **teja betina** (female or small teja), *Neolitsea zeylanica*,—1226.
- telinak**, *Gnetum tenuifolium*,—1617.
- telinga** (an ear):
- telinga beruang** (bear's ear), *Thottea dependens*,—1185.
- telinga kerbau** (buffalo's ear), *Blumea balsamifera*,—815, and *Solanum verbascifolium*,—945.
- telor ayam** (fowl's egg), *Psychotria rostrata*,—741.
- tembaga suasa** is an alloy of copper and gold. **pokok tembaga suasa** in 1529 is *Smilax calophylla*, and **rumput tembaga suasa** in 1504 is *Crinum asiaticum*.
- temberak hutan**, *Lasianthus oblongus*,—756, in reference to its foul smell; **akar temberak**, *Flacourtia jangomas*,—103.
- tembusu**, *Cyrtophyllum peregrinum*,—936, but applied differently in Sumatra, if the records are correct.
- temiyang**, *Phyllochlamys spinosa*,—1365.
- temu**, *Curcuma*. The kitchen Curcuma is *C. domestica*, **temu kunyit** or **temu kuning**. The medicinal temus are several:
- temu lawak**, *C. xanthorrhiza*,—1440–1441.
- temu lilin** (wax temu), *Curcuma sp.*,—1444.
- temu raya** (big temu), *C. ? xanthorrhiza*,—1442. In addition *Gastrochilus pandurata* is admitted as a temu under the name **temu kunchi**,—1431–1432. It seems that the Javanese use these plants to a greater extent than the Malays.
- tenjal tasek** or **tinjal tasek**, see tambun tasek.
- tentawan** or **sentawan**. A name given to certain climbing shrubs of diverse families, which envelop or capture (tawan) other plants. The name is obviously loosely understood. In 1385 it stands for *Conocephalus amoenus*; in 1383 it is altered into the form of **chentawan** and used for the same; and in 1386 it is used for *C. suaveolens*.
- tentulang**, see tulang.
- tepak**, perhaps for larak, *Melodorum cylindricum*,—47.
- tepeng**, *Desmos chinensis*,—34.
- tepus** (the gingerworts): Malay and Sundanese, and farther east changed into **tepu**.
- tepus belalah**, *Languas sp.*,—1494.
- tepus haliya**, *Zingiber spectabile*,—1467.
- tepus hinggap** (perched tepus, an epiphyte), *Hedychium ? longecornutum*,—1421.

- tepus sa-helai sa-tahun** (a-leaf-a-year tepus), *Gastrochilus sp.*,—1433.
- tepus wangi** (fragrant tepus), ?*Elattariopsis sp.*,—1485.
- terajang, teradang, and derajang.** Species of *Lepisanthes*, including *L. Kunstleri*,—329–332, and perhaps *L. cuneata*. These names are closely similar to **mertajam**, which is the name of the allied *Erioglossum edule*, and is changed sometimes into **terajam**,—327–328. Moreover **terajang** has been recorded for the *Erioglossum*.
- terap**, the Artocarps which give bark-cloth. In 1378 for *Artocarpus Kunstleri*.
- terapi**, *Glycosmis puberula*,—220, probably for nerapi.
- teriak**, *Ficus callicarpa*,—1367.
- terong**, *Solanum*, and close allies, together with *Cyclea* in the Menispermaceae. It is difficult to appreciate the view which adds the latter to the former, but it is certain that *Cyclea* is regarded as a terong.
- terong asam** (sour relish terong), *Solanum ferox*,—948–950.
- terong kemang** (evil-spirit terong), *Cyclea laxiflora*,—75–76.
- terong pengar** (drowsy terong), *Datura fastuosa*,—958.
- terong pipit** (sparrow's terong), *Solanum torvum*,—951.
- terong puyoh** (quail's terong), *Solanum mammosum*,—952.
- terupong and kerubong**, *Panicum sarmentosum*,—1601.
- tetumpang**, the epiphytic fern, *Cyclophorus adnascens*, which takes its lodging (tumpang) upon trees,—1634.
- timba tasek and tinjau tasek**, see tambun tasek.
- tongkat ali** (Ali's crutch or support), *Eurycoma longifolia*,—258–261, and *Smilax calophylla*,—1530. The first is the more usual use. Both plants are used as tonics. **tukar ali** (Ali's substitute) was used for tongkat ali in one case.
- tuba**, intimately connected in Malay with poisons, and generally denoting the species of *Derris* such as *D. elliptica*,—404, which are the chief of fish poisons. With a qualifying word tuba is used to indicate other poisons, among which is **daun tuba**, *Diospyros Wallichii*,—884.
- tukar ali**, see **tongkat ali**.
- tukas or tukus**, a name for a few palms; in 1558 used for *Didymosperma hastata*.
- tukut takai or tuku takal or tukut takal**, a not uncommon name for *Croton caudatum*,—1323.
- tulang** (a bone):
- tulang daing** (dried-fish bones), in 510–511 indicates *Carallia suffruticosa*, evidently because the peculiar serrations of the leaf-edge suggest the lines of projecting ends of bones which make elevations down the shrunken skin; but the name also belongs to some plants of the Leguminosae and Connaraceae which have no such resemblance. **tulang-tulang** or

tentulang, meaning suggesting bones, has in Malay two applications: one, which is perhaps the older one, is to a group of Rubiaceae shrubs; the other is to plants with leaves or twigs which suggest the skeleton by their articulations such as *Euphorbia tirucalli*,—1256–1257, and the orchid *Vanda Hookeriana*,—1414. The use of **tentulang jantan** for *Pedilanthus tithymaloides*,—1260 is similar.

tulang-tulang is applied to a few Zingiberaceae plants also; but it is difficult to see why.

kayu tulang as used in southern Sumatra has again a different application.

tumboh (bursting), for *Clerodendron disparifolium*,—1080, when used to cause a gum-boil to burst.

tunas sireh; see sireh.

akar **tunjok langit** (pointing to the sky), *Helminthostachys zeylanica*,—1659–1661.

bunga **tunjong** is the Waterlily; but in 922 is applied to *Asclepias curassavica*.

tupoi darah (tupoi for bleeding), *Languas sp.*, 1495. Tupoi is a form of tepus.

tutup bumi (bung of the World), *Elephantopus scaber*,—769–770, as representing by its rosette of leaves the pentacle with which Solomon sealed the jinns underground.

tuwalang for large trees such as bees usually nest in, and not in the first place the name of any particular tree. Its use in 1296 for *Embelia pectinata* must be regarded as a mistake: **dulang** was intended.

tuwasah, *Gymnopetalum cochinchinense*,—613–614.

tuwauh, *Thunbergia laurifolia*,—1009–1010; **patok tuwauh** for the very similar *T. grandiflora*,—1011.

ubai etek or **aubi etek**, *Pouzolzia indica*,—1400. Ubai, from want of familiarity, is changed into **rubai** and **gubai** in Pahang.

ubat batok kering (dry cough medicine), *Corchorus capsularis*,—200.

ulan, climbers mostly of the family Convolvulaceae.

ulan pelandok (mouse-deer's ulan), *Merremia convolvulacea*,—941.

ulan raya (big ulan), *Merremia vitifolia*,—939–940.

ulan susu (milk ulan), *Pueraria phaseoloides*,—384.

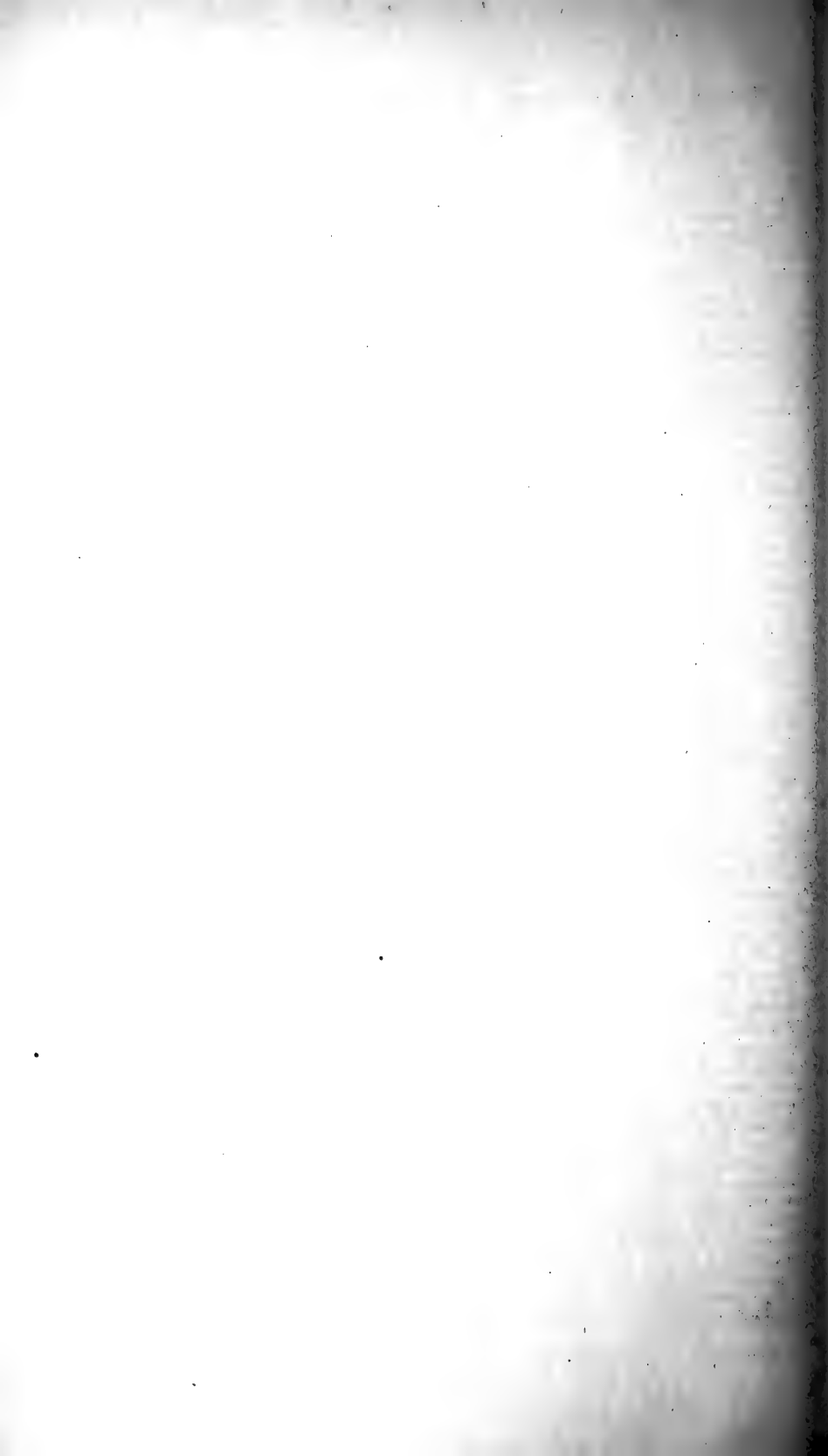
ulan tapak pelandok (mouse-deer's footprint ulan), *Merremia umbellata*,—942.

uloh-ulai, *Clerodendron disparifolium*,—1082.

umbi peye, *Acrostichum aureum*,—1647.

urap (a cosmetic): **urap gundor**, *Rennellia paniculata*,—736, the name from a Sakai.

akar **urat**, *Combretum nigrescens*,—518.



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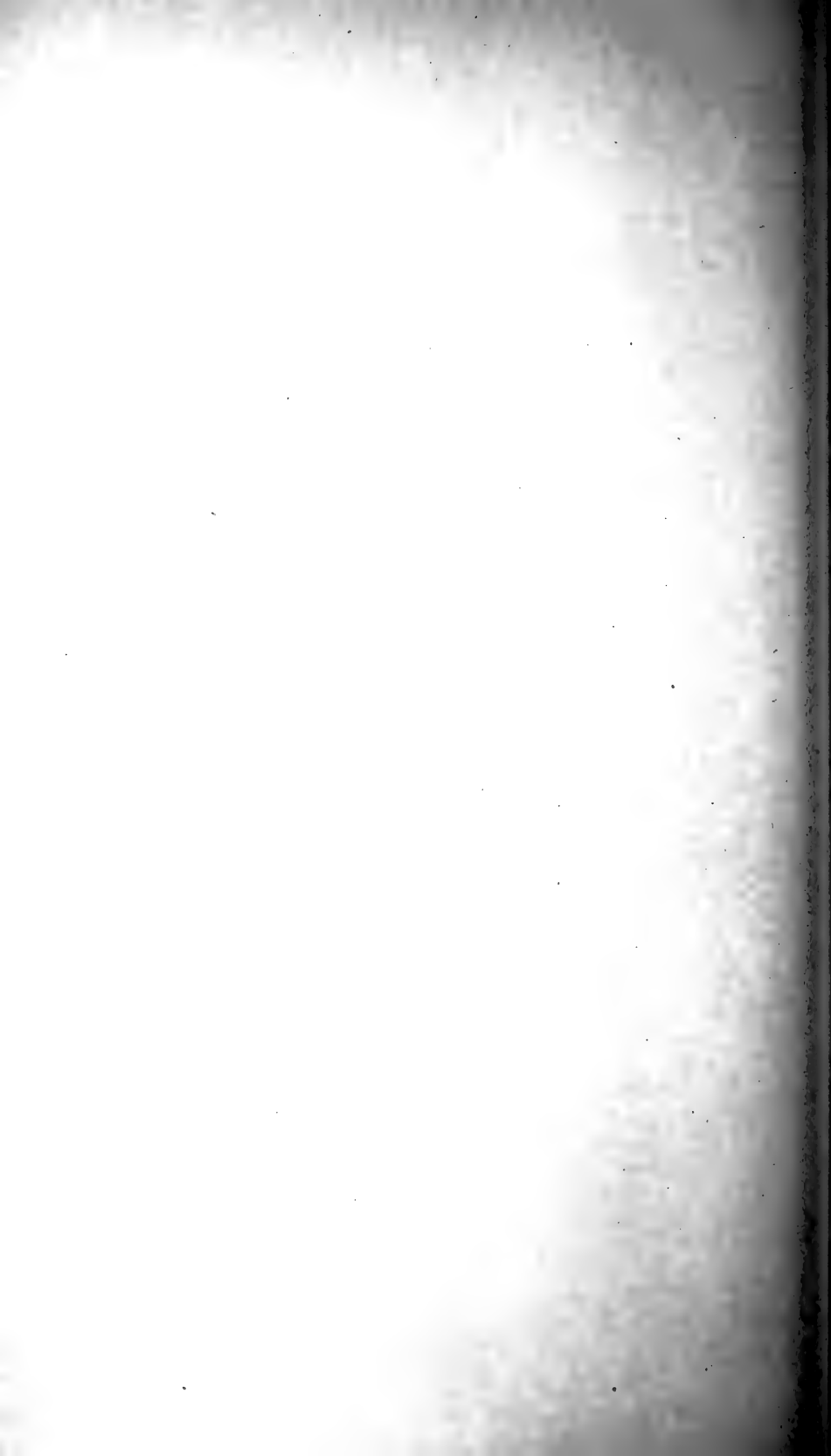
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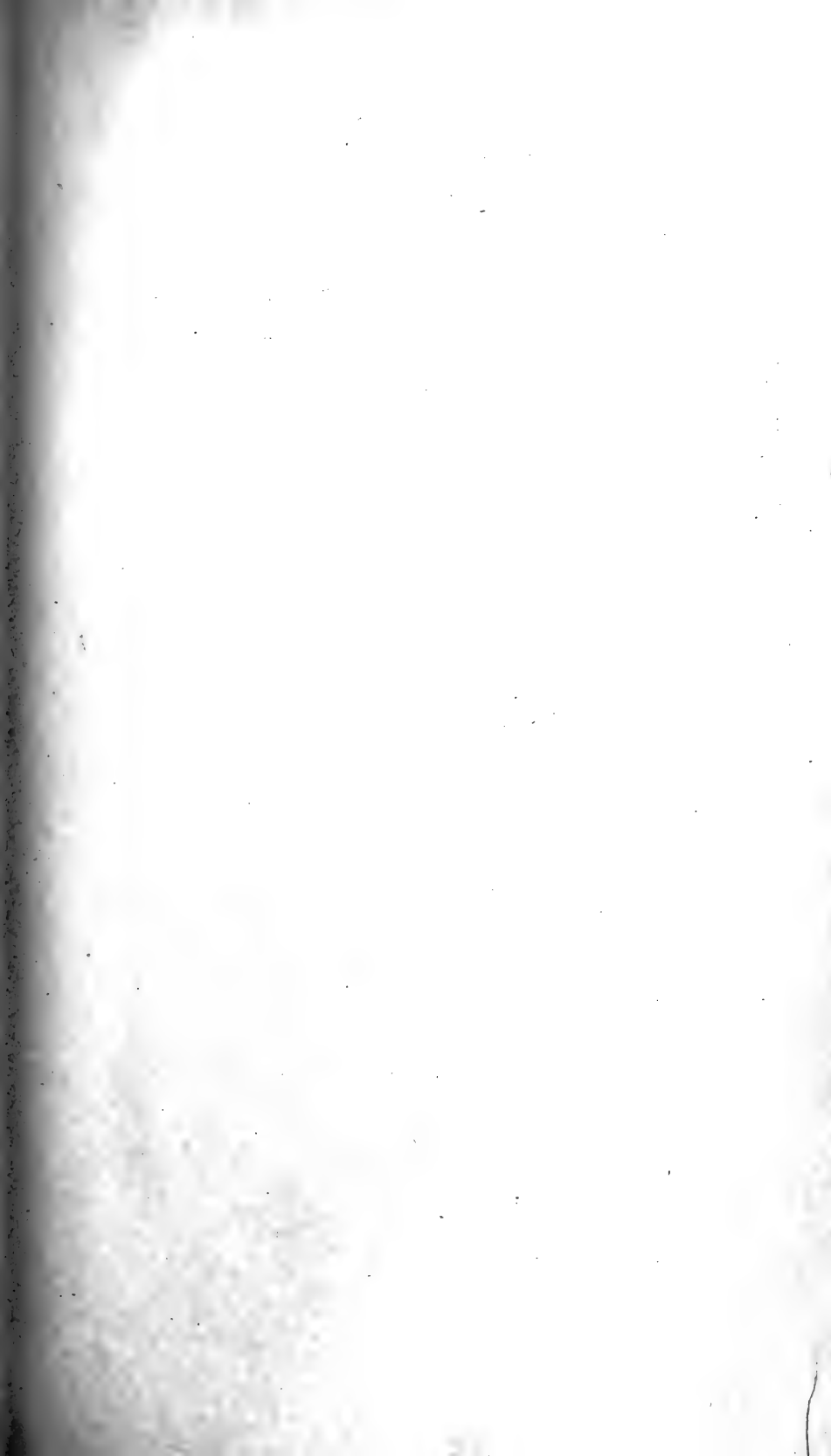
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Notice

The Volume will consist of three parts. Part I has been published, price \$2.50, entitled "On Chinese Medicine: Drugs of Chinese Pharmacies in Malaya" by David Hooper.

The third part will consist of a translation of a Malay manuscript on Medicine.

Volumes V and VI are being published concurrently.

The
Gardens' Bulletin
STRAITS SETTLEMENTS

VOL. VI

Issued October 1930

Part 3

Contents

THE MEDICAL BOOK OF
MALAYAN MEDICINE

TRANSLATED BY
INCHE' ISMAIL, *Munshi*
POSSIBLY IN PENANG, CIRCA 1880

NOW EDITED WITH MEDICAL NOTES BY
J. D. GIMLETTE
AND DETERMINATIONS OF THE DRUGS BY
I. H. BURKILL

To be purchased at the Botanic Gardens, Singapore

Price \$2.50



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Nos. 11-15

THE MEDICAL BOOK OF MALAYAN MEDICINE

*Translated by Inche' Ismail, Munshi,
Possibly in Penang, Circa 1886*

*Now edited with medical notes by
J. D. GIMLETTE*

*and determinations of the drugs by
I. H. BURKILL*

INTRODUCTION

Two years ago our attention was called to a manuscript in the possession of the Pharmaceutical Society of Great Britain, headed 'This is the Medical Book of Malayan Medicine', and endorsed above the heading 'Translated by Inche' Ismael. Moonshee'. By the great kindness of the Society we are permitted to publish a revision of it, as below. We return our most sincere thanks for this favour.

The history of the translation has been lost. It is written upon blue lined foolscap in a handwriting presumedly that of the munshi or teacher of languages, Ismail; and the names of the drugs are repeated in the margin in another handwriting. We reproduce a few lines from p. 16 in illustration (see next page), being parts of the prescriptions which we have numbered 67, 68, and 69 (on pp. 338-339 below). In the margin of the first pages there are also pencil comments, written apparently by the writer of the endorsement above the heading. We believe him to have been a British officer employed in Malaya, and the munshi to have prepared the translation under his instructions; but we have not succeeded in identifying him by his handwriting.

It is possible that the translation formed part of the collections made in the Straits for the Colonial and Indian Exhibition, London, 1886; but this is a surmise only.

The prescriptions which we have numbered 246 to 260 (pp. 369-370) were published by Sir William Maxwell in 1887 (*Journ. Roy. As. Soc. Straits branch*, 17; *Notes and Queries*,

No. 4, p. 116). He does not indicate from what source he took them, and he ends with an appropriate doxology, absent from the munshi's translation. One of us (J. D. G.) has used prescription 99 (*Malay Poisons and Charm Cures*, 3rd ed. London, 1929, p. 21). The rest of the manuscript appears in print here for the first time. Owing to its grossness we have had to purge it in places; and we have had to remove many conspicuous mistakes made by the munshi, whose knowledge was inadequate

Bulga changkai
Majakani
Hampadu Sawa

malay, clove, [majakani] majakani seed
[hampadu sawa malay], the gall of ^{the} *boa constrictor*
etc. rubbed them all and drink it and relieved

*Articles to explain of the medicines of
the disease on the neck*

Kulit bidara
Ayer madu

In first place take [kulit bidara malay] bidara's bark, bruised well take its juice mixed with [ayer madu malay] a custard water, honey well boiled, afterwards cooled for sometimes and give the patient to drink three times a day and so on

Akar batang bidara
Akar kayu manis

Moreover if does cure take [akar batang bidara malay] the root of bidara's trunk, and [akar kayu manis malay] the root of sweet wood, ^{the} ^{the} ^{the}

for his task. Fortunately his presumed employer required transliterated Malay to be inserted freely, and this has exposed the mistakes. One of us (J. D. G.) accepts entire responsibility for all statements of diagnosis of disease, and the other (I. H. B.) for the determinations of the materia medica. We have found it necessary to append a glossary, and have so arranged it that it serves also as an index. We have modernized the spelling of the transliterated Malay.

The manuscript from which the translation was made, as is evident from the nature of some of the munshi's mistakes, was written in arabic characters. Probably it was so valued by its owner that he would not part with it, though he consented to allow translation. It bears the marks of being a compilation of notes of different dates. The writer, for instance, after a conversation with a brother-practitioner upon the treatment of burns, added prescriptions 421, 422, and 423 upon the use of sial mēnaun, which then entered into his pharmacopoeia: and in a similar way he seems in general to have proceeded; but in the earlier part of the book, he absorbed into it larger blocks of matter at one time than he did later. Still the whole is of the nature of notes, never collated nor revised, so that little order is perceptible in the arrangement of the diseases, and the drugs

are called by different names in different prescriptions. As notes for the owner's own use, it is quite possible that there was an intentional obscurity, for the Malay practitioners are in general anxious to keep their information to themselves as compounders of proprietary medicines. Sometimes he has defeated us.

It is easily observed that the Medical Book is not homogeneous: it changes as it progresses from a polypharmacy suggestive of the town to the relative simplicity of Malay Village Medicine (cf. the preceding part, vol. vi, pp. 163-321 of the *Gardens' Bulletin*). This may be illustrated by a table giving the average number of materia entering into the prescriptions in different parts of it:

Prescriptions	1 to 100	.	.	4.03	drugs
"	101 to 200	.	.	3.90	"
"	201 to 300	.	.	3.90	"
"	301 to 400	.	.	2.70	"
"	401 to 500	.	.	2.41	"
"	501 to 543	.	.	2.23	"

Where, at 326, the translator ceased to give his headings of sections in Malay, the simplicity is markedly increased, as if the compiler, when his notes had reached that number, had come into contact with a different class of practitioners.

The plant-names used are markedly polyglot: some are arabic: many are words which merchants from Bombay would use; a few are employed in south-eastern India: others again are commonly heard in Batavia, or are Sundanese, and one is Balinesé. Some of the diseases do not bear the ordinary names as used on the Peninsula, and suggest that this treatise is by no means pure Malay medicine. If then the whole work be regarded as a compilation of notes added from time to time, it is not unreasonable to suppose that the compiler lived in a port where men of various nationalities mix: and because several of the simples used in a fresh state are more easily procured in Penang than Singapore, and, moreover, because the weights used suggest Penang, we believe the compiler a resident in that port. His extensive use of such materia medica as are stocked in shops, marks him a town-dweller, and either the owner of a drug-shop or intimate with the drug-shops by his home. His devotion to polypharmacy culminates in prescription 289 (p. 376) for Small-pox, with twenty-nine ingredients.

William Marsden, in his *History of Sumatra* (1783-1811), left a very interesting account of Medicine among Sumatran Malays; but the Medical Book carries us beyond his outlines. Marsden dwelt upon the art of those among whom he lived, in the internal administration of juices extracted from various plants, the employment of leaves as external poultices, acids, arsenic, and of gunpowder for skin-lesions; counter-irritation with hot-

leaves; the induction of sweating by curious methods; cures for fever; uses of long pepper, lime, gēlenggang, &c. The Medical Book adds fanciful remedies, ranging from burnt cockroaches to fried fish-heads; cures by suggestion; the boastfulness of the *bomor*, his magic, and his wide acquaintance with medicinal products found in somewhat remote places, and evidence of the strictness of his prohibitions (*pantang*). In contradistinction to our 'night and morning', the signature of his prescription runs: 'let him (the patient) take this morning and evening,' and again his invocation or inscription comes at the end of his prescriptions: 'and let him (the patient) be relieved.'

The Malay *bomor*, as a Mohamedan, being forbidden the use of alcohol, cannot make tinctures: and alcohol, in the form of rice-spirit (arrack), is mentioned once only in the Medical Book, in 308 (p. 380) for retention of urine.

Some light is thrown by the Medical Book upon native surgery. Much of it is devoted to diseases peculiar to women. There is no special mention of Cholera asiatica.

Among the drugs of the Book those prescribed for the cracked tongue of Sprue (196) might repay investigation.

We have had the good fortune to obtain help from Sir W. George Maxwell, K.B.E., C.M.G., Mr. H. W. Thomson, C.M.G., Mr. C. Otto Blagden, D.Litt., Mr. W. W. Skeat, M.A., Mr. A. T. Bryant, and Mr. A. F. Worthington, and tender our very sincere thanks to them. We thank also Mr. R. E. Holtum, Director of Gardens, Straits Settlements, Mr. C. Boden Kloss, Director of Museums, and Mr. J. B. Scrivenor, Director of the Geological Survey, Federated Malay States, for making several inquiries for us.

J. D. G.

I. H. B.

THIS IS THE MEDICAL BOOK OF MALAYAN MEDICINE

1. Sections to explain the medicines for violent headache (ngëlu bisa), accompanied with pains in the bones, and loss of vigour.

In the first place, take jintan puteh (seeds of *Cuminum Cyminum*), by weight, 5 cents; bawang puteh (garlic), 10 cents; hajimuju kersani (seeds of *Hyoscyamus*), 5 cents; ganja (Indian hemp); bunga pala (mace), 35 cents; buah pala (nutmeg), 5 cents; gadong China (*Smilax China*), 5 cents; halia (ginger), 5 cents; and akar tēmu lawas (rhizome of *Curcuma xanthorrhiza*), 5 cents. Pound them together. Mix with sufficient honey to make into pills. Let the patient take the pills, until he has finished them.

2. Should this fail.

Take otak kambing (goat's brain); tēpong (wheat flour), 2 parts (approximately 4 oz.); pulut hitam (raw, glutinous, purple rice), 1 part; lada puteh (white peppercorns) 1 part; kayu manis (cinnamon), 2 parts; koma-koma (saffron), 1 part; buah pala (nutmeg), 1 part; buah chēngkeh (cloves), 1 part; akar tēmu lawas (rhizome of *Curcuma xanthorrhiza*), 1 part; kētumbar (coriander seeds), 1 part; chabai Jawa (Java long pepper), 1 part; hajimuju kersani (seeds of *Hyoscyamus*), $\frac{1}{2}$ part; kulit mēswi (bark of *Masosia aromatica*), $\frac{1}{2}$ part; bawang puteh (garlic), 3 parts; ayer madu (honey), 1 part; minyak sapi (ghi), 1 part; and apiun (opium), a piece the size of a black peppercorn. Grind all together finely. Then cook sufficiently to form into a jelly. Let the patient eat this daily, and be relieved.

3. Sections to explain the medicines for a cough, accompanied with spitting of, either blood, or matter.

First, take susu (milk), either human, or from a black goat; and ayer buah dēlima (the juice of a pomegranate fruit). Drink this for three mornings, and be relieved.

4. Should this fail.

Take kētumbar (coriander seeds); and ayer madu (honey). Grind both together into a pulp. Take this also for three mornings, and be relieved.

5. Should this fail.

Take about seven ripe fruits of buah bulang (fruit of *Gmelina villosa*). Squeeze them and take the juice. Mix it with cow's or buffalo's milk. Drink this for three mornings, and be relieved.

6. Should this still fail.

Take akar tēmu hitam (rhizome of *Curcuma aeruginosa*); and kapur Barus (camphor of *Dryobalanops*), a piece as large as an Indian corn seed. Grind together. Take this for three mornings, and be relieved.

7. Should even this fail.

Take akar gandarusa hitam (root of the dark form of *Gendarussa vulgaris*). Scrape it and take the outer bark. Reduce to a pulp, and mix with halia padi (a race of *Zingiber officinale*—ginger) and ayer limau nipis (the juice of *Citrus aurantifolia*). Take it for three mornings, and be relieved.

8. Sections to explain the medicines for swellings in the flesh all over the body: (?) glandular enlargement.

First take part of a coco-nut shell which contains the eyes. Burn it and then take the ashes and charcoal; take also jintan hitam (seeds of *Nigella sativa*), as much as five fingers can hold (sa-jěmput); garam (salt), a pinch (sa-jěmput); and nasi (boiled rice), a pinch (sa-jěmput). Mix them all together. Roast until they are well burnt and grind them to powder. Now take hati habok (ashes from the centre of a burned-out fire), as much as three fingers can lift. Mix them with the powder and grind them both together. When well powdered, mix with rice-gruel. Daub this over each of the swellings, and be relieved. A warning is given: the way of daubing is from the upper parts (of the body) to the lower, and never from the lower to the upper parts.

9. Should this fail.

Take buah lung-lung (fruit of *Talauma elegans*); and kapur (the lime eaten with sireh), in equal weights. Pound these together. Daub the swellings in turn, as aforesaid (8), and be relieved.

10. Should this also fail.

Take těrusi (green vitriol; proto-sulphate of iron, or copperas); and 40 leaf-stalks of betel-vine leaves (gagang daun sireh). Pound them to a pulp. Daub the swellings in turn as directed above (8).

11. Sections to explain the medicines for Sakit Wasir, or haemorrhoids. [Compare with 63 and 64.]

In the first place, take apiun měntah (raw opium). Rub it on a stone. Apply it and let it be equally spread. Then take daun sěndudok (leaves of *Melastoma*); and kayu tulang-tulang (wood of *Euphorbia Tirucalli*). Pound the leaves well, and then heat both together with a little salt in a frying-pan. When sufficiently hot, wrap in a piece of cloth. Press the bundle gently (di-děmah) over the opium which has already been applied, and be relieved.

12. Should this fail.

Take a young green coco-nut (mumbang kělapa). Divide it into pieces and boil it. When sufficiently hot, use as a fomentation frequently, and be relieved.

13. Should the cure be slow.

Take buah kěchubong (seeds of *Datura fastuosa*); or (fruits failing) take daun kěchubong (leaves of this plant). Make up into a bundle with daun pisang (a plantain leaf). Put this among hot ashes, and when it is as hot as the patient can bear, use it as a dry poultice. Do this in like manner for three consecutive days, and be relieved.

14. Sections to explain the medicines for toothache, with either bleeding, or discharge of matter from the gums.

In the first place, take scrapings from tandok kěrbau (a buffalo's horn); kayu bėdara laut (wood of *Eurycoma longifolia*); kayu chėndana (sandal-wood); and buah chėngkeh (cloves). Steep all these in very sour vinegar. Use as a gargle, every morning, and be relieved.

15. Should this fail.

Take gandarusa puteh (leaves of the green-stemmed race of *Gendarussa vulgaris*). Reduce to a pulp, either with water or vinegar. When it is fine enough, apply it to the aching teeth, and be relieved.

16. Should this fail.

Take buah limau purut (fruit of *Citrus hystrix*); tawas (alum); inggu (asafetida); and tėrusi (blue vitriol; copper sulphate). Rub these down on a stone as required. Apply (the paste) to the aching teeth.

17. Should there be 'pricking' with increasing swelling.

The formation of gumboils. [Compare with 121.]

Take daun pachul (henna; the dry leaves of *Lawsonia inermis*); chuka (vinegar); garam (salt); and ayer tawar (fresh water). Take a cupful of each. Reduce by boiling, to two-thirds. Cool somewhat. Gargle with this every evening and every morning, and be relieved.

18. Should this fail.

In the first place, take tėrusi (blue vitriol; copper sulphate); pijar (borax); sėndawa (saltpetre); garam dari nėgėri Kėling (salt from Madras); and karat bėsi ('dross of iron', or rust). Take equal parts of all. Reduce to a pulp by heating. Put the pulp into a white cup, and mix it with the juice of a lime fruit. Expose it to the sun for three days. Stir it with a stick during the time of exposure as when making ink. Then rub the stick over the aching teeth as if cleaning them. Take care to keep the mouth closed, as much as possible, so that air does not reach the teeth, and be relieved.

19. Sections to explain the medicines for Barah or an Abscess.

[Compare with 342, 371, 449-451, and 500-501.]

When no head (mata) has formed.

Take daun kěchubong (leaves of *Datura fastuosa*); and chuka (vinegar). Reduce the leaves to pulp and steep in the vinegar. Apply this in order to make the abscess break quickly.

20. Moreover how to keep an abscess from bursting.

Take three white peppercorns (lada sulah); and garam Siam (salt from Siam). Grind both together. Apply this to the abscess and it will never break.

21. Sections to explain the medicines for Sakit Rěstong. [Rěstong is ulceration of the nose in late syphilis; also that of lupus and cancer. Compare with 172-173, 335, 352-353, 479-481.]

In the first place, take rěbong (any kind of very young bamboo shoot); chunam (prepared lime used in the betel-quit); and kapur Barus, (camphor of *Dryobalanops*), the same quantity of each, about one mayam (0.08 oz.); also jintan hitam (seeds of *Nigella sativa*), as much as five fingers can hold (sa-jěmput). Reduce these to a pulp. Rub this over the affected parts once a day. If it should cause extreme pain, do not be afraid of anything. Then take three fruits of putat (fruits of *Barringtonia*). Take the juice of three slices of the rinds. Heat this over a moderate fire until it becomes lukewarm. Moisten the parts affected, and be relieved.

22. Should this disease (rěstong) itch, either on the face, inside the nose, or at the eye.

Take akar těrong China (root of *Solanum Melongena*); and ayer limau nipis (juice of *Citrus aurantifolia*). Rub the root of the Chinese egg-plant down with the lime juice, and then apply it over the itching places, or within the nostrils, and be relieved.

23. Sections to explain the medicines for Děmam Kěpialu.

[Any continued fever lasting for more than three days, such as malaria, typhoid, rheumatic fever, or dengue. Děmam kěpialu is also used for fever accompanied with delirium. Compare with 409.]

When the patient feels giddy.

Take chěndana (sandal-wood); buah chěngkeh (cloves); lěmukut (rice dust), as much as three fingers can lift, thrice over; and a similar quantity of jintan puteh, (seeds of *Cuminum Cyminum*). Rub them down all together and mix with a little asafetida. Apply this (paste) to the patient's forehead, until such time as perspiration breaks out on his chest, and brings relief.

24. Make a medicine in order to moisten his head.

Take seven pieces of ibu kunyit (the fingers of the rhizome of fresh turmeric, and a pinch (sa-jěmput) of jintan puteh (seeds

of *Cuminum Cyminum*). Pound both together. Squeeze the juice out into water by hand. Moisten his head for three mornings, and let him be relieved.

25. Medicine for the hot stage of Dĕmam Kĕpialu. [Compare with 32.]

Take daun sireh (leaves of the betel-vine); buah pinang muda (green betel-nut); bonglai (rhizome of *Zingiber Cassumunar*); lĕmpoyang pahit (a bitter ginger); a small quantity of mĕswi (*Massoia* bark); jintan puteh (seeds of *Cuminum Cyminum*); kayu chĕndana (sandal-wood); and kapur makan (shell-lime used in betel-chewing). Pound all together, but not very finely. Then put the pulp into a white cup containing water. Squeeze it with the hand. Moisten the patient's head, as well as his whole body, and let him be relieved.

26. Should the hot stage continue day and night.

Take puchok birah hitam (tender shoots of a black *Alocasia*). Cut these very fine. Also take jĕrangau, (*Acorus Calamus*; sweet flag); bonglai (rhizome of *Zingiber Cassumunar*); and three slices of bawang merah (the onion of *Allium Ceba*). Reduce them all to pulp and apply it as a plaster to the head. Let it be very thick, and let him be relieved.

27. Moreover.

Take daun mamĕluk (leaves of *Croton argyratum*); antah (husk of wheat); daun pĕnggaga (leaves of *Hydrocotyle asiatica*); kayu chĕndana (sandal-wood); lada sulah (white pepper), 7 peppercorns; three slices of bonglai (rhizome of *Zingiber Cassumunar*); and three slices of akar chĕkur (rhizome of *Kaempferia Galanga*). Reduce to a fine pulp. Apply this over the whole body. Avoid bathing for three days. When the three days have passed, take ayer bĕras (water in which raw rice has soaked); daun baru (leaves of *Hibiscus tiliaceus*); and kulit baru (the outer bark of this plant). Bruise the leaves and bark. Squeeze the juice into the raw rice water, and give it to the patient to drink.

28. A medicine for bathing the sick man.

Take daun lakum (leaves of *Vitis trifolia*); and ayer bĕras (water in which raw rice has soaked). Put the leaves into the water and bathe him with it for three mornings, and let him be relieved.

29. Should his fever be a cold fever, then his saliva will taste bitter, and he will be unable to take food, or keep warm. [Compare with 382.]

Take the stem of a black *Alocasia* (batang birah hitam). Displace the hot ashes of a fire with it and take the centre part of the ashes (hati habok panas). Sieve these ashes through a

winnowing fan (nyiru). Then take a small quantity of akar mēšwi (the root of *Massoia aromatica*). Chew the root with betel, repeating the customary invocation prayers for keeping the devil and illness away. Now bespatter the ashes with spittle (sireh sēmboran), and mix them into a paste with the black *Alocasia* stem. Apply this to his head and stomach, three times a day, for three days in succession.

30. Furthermore.

Take puchok lakum (young shoots of *Vitis trifolia*); and ayer bēras (water in which raw rice has soaked). Squeeze the juice of the shoots into the raw rice water. Give this to him to drink for three mornings, or, give it to him in rice gruel, and let him be relieved.

31. Should this fail.

Take daun intaran (leaves of *Melia indica*; the Indian nim); kēnchur (rhizome of *Kaempferia Galanga*; chēkur); arang jati (the charcoal of teak wood); and a lump of salt (garam). Grind these finely together for the patient to drink, or eat in rice-gruel.

32. Sections to explain the medicines for the hot stage of fever.

Dēmam Kēpialu. Malaria. [Compare with 25.]

Take kēnchur (rhizome of *Kaempferia Galanga*; chēkur); adas manis (seeds of *Anethum graveolens*; dill); kulit mēmpēlasari (bark of *Alyxia*); jintan hitam (seeds of *Nigella sativa*); jintan putih (seeds of *Cuminum Cyminum*); kēmukus (cubeb); akar jērangau (rhizome of *Acorus Calamus*; sweet flag); bonglai (rhizome of *Zingiber Cassumunar*); kayu sēpang (wood of *Caesalpinia Sappan*); kayu chēndana (sandal-wood); ganti (rhizome of *Peucedanum japonicum*); akar mēšwi (the root of *Massoia aromatica*); buah chēngkeh (cloves); buah pala (nutmeg); kayu manis Jawa (bark of *Cinnamomum Burmanni*); akar puchok (rhizome of *Saussurea Lappa*; the Indian kut); kulit bēlangkas (shell of the king-crab; *Limulus*); kulit kētam (shells of crabs in general); daun gandarusa (leaves of *Gendarussa vulgaris*); akar tēmu kēring (dry turmeric root); and lēmpoyang wangi (a fragrant ginger). Grind all these to a powder like flour. Mix this with raw rice and cook it so as to make a gruel. Let the patient eat this, and be relieved.

33. Moreover make a medicine to apply over the body.

Take daun jērangau (leaves of *Acorus Calamus*; sweet flag); adas manis (seeds of *Anethum graveolens*; dill); kulit mēmpēlasari (bark of *Alyxia*); and lada sulah (white pepper). Mix them and reduce them all to a pulp. Apply this over the body of the sick man every day.

34. Sections to explain the medicines for Pirai disease.

[Pēnyakit Pirai is a disease of peculiar origin—see 286 and 383;

it is attended with pain in the joints, in the sinews and bones, similar to the pain of rheumatism, or gout.]

Take sireh bĕrtĕmu urat, ready for chewing (a quid of betel made in a leaf with arching veins). Stand upright in front of the door of your house, facing it. Chew the sireh. Spit on the ground. Take the earth that has been spat upon, and apply it to the places that are painful.

35. Moreover, to explain the medicines used for Pirai Urat, or 'sinew pirai', also for pirai in the bones.

First take sintei merah (sunti; a red pickle). Add a little water and reduce it to a fine pulp. Then apply it to the places that are painful.

36. Should this fail.

Take kĕmĕnyan puteh (white, or purest, gum benzoin); and isi buah pinang muda (the interior of a green betel-nut). Reduce both together to a pulp. Apply this under the fundament.

37. Sections to explain the medicines for Sakit Kanak-kanak.

Sickness of children. Intestinal worms. [Compare with 95, 237, and 384-385.]

Take daun pauh (leaves of a *Mangifera*); daun kĕlich (leaves of *Caesalpinia Crista* and *C. Jayabo*; gorek); jintan hitam (seeds of *Nigella sativa*); and bawang merah (the onion of *Allium Cepa*). Grind all together finely. Apply this medicine thickly to the crown of the child's head.

38. Moreover, make a medicine for drinking.

Take two tea-spoonfuls of gĕtah bĕtek (fresh latex of *Carica Papaya*); and mix it with Javanese sugar to the depth of one finger joint (sa-ruas jari). Then give it to the child to drink, and let him be relieved. A warning follows: do not let the child eat prawns, crabs, or fowl: never allow him to eat food whilst he is taking this medicine.

39. Moreover, for the vomiting of worms.

Take daun pĕria (leaves of *Momordica Charantia*; the bitter pumpkin); adas (seeds of *Anethum graveolens*; dill); kulit mĕmpĕlasari (bark of *Alyxia*); and bawang merah (the onion of *Allium Cepa*). Grind them finely. Take the essence (juice), and give it to the child to drink. Rub the husk of the strained pulp (the residue) on his stomach, and let him be relieved.

40. Sections to explain the medicines for a disease of uncertain origin. [See note to 164. Compare with 263 and 350.]

The sick man seems to be mad, but he is not really mad; it is merely on account of the disease that he babbles, and sometimes forgets himself. (?) Hystero-epilepsy.

In the first place, take akar tĕmu kĕring (rhizome of *Curcuma domestica*; dried turmeric); akar tĕmu hitam (rhizome of *Curcuma aeruginosa*); akar tĕmu putih (rhizome of *Curcuma Zedoaria*); and akar tĕmu lawas (rhizome of *Curcuma xanthorrhiza*). Reduce these to a fine pulp. Then take isi buah pinang yang lĕmbut (the soft interior of a green betel-nut; *Areca Catechu*); kulit kuini (bark of *Mangifera odorata*); akar bayam duri (root of *Amaranthus spinosus*); kulit jambu biji (bark of *Psidium Guajava*; the guava); puchok pinang (young shoots of *Areca Catechu*); puchok andong (young shoots of *Cordyline terminalis*; garden dracaena); bawang merah (the onion of *Allium Cepa*); adas (seeds of *Anethum graveolens*; dill); and kulit mĕmpĕlasari (bark of *Alyxia*). Grind all together finely. Rub this evenly over the whole body as if it were a cosmetic or toilet-powder.

41. Moreover, make a medicine for bathing the sick man.

Take ayer ĕmas (gold water); ayer perak (silver water); ayer bĕsi (iron water); ayer mĕleleh daun kayu (water that drips from leaves); and ayer sungai (river water). Prepare a cosmetic of different colours, black, red, and yellow, as well as white. [Compare this medicinal bath with the mystic alloy of five metals called pancha-logam, and see Skeat's *Malay Magic*, 1900, p. 431.]

42. Should he have a cough.

Take daun pĕnggaga (leaves of *Hydrocotyle asiatica*); buah kundur (fruit of *Benincasa cerifera*; the wax-gourd); and gula batu (sugar candy). Boil these together. Give this to him to drink, and let him be relieved.

43. Sections to explain tonics for man and woman.

These are to increase a man's vigour; to warm his cold body; to restore colour to a woman's pallid countenance; to strengthen the bones; to drive away pain; and to make the whole body healthy.

First, take tĕlur ayam (a hen's egg). Separate the yolk and keep the actual shell as a measure (sukatan). Next, take ayer kunyit hidup (the essence, or juice, of fresh turmeric rhizome); ayer madu (honey); and minyak bijan (sesamum oil). Take the egg-shell full of each and beat up with the yolk of the egg. Drink this for three mornings. If the body should be cold, it will get warm, and the patient will be relieved.

44. Should he be quick to anger on account of pain.

Take 'an insect of a thousand feet alive' (a live millepede). Soak it in water. Let him drink this water, and be relieved.

45. Another tonic.

Take garam (salt) and kalambak (best quality resinous

wood of *Aquilaria*; gaharu). Rub these together on a stone with hot water. Give this to him to drink, and let him be relieved.

46. Again.

Take daun kacang parang (leaves of *Canavalia ensiformis*); sĕmut hitam (black ants), 7 in number; hati bawang (the heart of an onion); and sintei (sunti; pickled bĕlimbing fruit). Reduce to a pulp. Squeeze the juice into the patient's eyes, and let him be relieved.

47. Sections to explain the medicines for pains in the stomach.

[Compare with 72.]

Should there be a feeling as if ants were creeping over it, and under the loins, as well as over the whole body. Formication.

Take puteh tĕlur ayam (white of a hen's egg); minyak kĕlapa (fresh coco-nut oil); and a little halia (ginger). Mix and spread on Chinese paper. Apply this as a plaster to the stomach, or to wherever the pain may be, and be relieved.

48. Should this fail.

Take a small chicken. Cut it in halves. Take changku tamal (? borax). Strew the powder over the raw surfaces and bruise them moderately. Then apply them to the place where the pain is felt.

49. Should there be obstruction to the flow of urine, wrap the chicken round the membrum virile, and be relieved.

50. A section to explain the medicine for 'an internal cough which never comes forth'. A dry hacking cough.

Take akar gandarusa hitam (dark-stemmed *Gendarussa vulgaris*); halia padi (a race of *Zingiber officinale*, ginger); and ayer limau (juice of *Citrus aurantifolia*). Grind scrapings of the Gandarusa root with the ginger, and mix (into a bolus) with the lime juice. Give this to him for three mornings, and let him be relieved.

51. Sections to explain the medicines for dark, or light, spots on the skin (macules) caused by leprosy and other diseases.

[Compare with 496 and 526.]

In the first place, take apiun mĕntah (raw opium); warangan (white arsenic); daun sireh (leaves of the betel-vine); mata kunyit (a stem-bud from a fresh turmeric rhizome), cut fine; and lĕmukut (rice dust). Grind finely. Rub this into the hands, or feet, which are discoloured, and be relieved.

52. Should this fail.

Take kapur angin (*Usnea*; rumput angin); akar pisang baharu bĕr-tumboh (newly sprouted banana roots); minyak kĕlapa (fresh coco-nut oil); and batang birah hitam (leaf-stalks of a

black *Alocasia*). Crush these well together. Apply this to the hands and feet, and be relieved.

53. Should this fail.

Take daun kětumbit (leaves of *Leucas*); and a small quantity of chunam (prepared lime used in the betel-quid). Churn in the palms of the hands until frothy (běrbueh). Apply this to the hands, or feet, and be relieved.

54. Should this still fail.

Take kayu tulang-tulang (wood of ? *Euphorbia Tirucalli*); and a small quantity of chunam (prepared lime used in the betel-quid). Mix them together and boil them. When cool enough, let the patient dip his hands, or feet, into the hot water. Warm it again whenever he wishes to repeat the immersion, and let him be relieved.

[These sections appear to refer to the skin disease Kědal (which see, 281) rather than to the macules of anaesthetic leprosy, or a macular syphilide.]

55. A section to explain a medicine for a cough accompanied with spitting of, either blood, or matter. Compare with 3.

Take susu (milk), both human, and from a black goat; and ayer buah dėlima (the juice of a pomegranate fruit). Mix the three together. Drink this, morning and evening, for either three, or seven days, and be relieved.

56. Sections to explain the medicines for weakness (kalau laki-laki lěmah).

Take ayer madu (honey); pati kunyit hidup (the essence, or juice, expressed from fresh turmeric rhizome); and kuning tėlur ayam hitam (the yolk of a black fowl's egg). Throw away the white. Keep the shell as a measure. Take also bawang merah (the onion of *Allium Cepa*), the expressed juice of the onion; and jintan hitam (seeds of *Nigella sativa*), the extracted juice of the seeds. Fill the egg-shell full with each of the juices, equally. Mix. Beat all well together. Drink this for three mornings, and be relieved.

57. Another tonic medicine.

Take daun sětěbal (leaves of *Hoya*); chabai Jawa (fruits of *Piper retrofractum*; Java long pepper); kayu manis (bark of *Cinnamomum zeylanicum*; cinnamon); bunga pala (mace); mastaki (resin of *Pistachia Terebinthus*; mastic); buah pala (nutmeg); koma-koma (saffron); kěmukus (cubebs); lada puteh (white pepper); apiun měntah (raw opium), the size of a black peppercorn; and ayer madu (honey), by weight 360 quarter cents (duit kěchil), which equal 360 dirham. Mix and grind to a very fine pulp, so as to form a jelly. Eat this medicine every morning and evening until it is finished, and be relieved.

58. Make an electuary (maajun) in like manner.

Take lěngkuwas China (dried rhizome of *Languas officinarum*), by weight, 9 mas, which equal 9 cents; sintei (sunti; a pickle of *Averrhoa*), 9 mas; halia (ginger), 9 mas; kayu manis (cinnamon, amount not given); kěmukus (cubeb), 9 mas; hajimuju kěrsani (*Hyoscyamus* seeds), 9 mas; buah chěngkeh (cloves), 1 mas; kěsturi (musk), 1 mas; kěměnyan (gum benzoin) 1 mas; kayu gaharu (*Aquilaria* wood), 3 mas; kayu laka (wood of *Dalbergia parviflora*), 3 mas; and kapur Barus (camphor of *Dryobalanops*), 3 mas by weight. Mix all together. Powder them very finely. Weigh into three parts. Now endeavour to get gula nabot, sometimes called gula nipah (sugar from the palm, *Nipa fruticans*); but, if this, as well as gula batu (sugar candy), is unobtainable, honey will do as well in making this medicine. Mix one part of the powder with the sugar, or honey. Simmer over a moderate fire, stirring well. When about to give a dose to the patient, add the milk of a green coco-nut, re-heating until a jelly forms. Now let him take 3 mas (3 cents), by weight at a time, and be relieved.

59. Sections to explain medicines (maajun) for a male disorder of sex.

In the first place, take jintan hitam (seeds of *Nigella sativa*), by weight, 2 cents; buah chěngkeh (cloves), 2 cents; kayu manis (cinnamon), 2 cents; lada sulah (white pepper), 2 cents; biji sěsawi (mustard seed), 2 cents; and lěngkuwas China (dried rhizome of *Languas officinarum*), by weight, 2 cents. Reduce to powder. Take a spoonful in sago-gruel, followed by a draught of warm water.

60. Another medicine (maajun).

In the first place, take tujoh kuning tělur ayam (the yolks of seven hens' eggs); ayer madu tujoh sukat (the seven egg-shells full of honey); minyak sapi tujoh sukat (the seven egg-shells full of clarified butter); ayer bawang merah tujoh sukat (the seven egg-shells full of juice expressed from the onion *Allium Cepa*); and ayer kunyit hidup tujoh sukat (the seven egg-shells full of juice expressed from fresh turmeric rhizome). Mix all together. Heat over a moderate fire. Drink the medicine when it is lukewarm (suam-suam kuku). Bathe before taking it. Going out into the sun is prohibited. Act in this manner for seven days. This medicine will not only invigorate, but will relieve the sick man by dispelling any bad winds there may be about the body.

61. Sections to explain further the making of maajun.

Take akar lěmpoyang pahit (the rhizome of a bitter ginger); apiun měntah (raw opium), a piece the size of a black pepper-

corn; and three lumps of salt (garam). Rub these down together. Take this every afternoon, for three days, at waktu aasar (the time of saying Mohamedan prayers between 2.30 and 4.30 p.m.).

62. Moreover.

Take hot ashes from the centre of a fire (hati habok panas); and the essence, or juice (santan pati) extracted from old coco-nut pulp. Damp the hot ashes with the coco-nut essence, and if there should be dysuria, apply them over the pubes (ari-ari), where the pain is felt, and be relieved.

63. Sections to explain the medicines for Sakit Wasir, or haemorrhoids. [Compare with 11-13.]

Take tĕrong ungu (fruit of the purple egg-plant, *Solanum Melongena*). Cut it up very finely. Dry in the sun. When quite dry, burn it to ashes. Wrap the hot ashes in old cloth. Apply the bundle (di-dĕmah) as a dry poultice, until the patient appreciates the warmth, and feels relieved.

64. Another medicine.

Take tĕrusi (blue vitriol; copper sulphate); and two and a half stems of betel-vine leaves (gagang daun sireh). Grind both together. Apply (the paste), and be relieved.

65. Another medicine for drinking.

Take puchok pĕnggaga (young shoots of *Hydrocotyle asiatica*); adas (seeds of *Anethum graveolens*; dill); and kulit mĕmpĕlasari (bark of *Alyxia*). Grind these together. Make into seven pills. Throw away one and keep the six. Dissolve two pills for a dose in water. Expose the solution all night to the dew. Drink it in the early morning for three days, and be relieved.

66. A section to explain a medicine for Sakit Pinggang. Lum-bago. [This is given in the manuscript as Sciatica. Compare with 149.]

Take lĕmukut (rice dust); and buah kĕras jantan (nuts of a race of *Aleurites moluccana*; the candle nut tree). Express the oil from the nuts and keep it for a whole night. Grind the rice dust finely with the oil. Rub this into the painful area, and be relieved.

67. A section to explain medicines for drinking when an ulcer fails to granulate ('shoot forth clearly'). A callous ulcer.

Take kayu chĕndana (sandal-wood); buah chĕngkeh (cloves); majakani (cynips galls from *Quercus lusitanica*); and ĕmpĕdu ular sawa (bile of the python). Rub them all together. Take this, and be relieved.

68. Sections to explain the medicines for disease of the throat. Sore throat.

In the first place, take kulit bédara (bark of *Zizyphus Jujuba*). Bruise it well and take the juice. Mix this with honey. Boil it well. Set aside to cool. Give this to the patient to drink three times a day, and let him be relieved.

69. Should this fail.

Take akar bédara (root of *Zizyphus Jujuba*); and akar kayu manis China (root of a *Cinnamomum* perhaps; see glossary). Rub the two roots down on a stone. Give some of this to the patient to drink, and let him apply some of it to the neck where the pain is felt, and be relieved.

70. Should this fail.

Let him take the panacea—pěnawar sěgala bangsa. [See 323.] Or, let him take chěndana (sandal-wood); buah chěngkeh (cloves); chěndana puteh (wood of *Eurycoma*); kayu puteh (wood of *Melaleuca Leucadendron*; cajeput); tawas (alum); majakani (cynips galls from *Quercus lusitanica*); and jagong běr-biji (maize in ear). Grind all these together. Let the patient take this, and be relieved.

71. Should this also fail.

Take kunyit (turmeric rhizome); hajimuju (jěmuju; *Carum copticum* seeds); akar batang asam Jawa (root of the tamarind tree); and akar batang lěmbega (rěmbega; root of *Calotropis gigantea*). Slice them into very thin pieces and bake on an iron pan until well dried. Reduce to a fine powder. Moisten this with honey, and make it into nine pills. Let the patient take three pills every morning, and be relieved.

72. Sections to explain the medicines for pain in the stomach.

[Compare with 205–212.]

Take limau purut (fruit of *Citrus Hystrix*); bawang puteh (garlic); jintan hitam (seeds of *Nigella sativa*); and buah chěngkeh (cloves). Mix. Grind up finely. Give it to the patient to swallow.

73. Should this fail.

Take daun urang-aring merah (leaves of *Pouzolzia indica*); and arang těmpurong (charcoal of coco-nut shell). Mix and reduce to a pulp. Apply this to the stomach, and be relieved.

74. Should young children suffer from 'bloody flux' (dysentery).

[Compare with 103.]

Take the half-ripe pulp of a green betel-nut (buah pinang muda); and garam (salt). Grind them up with the teeth. Plaster the child's stomach with the chewed pulp, and let him be relieved.

75. Should the pain in the stomach be accompanied with pricking pain in the liver.

Take limau lelang (fruit of *Paramignya angulata*); gaharu (good aloes-wood); chëndana puteh (sandal-wood: see glossary); chëndana janggi (red sanders wood); and kapur Barus (camphor of *Dryobalanops*). Take all these in small amounts. Let the patient take this in hot water, and be relieved.

76. A section to explain a medicine for the pain in the stomach called Chika. [Severe colic at night-time accompanied with diarrhoea. Compare with 221-225 and 537.]

Take lëngkuwas (rhizome of *Languas Galanga*; galingale), 7slices; and 7 black peppercorns (lada hitam). Grind them finely. Apply this (paste) to the patient's navel, and let him be relieved.

77. Sections to explain medicines for diseases of the ear. When there is a discharge of blood from the ear.

Take minyak bijan (sesamum oil); bawang puteh (garlic), removing the outer coat; lada sulah (white pepper); and mastaki (mastic). Simmer over a moderate fire. When cool, drop it into the ear, and plug the ear with cotton (kapok). Take the plug out at sunrise the next morning.

78. Should there be a discharge of matter from the ear.

Take daun sudu-sudu (a leaf of a fleshy *Euphorbia*), fully mature; and minyak bijan (sesamum oil). Smear a little of the oil on the leaf. Heat it over hot ashes until the colour fades. Let it cool a little. Now twist the leaf so that its juice may drop into the ears, and let the patient be relieved.

79. Another medicine for the ear.

Take batang pinang (trunk of the areca-nut palm); daun sireh (leaves of the betel-vine); bawang merah (the onion of *Allium Cepa*); and akar pinang (the root of the areca-nut palm). Pound the first and the last two together. Wrap the pulp in a sireh leaf, and place over hot ashes until the leaf begins to steam. Squeeze the juice into the patient's ear, as hot as he can bear it, and let him be relieved.

80. A section to explain the medicines for pains in the stomach which are accompanied with griping pains.

Take kayu manis Jawa (bark of *Cinnamomum Burmanni*); and gula Jawa (Javanese sugar). Grind them well together. Let the patient swallow this for three mornings, and be relieved.

81. A section to explain the medicine for cystitis.

Take daun kapas hantu (leaves of *Hibiscus Abelmoschus*); daun tërong asam (leaves of *Solanum ferox*); mata kunyit (a stem-bud from a fresh turmeric rhizome); lëmukut (rice dust); and ayer bër malam (water that has been kept all night). Reduce these to a pulp. Apply this over the pubes as a plaster.

82. Sections to explain the medicines for Sakit Sěmbělit.

Indigestion accompanied with constipation.

Take daun puding merah (leaves of *Graptophyllum hortense*); and daun ěpědu landak (leaves of *Barleria Prionitis*). Grind these finely, and pass through a strainer. Give the juice to the sick man to drink.

83. Should this illness affect the head, and cause disorders of the senses with pain, on one, or other side, of the head.

Megrim or Brow-ague. [Compare with 365.]

Take buah kěras (nuts of *Aleurites moluccana*; the candle-nut tree), to the number of 3 times 7, and split them in halves. Keep one half of each divided nut, and throw away the other halves. Then take daun pokok kěras (leaves of this tree), to the number of 3 times 7, and divide these in halves. Keep one half of each divided leaf, and throw the other halves away. Reduce to a pulp with water that has been kept for a whole night. Apply this to the head, as a plaster, for three days.

84. Moreover make a julep to purge the patient.

Take jadam (bitter aloes), by weight 3 mas, which equals 3 cents by weight; inggu (asafetida), 1 mas; lada sulah (white pepper), 1 mas; and bawang puteh (garlic). Grind these together finely. Moisten with the juice of a lime fruit, and make into pills each weighing 1 mas.

85. Should the purging not stop.

Take nasi (boiled rice), cooked to a mush (kanji).

86. Should there be a cough.

Take akar manis China (Chinese liquorice); and halia padi (a race of *Zingiber officinale*, ginger). Pound these together. Take this by the mouth for three mornings, and be relieved.

87. Moreover.

Take akar chěraka merah (root of *Plumbago rosea*); and halia padi (a race of *Zingiber officinale*, ginger). Grind finely and mix with clarified butter (ghi). Let the patient swallow this in the early morning, and be relieved.

88. Sections to explain medicines for numbness of the feet.

In the first place, take about a cupful of susu kambing hitam (milk of a black goat); and a very small cupful of ayer madu (honey). Mix. Drink this on three consecutive mornings.

89. Should this fail.

Now take ěmas sa-puloh mutu (pure gold); and perak yang baik (pure silver). Rub each three times on a stone with honey. Then mix this honey with the aforesaid preparation of milk (88). Warm it slightly and then drink it.

90. Moreover.

Take lěmpoyang pahit (a bitter ginger); kěnchur (rhizome of *Kaempferia Galanga*; chěkur); bonglai (rhizome of *Zingiber Cassumunar*); kulit sintok (bark of *Cinnamomum* or *Entada*); kulit mėswi (bark of *Massoia aromatica*); jintan puteh (seeds of *Cuminum Cyminum*); jintan hitam (seeds of *Nigella sativa*); chabai Jawa (Java long pepper); lada sulah (white pepper); chěndana (sandal-wood); bawang merah (the onion of *Allium Cepa*); daun asam riyang-riyang (leaves of *Vitis hastata*); and batang sireh (stems of betel-vine leaves). Grind finely. Divide into two parts. Take one part. Apply this to the benumbed feet, and be relieved.

91. Sections to explain the medicines for languidness caused by Děmam Kěpialu. [See note to 23.]

Take akar těmu pauh (root of *Curcuma mangga*); akar puchok (rhizome of *Saussurea Lappa*; the Indian kut); jintan puteh (seeds of *Cuminum Cyminum*); jintan hitam (seeds of *Nigella sativa*); and kayu manis China (*Glycyrrhiza glabra*; Chinese liquorice). Grind finely. Take this for three days, and be relieved.

92. Should this fail.

Take jintan hitam (seeds of *Nigella sativa*); kěmukus (cubebbs); sintei (sunti; a pickle of *Averrhoa*); halia (ginger); ibu těmu kunchi (the finger of the fresh rhizome of *Gastrochilus panduratum*); buah chabai Jawa (fruit of *Piper retrofractum*; Java long pepper); bawang puteh (garlic); daun sireh běrtěmu urat (a sireh leaf with arching veins); birah (an *Alocasia*); and a small quantity of chunam (prepared lime used in the betel-quinid). Pound and knead with the hand. Daub this over the whole of the patient's body, and let him be relieved.

93. Should the sick man be light-headed or irrational.

Take hujung bee-eur murbat (see glossary); and three slices of bawang (an onion). Pound these by hand, and then wet his head with the juice, and let him be relieved.

94. Moreover, prepare a medicine for spitting over him (sěmborkan).

Take daun sireh běrtěmu urat (a sireh leaf with arching veins); chunam (prepared lime used in the betel-quinid); and padang bělulang (a plant of ? *Sida*). Pull up the plant while holding the breath. Take also, puchok jěruju (young shoots of *Acanthus*); mata kunyit (an opening bud of fresh turmeric and mėlukut (lěmukut; rice dust). 'All these make for his (the witch-doctor's) ejection.'

95. A section to explain a medicine for thread worms in children.

Take gětah bėtek (the fresh latex of *Carica Papaya*); hati

habok (white ashes from the heart of a burned-out fire); and kulit limau purut (rind of *Citrus Hystrix*), equal in weight to a nutmeg. Grind up finely and make into pills. Let the child swallow the pills, and be relieved.

96. Sections to explain the medicines for pains in the stomach which are accompanied with cramp in the legs (sakit përut sampai ka-kaki).

Take a handful of salt (garam); and akar lëmpoyang pahit (a bitter ginger). Reduce these to pulp and take the juice to the depth of a finger-joint. Drink this for three mornings, and be relieved.

97. Should this fail.

Take 7 fruits of chabai Jawa (fruits of *Piper retrofractum*; Java long pepper). Grind them up well. Drink this with hot water, and be relieved.

98. Should a violent fit of fever come on.

Take buah labu puteh (fruit of *Lagenaria vulgaris*; the bottle-gourd). Boil it and expose it to the dew at night. Let the patient eat the pulp the next morning, and bathe his head with the water in which it has been boiled.

99. Sections to explain Lukhman al-hakim's medicines for coughs. [Compare with 154.]

Take batang sudu-sudu (stems of a succulent *Euphorbia*), about 4 gantangs (gallons), chopped small, and well dried; and padi (un-husked rice), about 1 gantang. Boil the rice well. Dry and beat off the husk. Mix with the *Euphorbia* stems when the rice is sufficiently clean and pound into flour. Keep it well covered. Give, when required, not more than half an ounce to the sick man.

100. Another medicine for coughs.

Take hajimuju (jëmuju; *Carum copticum* seeds); and bawang puteh (garlic). Reduce to a pulp. Let the patient swallow this on three consecutive mornings.

101. Sections to explain a tonic medicine for men.

The way of taking this medicine is: when the moon is in eclipse, pull up a plant of sëlëgari, (having) fixed our design, for a man, i. e., having consulted the horoscope. Chew the root of the plant (*Sida rhombifolia*) with a sireh preparation.

102. Moreover.

Take buah pala (nutmeg), one nutmeg; buah chëngkeh (cloves), 3 times 7 in number; buah këchubong (seeds of *Datura fastuosa*), 3 times 7 in number; lada hitam (black pepper-corns), twice 7; and këmukus (cubeb), 3 times 7 in number.

Reduce these to powder, and moisten with honey. Take this medicine every morning and evening.

103. A section relative to 'bloody flux' (haematuria). [Compare with 74.]

Take daun sĕrunai laut (leaves of *Wedelia biflora*). Cook these leaves as a vegetable, and eat them daily.

104. A section to explain a medicine for cancer.

Ulceration which is incurable; being under the influence of evil spirits, it relapses again and again, as soon as it is cured.

Take kulit langir (the fibrous bark of *Albizzia saponaria*). Rub the patient's body with the juice of this plant, in order to banish the evil spirits or ghosts (hantu). Then try to get the leaves of the plant for bathing him. Wash (bathe) him, so that he may recover from the disease.

105. Sections to explain the medicines for orchitis.

Take buah asam paya (fruit of *Zalacca edulis*); hati habok (ashes from the heart of a burned-out fire); and chuka yang asam (very sour vinegar). Knead with the hand. Apply this (paste) to the swelling, and extend the application as far as the pubes.

106. Then take daun lĕnggundi (a leaf of *Vitex trifolia*); and jintan hitam (seeds of *Nigella sativa*). Bake on a pan until well dried. Next, take daun mĕlong (a leaf of *Crinum*) and remove the midrib. Place the *Crinum* leaf on a piece of cloth. Spread the *Vitex* leaf on top of it. Heat the leaves and apply them as hot as the patient can bear. Bind them on as 'a bag or truss', i. e. in the form of a bag support.

107. Should this fail.

Take daun lĕnggundi; and jintan hitam, as above (106); and daun goreng (a leaf of *Caesalpinia Crista* or *C. Jayabo*). Act as aforesaid.

108. Should this also fail.

Take daun saga kĕchil (leaves of *Abrus precatorius*). Heat them with some scraped coco-nut. Apply this as above (106), as hot as the patient can bear, and let him be relieved.

109. Sections to explain the medicines used in pregnancy.

Should there be constant piercing pains in the liver (hati).

Take agila wood of the finest quality (kayu gaharu; wood of *Aquilaria*); jintan putih (seeds of *Cuminum Cyminum*); jintan hitam (seeds of *Nigella sativa*); buah chĕngkeh (cloves); and a small quantity of kapur Barus (camphor of *Dryobalanops*). Grind finely. Let her drink it in warm water.

110. Should there be leucorrhoea. [Compare with 290–296.]

Take buah mēngkudu hutan (fruit of *Morinda elliptica*). Take seven fruits. Reduce them to pulp, and divide this into three parts. Then mix with pati kunyit (juice squeezed from freshly pulped turmeric rhizome). Drink this for three mornings.

111. Sections to explain medicines used after recent delivery.

For puerperal infection.

Take a piece of sintei halia (sunti halia; dried ginger root), as long as the forefinger. Bake it until it becomes sufficiently yellow. Reduce to pulp, and steep it in very sour vinegar. Beat this up with the yolk of an egg. She must drink this for three mornings.

112. Another medicine for puerperal infection. Sapræmia. [Compare with 137, 146, and 226.]

Take seven slices of lēmpoyang pahit (a bitter ginger); and a handful of daun kēsimbukan (leaves of *Paederia* or *Saprosma*). Pound by hand, and give her the juice to drink for three mornings.

113. Should the sick woman feel cold.

Take sintei halia padi (sunti halia padi; dried rhizome of the race of ginger called halia padi); kapur Barus (camphor of *Dryobalanops*); ganti (rhizome of *Peucedanum japonicum*); ayer bawang tunggal (juice expressed from an onion); daun sēlaseh hitam (leaves of *Ocimum spp.*; dark-stemmed basil); kēnchur (rhizome of *Kaempferia Galanga*; chēkur); akar jērangau (root of *Acorus Calamus*; sweet flag); and ayer madu (honey). 'All these (to be) reduced to a pulp and then applied within.' [This is probably an application to rub over the abdomen.]

114. Another medicine to restore her appetite.

Take majakani (cynips galls from *Quercus lusitanica*); kayu gaharu (*Aquilaria* wood); chēndana (sandal-wood); pati kunyit hidup (juice squeezed from freshly pulped turmeric rhizome); ayer madu (honey); and a hen's egg (tělur ayam) fried in sesamum oil. Repeat the medicine in this way for seven days.

115. Should there be twinges of sharp gouty pain in the feet and hands (sēngal kaki tangan). [Compare with 402.]

When there is no sleep day, or night, in consequence.

Take a handful of daun kēlichī (leaves of *Caesalpinia Crista* and *C. Jayabo*), as full as possible (sa-tangan tērak); seven white peppercorns (lada sulah); and three pieces, or wrappers (ulas), of garlic (bawang puteh). Grind finely. Moisten with honey to make an electuary (maajun). Make into pills. Let her swallow three of these, at a time, at one dose.

116. Moreover prepare a cosmetic.

Take buah bēdak (a ball of cosmetic powder) and lada hitam

(black peppercorns). Both in equal quantities by weight. Grind finely together. Rub this powder into the feet and hands.

117. Should this fail.

Take kulit jërami (bark of *Artocarpus integra*, or of *A. Champeden*); akar jërangau (root of *Acorus Calamus*; sweet flag); lada hitam (black peppercorns); bonglai (rhizome of *Zingiber Cassumunar*); tahi kambing hitam (dung of a black goat); kapur tohor (coarse lime); and chunam (prepared lime used in the betel-quad). Reduce all these to a pulp. Apply this to the painful feet and hands.

118. Fasal pada mënnyatakan ubat tiada boleh buang ayer bësar atau kěchil. [The translator Inche' Ismail (munshi) now commences to give the headings of the sections in Malay.] A section to explain a medicine for retention of the excreta during the puerperium.

Take 7 flies (lalat); and 7 lumps of salt (garam). Grind them finely together (giling lumat-lumat). Rub this (paste) on the stomach where the pain is felt, and let her be relieved.

119. Sa-bagai lagi fasal mënnyatakan ubat mëroyan.

Furthermore sections to explain mëroyan medicines.

[The medicines called Ubat Mëroyan are given in the first three days following a confinement; they are often merely prophylactic and intended to ward off evil spirits. Compare with 229, 333, and 494.]

Take biji sësawi (mustard seed); and bawang puteh (garlic). Wrap them in a Colocasia leaf (daun kěladi; a leaf of *Colocasia antiquorum*) and leave for a whole night (exposed to the dew). Very early the next morning, before the flies are on the wing, they must be eaten. They must be eaten in this way—sit in a hole facing the rising sun and then swallow them.

120. Another medicine of the same kind. Ubat Mëroyan.

Take akar paku mërak (root of *Selaginella*); and akar jërami (root of *Artocarpus integra*, or of *A. Champeden*). Burn them. Take the ashes (abu-nya). Make them into a pulp with water. This must be taken on three consecutive mornings.

121. Fasal pada mënnyatakan ubat sakit mulut bėngkak-nya itu sėbab sunggoh sėjok, atau makan sėjok, mēnjadi bėngkak.

A section to explain a medicine for a swelling in the mouth caused, either by extreme cold, or by eating very cold things.

A Gumboil. [Compare with 17 and 18.]

Take majakani (cynips galls from *Quercus lusitanica*); and majalawi (dry mature fruits of *Terminalia Chebula*; myrobalsans). Grind them very finely together. Mix this medicine with very sour vinegar. Apply it to the swelling.

122. Fasal pada mēnyatakan ubat dēmam panas, atau dingin, sērtā mulut mērachau-rachau.

A section to explain the medicine for hot, or cold, fevers which are accompanied with delirium. Malarial fevers.

Take akar tapak leman (root of *Elephantopus scaber*). Wash it well. Let the patient chew the root. Then ask him how it tastes. If the taste be bitter, he will be cured soon; if insipid, he will be cured in time; if sweetish, then God knoweth.

123. Fasal pada mēnyatakan ubat ka-sumbat kēpialu ka-dalam. Sections to explain the medicines for a continued fever which is suppressed.

Take daun lakum merah (young red leaves of mucilaginous species of *Vitis*); gētah bērnama antara (intaran; gum, or sap, of *Melia indica*); and gaharu (resinous wood of *Aquilaria*). Boil these together. Bathe the patient with this water, also let him drink it for three days in succession.

124. Another medicine.

Take hot ashes from the centre of a fire (hati habok yang hangat), with a parang (chopper). Wrap them in cloth in the form of a round bundle. When the patient feels piercing pains about his body, press gently with the bundle of hot ashes (bila datang mēnikam-nikam pada badan mau-lah di-dēmah pērlahan-lahan dēngan abu itu).

125. Fasal pada mēnyatakan ubat karang, nanah atau darah. Sections to explain the medicines for gonorrhoea. [Compare with 302-304.]

In the first place, take daun gandarusa (leaves of *Gendarussa vulgaris*); mata kunyit (a stem-bud from a fresh turmeric rhizome); and hujung lēmukut (very fine rice dust). Grind to a fine pulp. Squeeze out the essence, or juice. Drink this for three mornings, and be relieved.

126. Another medicine.

Take a handful tightly held (sa-gēnggam rut) of daun pulut-pulut (leaves of *Urena* or other mucilaginous plant). Crush out the juice by hand into water. Let the patient drink this for three mornings.

127. Another medicine.

Take akar pulut-pulut (root of *Urena*). Make the patient chew it with sireh in the customary way that Malays have in taking their betel-nut.

128. Should these fail.

Take akar lalang (lalang runners; *Imperata arundinacea*); sēndawa (saltpetre); and tawas (alum). Take an equal quantity of each and boil them with the lalang runners. Then expose

this draught to the dew at night-time. Next morning, the patient should bathe, and then drink some of the draught. When drinking it, he must not let it touch his teeth. Should the 'coral', i. e. karang-karang (the disease), be developing, it will either disappear, or show itself, and this will bring relief.

129. Moreover in order to be quite clean (purified).

Take kapur Barus, (camphor of *Dryobalanops*), a piece the size of a black peppercorn; and ayer limau nipis (the juice of *Citrus aurantifolia*). Drink this for three mornings.

130. Another medicine.

Take a handful (sa-chěkup bětul) of daun kiambang (leaves of *Pistia Stratiotes*). Cut off the tops and bottoms of these leaves (kěrat ekur kěpala-nya). Then take 7 black peppercorns; and 3 lumps (buku) of garam jantan (coarse, or long-grained salt). Grind all these finely together and expose the mass to the sun. Should it be necessary to prescribe for three days, the amounts should be: leaves, 3 handfuls; 21 black peppercorns; and 9 lumps of coarse salt. When the mass is half dried, make it into 21 pills and put them back into the sunlight until they are well dried. In the morning the patient should first bathe, and then swallow 7 of the pills. Before swallowing them, some sugar must be taken, otherwise the throat will feel itchy.

131. Moreover.

Take a closed handful (sa-gěnggam) of daun bėbėran (leaves of *Koompassia*; the kėmpas tree); daun sireh bėrtėmu urat (sireh leaves with arching veins); and mėdang sila (gypsum; hydrous calcium sulphate). Grind these finely (giling lumat-lumat). Take the essence, or juice (pati-nya). Let the patient drink this for three days, and smear the dregs over the pubes (dan hampas-nya itu sapu-kan pada ari-ari).

132. A further local application.

(sa-bagai lagi ubat ari-ari-nya).

Take daun buah kėras (leaves of *Aleurites moluccana*; the candle-nut tree). Take seven leaves that have fallen from the tree. Also take mėswi (bark of *Massoia aromatica*); bawang merah (the onion of *Allium Cepa*); bonglai (rhizome of *Zingiber Cassumunar*); duri landak kiki-kiki halus (scrapings of a porcupine's quills; *Hystrix longicauda*); and gigi tėmbelok (the teeth of the shipworm; *Teredo*). Reduce all these to a pulp. Apply this medicine over the pubes, and be relieved.

133. Should blood be passed.

Take jintan hitam (seeds of *Nigella sativa*); and gula (sugar). Bake the seeds. Reduce them to powder. Mix this with the sugar. Let the patient take it in the dry state for seven days.

134. Fasal pada mēnyatakan ubat kalau angin turun ka-kaki. Sections to explain the medicines for a wind that settles in the feet. Rheumatism. [See note to 164.]

In the first place, take jintan saru (juniper berries); buah pala (nutmeg); bunga pala (mace); lada bĕr-ekur (cubebes); sintei halia (sunti halia, dried rhizome of ginger); jadam (bitter aloes); buah chĕngkeh (cloves); akar jĕrangau (root of *Acorus Calamus*; sweet flag); adas pĕdas (fennel seed); jĕmuju (seeds of *Carum copticum*); buah pĕlaga (cardamoms); and chĕndana janggi (red sanders wood). Reduce these to very fine powder. Then knead (uli) with honey. Swallow this medicine every morning and evening.

135. Another medicine for rubbing over the body.

Take akar sĕruntun (root of *Tinospora crispa*); kĕpala nasi (the top, or best, layer of boiled rice). Take a handful (sa-kĕkal) of the coagulated rice; and tĕmpurong jantan (coco-nut shell), a piece about two fingers wide. This, as well as the rice, should be well burnt. Then, reduce the three to a very fine powder. Dissolve (suspend) this in water. Besmear the painful parts with the sediment.

136. Another medicine.

Take biji chĕmpaka (seeds of *Michelia Champaka*), 40 in number; bunga pĕkan (flowers of *Jasminum*), 40 flowers; biji lunang (bonglai kayu; seeds of *Oroxylum indicum*), 40 seeds; biji dĕlima (seeds of the pomegranate, *Punica Granatum*), 40 seeds; and lada sulah (white pepper), 14 peppercorns. Reduce these to pulp. Then divide into seven parts. Take one part every day for seven consecutive days.

137. Fasal pada mēnyatakan ubat pĕrĕmpuan jika datang busok bauh-nya.

Sections to explain medicines for puerperal infection. [Compare with 111–112; and 226.] Saproaemia.

Take limau purut (fruit of *Citrus Hystrix*); akar lĕngkuwas (rhizome of *Languas Galanga*; galingale); bunga mĕlur (*Jasminum Sambac*, and other species), 7 flowers (tujoh kaki); lada sulah (white pepper), 7 white peppercorns; and a little ginger root (halia). Reduce all these to pulp. Take this for three mornings, and be relieved.

138. Another medicine.

Take puchok sĕlaseh hitam (young shoots of *Ocimum spp.*; dark-stemmed basil), 7 shoots; a little asam Jawa (a sour relish made with tamarind pods); a piece of ibu kunyit (the fingers of fresh turmeric rhizome); majakani (cynips galls of *Quercus lusitanica*), half (sa-bĕlah) a gall-nut; ganti (rhizome of *Peucedanum japonicum*); kulit mĕswi (*Massoia* bark); buah chĕngkeh

(cloves), 14 in number; bėras (raw husked rice), as much as four fingers can lift; akar lėngkuwas (rhizome of *Languas Galanga*; galingale); bawang puteh tunggal (one entire garlic bulb); and some kayu manis (cinnamon). Grind all these finely. Then divide into three parts (or doses). As required, dissolve one part in water to the depth of one joint of the forefinger (ayer-nya suatu ruas tėlunjuk). Take a dose on three consecutive mornings.

139. Another medicine.

Take bunga laksana (flowers of *Acacia farnesiana*; bunga Siam); ibu kunyit (the fingers of a fresh turmeric rhizome); and a little kėmėnyan puteh (white, or purest, gum benzoin). Reduce these to pulp. Divide it into three parts (or doses). Dissolve in water. Take a dose on three consecutive mornings, and be relieved. The way of drinking this medicine must be when standing upright.

140. Another medicine.

Take daun mėrpuying (leaves of *Carallia integerrima*); ibu kunyit (the fingers of a fresh turmeric rhizome); kėmėnyan puteh (white, or purest, gum benzoin); and lėmukut (rice dust). Reduce them to pulp. Divide into three parts. Take this medicine in the same way as aforesaid (139), and be relieved.

141. Another medicine.

Take daun bunga Siam (leaves of *Acacia farnesiana*); puchok sėndudok (young shoots of *Melastoma spp.*); buah chėngkeh (cloves); kėmėnyan puteh (white, or purest, gum benzoin); lada hitam (black peppercorns); and buah pala (nutmeg). Divide into three parts or doses. Take a dose on three consecutive days, and be relieved.

142. Another medicine.

Take daun jalamudi (leaves of an unidentified plant); hajimuju (jėmuju; seeds of *Carum copticum*); chabai Jawa (fruit of *Piper retrofractum*; Java long pepper); buah chėngkeh (cloves); buah pala (nutmeg); akar manis China (Chinese liquorice; roots of *Glycyrrhiza glabra*, and others); and buah kėdėkai (Chebulic myrobalans, fruits of *Terminalia Chebula*); akar puchok (rhizome of *Saussurea Lappa*; the Indian kut); kulit mėswi (bark of *Massoia aromatica*); and halia kėring (dried ginger). Take this medicine for three mornings, and be relieved.

143. Fasal pada mėnyatakan sakit bėrnama sėnggugut tiada boleh bėranak oleh sėbab sėnggugut.

A section to explain the illness called Sėnggugut, on account of which a woman cannot bear a child. [Compare with 226. Sėnggugut is a generic name for loss of uterine blood; the group includes catamenia and lochia. The disorders that arise

are merely symptoms, either due to a local cause, or the consequence of a general constitutional disease, such, for example, as venereal disease, or puerperal fever.]

Now these are the medicines.

In the first place take akar bunga susun kēlapa (root of *Ervatamia*), 3 duits, or $\frac{1}{4}$ cents, by weight; akar lēmpoyang (rhizome of *Zingiber spp.*), 2 duits; lēngkuwas (rhizome of *Languas Galanga*; galingale), 1 duit; buah chēngkeh (cloves), 1 duit; kapur makan (shell-lime used in betel-chewing), 2 duits; and chabai Jawa (fruit of *Piper retrofractum*; Java long pepper), 1 duit by weight. Grind finely, and when grinding, add the juice of a lime fruit. Place the mass in an earthenware pot containing water. Tie plantain leaves securely over the mouth of the pot. Bring the pot to the boil. Remove it from the fire when the decoction has been reduced to one third. When it is required for drinking, dip three pieces of red hot iron into it. It is now ready to drink. Act in this manner on every occasion, and take the dregs that remain in the drinking cup. These must be rubbed over the pubes, and let the patient be relieved.

144. Another medicine.

Take bunga pētola (flowers of *Luffa spp.*; a pumpkin); kulit rambutan (bark of *Nephelium lappaceum*; the rambutan tree); bunga changkok (flowers of *Schima Noronhae*); bunga chadaya (flowers of *Woodfordia floribunda*; sēduwayah); and chuchur atap (leaves of *Leptospermum flavescens*; hujung atap). Blend these together. Drink it like an infusion of tea, every morning and evening, and be relieved.

145. Should there be (fever) and thirst.

Take bunga pēlasari (mēmpēlasari; flowers of *Alyxia*); koma-koma (Arabic saffron); chēndana (sandal-wood); bulang (*Gmelina*); and yang-yang (*Vitis hastata*). Boil these together. Let her drink it every evening and morning.

146. Should there be puerperal infection. Sapræmia. [Compare with 137 and 226.]

Take a handful of daun sēpang (leaves of *Caesalpinia Sappan*); some akar lēmpoyang pahit (rhizome of a bitter ginger); some ganti (rhizome of *Peucedanum japonicum*); some kalambak (best quality resinous wood of *Aquilaria*; gaharu); puchok kunyit (young shoots of *Curcuma domestica*); and kayu kēsturi (wood of *Juniperus chinensis*). Grind all these finely together. Take this medicine for three mornings, and be relieved.

147. Should there be a (specific) ulcer (luka).

Take 'sahing badak (rhinoceros fang)'. Burn it near her side. [Sahing may be a miswriting for taring (tusk); but, as the incisor and canine teeth (siyong) are reduced or wanting in the

rhinoceroses, it is probable that the horn (sumbu) of the rhinoceros is meant, rather than the fang of the animal.]

148. Moreover, make a medicine for bathing the ulcer.

Take kulit nangka (bark of *Artocarpus integra*; the jak fruit tree); kulit bachang (bark of *Mangifera foetida*); and kulit tēngar (bark of *Ceriops Candolleana*). Boil all these together. Make a lotion for washing the ulcer, and let her be relieved.

149. Fasal pada mēnyatakan ubat sakit pinggang.

A section to explain the medicines for pains in the loins.

Lumbago. [This is given in the manuscript as Sciatica. Compare with 66.]

Take puchok malapari (young shoots of *Pongamia glabra*); hujung lēmukut (very fine rice dust); and mata kunyit (a stem-bud on a fresh turmeric rhizome). Grind finely. Rub this medicine into the loins.

150. Another medicine.

Take three handfuls of daun lēnggundi (leaves of *Vitex trifolia*); a pinch (sa-jēmpu) of jintan hitam (seeds of *Nigella sativa*); a nutmeg (buah pala); and fourteen cloves (buah chēngkeh). Reduce all these to pulp. This must be taken as a draught for three mornings and evenings, and the dregs well rubbed into the loins.

151. Another medicine.

Take daun gandarusa (leaves of *Gendarussa vulgaris*); akar jērangau (root of *Acorus Calamus*; sweet flag); and bonglai (rhizome of *Zingiber Cassumunar*). Grind finely. Steep in vinegar and warm slightly over a moderate fire. Rub this well into the loins, and be relieved.

152. Another medicine.

Take pulut hitam (raw, glutinous, purple rice); bawang merah (the onion of *Allium Cepa*), 7 pieces, or wrappers (ulas), sliced; and one closed handful (sa-gēnggam) of white peppercorns (lada sulah). We ourselves (the patients), must reduce this to pulp, and our own children (the patients' children), must reduce it to powder. Eat it daily, every morning and evening.

153. Moreover this powder (152) is of benefit in amenorrhoea.

154. Fasal pada mēnyatakan ubat sakit lēlah, atau batok-nya.

Sections to explain medicines for asthma, or for coughs. [Compare with 99, and 311.]

First, take daun sudu-sudu (leaves of a succulent *Euphorbia*), about 4 gantangs (gallons). Let it be this amount after the leaves have been chopped up. Boil them. Dry them partially after boiling. Next, take padi (rice in the husk), about 1 gantang. Dry this. Mix the padi with the leaves. Boil them

together. When sufficiently cooked, throw the leaves away. Expose the padi to the heat of the sun. When dry, let it be pounded into rice (běras). Let it be well covered. Whenever the pains (fits of asthma) come, take about one ounce of this rice at one meal, and be relieved. Do not take more than one ounce of this medicine at one time.

155. Should the cough not relax.

Take a half-ripe fruit (sa-těngah masak) of buah pupot (? pěřepat: fruit of *Sonneratia*). Cut it in halves. Take one half. Rub it on a stone with about half a tea-cupful (chawan) of warm water. Let him drink this. Rub the husk of the fruit on his neck, and let him be relieved.

156. Fasal pada měnyatakan ubat panau kurap.

A section to explain a medicine for Panau Kurap.

'Ringworm, or white spots on the skin occasioned by leprosy, or scrofulous distempers.' [Compare with 306.]

Take kapur tohor (coarse lime); chunam (prepared lime used in the betel-quit); and daun chěměmar (leaves of *Micromelum*). Grind finely. Moisten with the juice of a lime fruit. Rub this over the body, and be relieved.

157. Fasal pada měnyatakan ubat puru dalam tulang.

A section to explain a medicine for ulceration of bone. [Compare with 410.]

Take lada hitam jadi-kan sěrbau (black peppercorns already ground); ayer madu (honey); and minyak sapi (clarified butter). Mix these together. Give this to the patient to eat, and the ulcer will then 'come forth' (granulate).

158. Fasal pada měnyatakan ubat tulang patah.

A section to explain the medicine for broken bones.

Take a chicken about ten days old; and biji bayam (seeds of the garden cockscomb; *Celosia cristata*). Fry the seeds in oil. Pound them with the chicken. Then apply this to the broken bone. Truss (bind closely) with cloth, and it will be cured.

159. Fasal pada měnyatakan ubat anak kěchil sakit pěrut.

Sections to explain medicines for infants suffering from pains in the stomach.

Take buah chabai tali (fruit of *Helicteres Isora*); akar dělima, (root of the pomegranate); and isi pinang muda (the interior of a green betel-nut). Take all in the same proportion. Reduce to pulp and mix with honey. Let the infant lick it up.

160. Should this fail.

Take buah chabai tali (fruit of *Helicteres Isora*); akar dělima

(root of the pomegranate); and susu lëmbu (cow's milk). Mix well together. Let him drink it, and he will be relieved.

161. Should the baby lose strength.

Take kunyit tërüs yang usang (rhizome of the *Zingiber* called kunyit tërüs that has dried up). It should have been kept for three years. Make a teacupful (chawan) of watery extract from it. Then take tëlur ayam hitam (a black hen's egg); a little garam (salt); and a little jintan hitam (seeds of *Nigella sativa*). Reduce these to pulp. Take the ginger essence (extract), and mix the pulp with it. Give this medicine to the infant, and let him be relieved.

162. Fasal pada mënnyatakan ubat gila bingong hilang akal-nya. Sections to explain medicines for a madman who is stupid and foolish.

Take ayer madu yang usang (dried up honey); minyak sapi (clarified butter); and adas manis (dill; seed of *Anethum graveolens*), in equal proportions. Solidify them by gently heating them together. Keep well covered. This medicine may only be taken in the daytime, 'so his head can be light,' i. e., may be lightened.

163. Another medicine.

Take kunang-kunang (fire-flies); tëlur ayam (a hen's egg); gula pasir (moist sugar); and minyak sapi (clarified butter). Take all these in equal proportions by weight, and blend them all together. This must be taken every morning and evening, and the patient must bathe at the same time.

164. Should his head be affected by wind, or by heat.

Take halia (ginger), 16 quarter cents (suku) by weight; minyak sapi (clarified butter), 16 dirham, by weight, which equals 20 large saga seeds (seeds of *Adenanthera*); and komakoma (saffron), 16 saga seeds. Grind the ginger very finely with the saffron. Then mix with the clarified butter. Let the sick man draw a quantity of this into his nostrils. It will take wind away from his head, and he will be relieved.

[Malays regard wind as the causal agent in diseases which are difficult to diagnose, especially rheumatism. Compare the generic term Pënyakit Angin.]

165. Fasal pada mënnyatakan ubat bisa dalam dada.

Sections to explain medicines for violent pain in the chest.

[Compare with 395.]

Take gaharu tandok (second quality resinous wood of *Aquilaria*); akar puchok (rhizome of *Saussurea Lappa*; the Indian kut); and pati santan (the essence, or juice, of fresh coco-nut pulp). Rub these down on a stone. Take this for three days in succession.

166. Another medicine.

Take kuning telur (yolk of an egg); gaharu (resinous wood of *Aquilaria*); akar lëngkuwas kēchil (fresh rhizome of *Languas conchigera*); and ayer madu (honey). Rub the resin and the rhizome down together. Then mix with the yolk and the honey. Beat them well together. Let him drink this and he will be cured.

167. Fasal pada mēnyatakan ubat bisa sakalian badan.

A section to explain a medicine for violent pains all over the body. There is discomfort after meals, and no repose by day, or night.

Take halia (ginger); biji chuchur atap (leaves, daun, probably not seeds, biji, of *Leptospermum flavescens*; hujung atap); biji sēsawi (mustard seeds); akar tērong pipit (root of *Solanum verbascifolium*); and akar tērong asam (root of *Solanum ferox*). Mix these together. Boil them. Let the patient drink this, and be relieved.

168. Fasal pada mēnyatakan ubat laki-laki turun dari-pada raja-raja zaman dahulu.

A section to explain a medicine that has come down from princes of bygone ages.

In the first place, take damar mata kucing yang puteh (white 'cat's-eyes' resin; *Hopea*), in powder, about 1 chupak; minyak sapi kambing (goat suet), $\frac{1}{2}$ chupak; raksa (quick-silver), 3 mas by weight; and apiun mēntah (raw opium), 3 mas by weight. Mix them together, and form into pills. Wrap the pills in a white cloth. Next, burn the pills, one by one, and collect the smoke in a new rice-pot. Take the soot (chēlaga), and keep it well covered. For giving the medicine mix it with gold at each weighing, the weight must be estimated in mas ($\frac{1}{16}$ of a tahl). Take a pill 3 mas in weight as a dose. One pill is to be taken at a time.

169. Fasal pada mēnyatakan ubat mēmēchah-kan darah yang tiada baik dalam badan.

A section to explain a medicine for breaking up bad blood in the body. Also for removing winds; easing sinews; and clearing the head. Taken after parturition this medicine brings virtue to the blood.

Take kuning telur ayam hitam (the yolk of a black fowl's egg); ayer madu (honey), the egg-shellful; ayer lëngkuwas (juice expressed from the fresh rhizome of *Languas Galanga*; galingale), the egg-shellful; and santan kēlapa hijau (milk of a green coco-nut), the egg-shellful. Beat these well together. Drink this for seven days, and all the complaints will be cured.

170. Fasal pada mēnyatakan ubat sakit pērut nama-nya lalahkan.

A section to explain a medicine for the stomach-ache called lalahkan (lalah—gluttonous eating).

Take apiun mēntah (raw opium), a piece the size of a black peppercorn; buah majakani (cynips galls from *Quercus lusi-tanica*), half a gall nut; buah pala sa-bēlah (half a nutmeg); a little kachu puteh (best quality gum of *Acacia Catechu*; cutch, or catechu); a little jērnang (resin of *Daemonorops spp.*; dragon's-blood); bunga putek dēlima (a fallen blossom of a pomegranate fruit tree); a little baked salt (garam rēndang); 5 pieces, or wrappers (ulas) of bawang puteh (garlic); and 5 pieces, or wrappers, of bawang merah (the onion of *Allium Cepa*). Bake both the onion and the garlic until they are dry. Take also a little lada hitam (black peppercorns); and chēndana janggi (red sanders wood); kayu arang (wood of *Diospyros*; ebony); kayu manis (cinnamon); and kayu jati (wood of *Tectona grandis*; the teak tree). Reduce all these to a fine powder, and take sufficient honey to make it into a bolus. As required, take one bolus, 2 mayam in weight, at a time. The bolus must not be less in bulk.

171. Fasal pada mēnyatakan ubat sakit mata kabur.

A section to explain a medicine for dimness of vision resulting from old age or infirmity.

Take tulang kambing (a goat's bone); and ayer susu orang (human milk). Rub the bone in the milk and instil the milk into the dim eyes (titek-kan pada mata kabur itu).

172. Fasal pada mēnyatakan ubat sakit rēstong.

Sections to explain medicines for specific ulceration of the nose.

[Compare with 21–22, 173, 335, 352–353, and 479–481.]

Take manek kēmēnyan (beads of gum benzoin); bawang merah (the onion of *Allium Cepa*); and kunyit tērus (rhizome of the *Zingiber* so named). Rub on a stone with lime juice, and take it for three mornings.

173. Another medicine for Sakit Rēstong.

Take akar bunga susun kēlapa (root of *Ervatamia*); kunyit hidup (fresh turmeric rhizome); akar chēkur (rhizome of *Kaempferia Galanga*); and akar jērangau (root of *Acorus Calamus*; sweet flag). Rub down on a stone, with lime juice. Take this for three days, and be relieved.

174. Fasal pada mēnyatakan ubat sa-orang sēpērti gila.

A section to explain a medicine for a man who seems to be mad.

Take limau purut (fruit of *Citrus Hystrix*); limau mata kērbau (fruit of a race of *Citrus medica*; a wild citron, eye-shaped

in side view); limau nipis (fruit of *Citrus aurantifolia*); limau hantu (fruit of a wild *Citrus*); limau kĕrat lintang (fruit of *Citrus medica*, var. *sarcodactylis*; 'Buddha's fingers'); tĕmu kunchi (rhizome of *Gastrochilus Panduratum*); tĕmu kuning (rhizome of *Curcuma domestica*; turmeric); tĕmu puteh (rhizome of *Curcuma Zedoaria*; zedoary); tĕmu hitam (rhizome of *Curcuma aeruginosa*); tĕmu lawas (rhizome of *Curcuma zanthorrhiza*); tĕmu pauh (rhizome of *Curcuma mangga*); kunyit tĕrus (rhizome of the *Zingiber* so named); halia bara (a ginger); halia puteh (a rhizome of ? a *Globba* or a ginger); jintan hitam (seeds of *Nigella sativa*); jintan puteh (seeds of *Cuminum Cyminum*); kĕtumbar (coriander seeds); buah pala (nutmeg); buah chĕngkeh (cloves); hajimuju (jĕmuju; *Carum copticum* seeds); buah pĕlaga (cardamoms); lada sulah (white pepper); lada hitam (black peppercorns); and garam (salt). Take all in equal weights or proportions. Blend together when all have been weighed. Boil all the limes and strain the water. Add all the spices to the water. Boil again until it becomes as thick as starch. When cool enough, apply it over the whole body, and he will be relieved.

175. Fasal pada mĕnyatakan ubat rambut lĕbat tiada gugur. Sections to explain the medicines to prevent premature loss of thick hair. [Compare with 329 and 531.]

Take 30 young leaves, or sprouts (puchok) of jĕruju (*Acanthus*); daun gandarusa (leaves of *Gendarussa vulgaris*); 3 leaves of daun pandan wangi (leaves of *Pandanus odoratus*); daun chĕkur manis (leaves of *Sauropus albicans*); and santan kĕlapa hijau (green coco-nut milk). Put all the leaves into the coco-nut milk. Crush the juices out by hand into a cup or basin. Expose this all night to the dew. Moisten the patient's head with it every morning for three days.

176. Another medicine.

Take umbi pisang bĕnggala (the very tip of the root of the common banana tree of that name). Get the juice by pounding it. Next, take kĕlapa yang di-makan tupai (a coco-nut that a squirrel has bitten into). Scrape out the pulp that may be in it, and express the juice from it. Mix this with the banana juice. Expose overnight to the dew. Next morning, moisten the head with the mixed juices. Do this for three mornings.

177. Another medicine.

Take daun labu puteh (leaves of *Lagenaria vulgaris*; the bottle-gourd). Crush the juice out of the leaves by hand into a cupful of coco-nut milk. Expose this all night to the dew. Next morning, moisten the head with it. Do this for three mornings, and be relieved.

178. Fasal pada mēnyatakan ubat ngēlu kēpala.

Sections to explain the medicines for headaches.

Take daun pēria (leaves of *Momordica Charantia*; the bitter pumpkin); daun gandaria (fresh leaves of *Bouea macrophylla*); mata kunyit (a stem-bud of a fresh turmeric rhizome); and hujung bēras (very fine raw rice). Grind together finely. Apply this to the head as a poultice, and be relieved.

179. Another medicine.

Take a handful of daun lēnggundi (leaves of *Vitex trifolia*); puchok gorek (kēliči; young leaves of *Caesalpinia Crista* or *C. Jayabo*); kulit limau purut (peel, or rind, of *Citrus Hystrix*), of one fruit only; buah chēngkeh (cloves), 12 in number; bawang merah (the onion of *Allium Cepa*), one onion only; halia (ginger), a piece the size of the thumb; kulit mērunggai (bark of *Moringa oleifera*; the horse-radish tree); and lada sulah (white pepper). Concerning the white peppercorns, on the first day of giving this medicine, take 7 peppercorns; on the second day, twice seven; on the third day, three times seven; and so on. Now, grind everything together finely. Press out the essence (juice), and mix it in a tea-cup (chawan) with coconut water, sufficient for one draught. Drink this morning and evening. Also put in a very small quantity of camphor.

180. Another medicine.

Take daun sēsawi hitam (leaves of *Brassica juncea*; Indian mustard); and daun pēria (leaves of *Momordica Charantia*; the bitter pumpkin). Reduce to a pulp. Apply this to the forehead of the sick man.

181. Another medicine.

Take daun limau kapas (leaves of a race of *Citrus medica*); and biji sēsawi (mustard seed). Reduce these to a pulp. Put this into a plantain leaf and warm it slightly over a fire. Apply it to the patient's forehead, but before doing so, oil his forehead with minyak lēnga (sesamum oil), and let him be relieved.

182. Fasal pada mēnyatakan ubat mata luka.

Sections to explain the medicines for wounds of the eye. [Compare with 393.]

Take jintan putih (seeds of *Cuminum Cyminum*); and bēras (raw, husked rice). The rice must be washed by a young woman who has recently given birth to a first-born child. Bruise the cumin seeds. Put them into a piece of rag. Dip this into the raw rice water. Drop this water into the wounded eye, and be relieved.

183. Another medicine.

Take kunyit hiris-hiris (sliced turmeric); bēras (raw, husked rice), 7 grains; and tandok kērbau yang putih (a white buffalo's

horn). Take very fine scrapings (kikis halus-halus) of the horn. Steep these in water. Drop this water into the wounded eye and the man will be cured.

184. Another medicine.

Take apiun yang baik (opium of good quality). Rub it on a piece of iron, either with ayer limau nipis (juice of *Citrus aurantifolia*), or minyak lęnga (sesamum oil). Apply this over the eyelid, and be relieved.

185. Another medicine.

Take kapur Barus (camphor of *Dryobalanops*). Dip a piece three times into water. Put the clear solution into a white cup. Expose it at night to the dew. Next morning, drop this water into the wounded eye by means of tree-cotton, and be relieved.

186. Should there be Tumboh—'spots or specks on the eyes'.

[Compare with 313 and 407.] Scars left from wounds; perhaps, also from ulcers of the cornea following small-pox (kětumbohan); or, from trachoma (granular conjunctivitis).

Take jęrnang (dragon's-blood; resin of *Daemonorops spp.*), reduced to a fine powder; bulu ayam yang muda (down from a young chicken); and bulu ayam puteh kuning kaki (feathers from a white fowl with yellow legs). Put the powdered resin, and the down, into some water and expose it to the dew at night. Next morning, before the flies start to fly, take the white feathers, and 'write on the eyes', i. e. draw rings round the eyes with the dye. Utter no words (incantation), and let him be relieved.

187. Another medicine.

Take bawang puteh (garlic); ayer pinang muda (juice of a green betel-nut); and a small quantity of alum (tawas). Reduce these to a fine pulp and put it into a piece of white rag. Squeeze the juice into the eyes, and be relieved.

188. Should he become purblind (buta larang).

Take kunyit hidup (fresh turmeric rhizome). Rub it down with warm water. Stain (round) the eyes, and be relieved.

189. Fasal pada męnyatakan suatu pęnyakit pada muka.
Jęrawat.

Sections to explain a disease on the face called Jęrawat.

An eruption of pimples on the face. (?) Acne.

Take tęngkok labu (the neck, or narrow part, of the bottle-gourd) and the finger of a fresh turmeric rhizome. Rub them down on a stone with the juice of a lime fruit. Apply this to the face for three days, and be relieved.

190. Another medicine.

Take kulit bunga tanjong (bark of *Mimusops Elengi*); kulit ru (bark of *Casuarina equisetifolia*); kulit batang asam Jawa,

(bark of the tamarind tree); and kulit langir (bark of *Albizzia saponaria*). Rub all these down on a stone. Apply this medicine to the face, and be relieved.

191. Moreover, in order to restore the smoothness of the skin ('to recall the former face skin').

Take pati santan (the essence, or juice, of fresh coco-nut pulp); pati kunyit hidup (juice expressed from freshly pulped turmeric rhizome); kuning telur (yolk of an egg); and biji kědaung (seeds of *Parkia Roxburghii*). Mix and pound together. Rub this daily over the face with cotton. The skin will become smooth and the patient will be cured.

192. Fasal pada měnyatakan sakit kěpala nama pitam.
Sections to explain an illness in the head called Pitam.

Fits of dizziness caused by a rush of blood to the head. Vertigo.
[Compare with 417.]

Take puchok batang asam Jawa (young shoots of the tamarind tree); mata kunyit (a stem-bud of a fresh turmeric rhizome); and hujung lěmukut (very fine rice dust). Pound by hand, adding only a little water. Expose this at night to the dew. Bathe the head for three mornings, and be relieved.

193. Another medicine.

Take five young shoots of the betel-vine (puchok sireh yang muda); and onion of *Allium Cepa* (bawang merah); and some jintan hitam (seeds of *Nigella sativa*). Grind finely. Put the pulp into a piece of cloth. Squeeze the juice into the patient's eyes for three days, and let him be relieved.

194. Another medicine.

Take daun pěnggaga (leaves of *Hydrocotyle asiatica*); and biji kachang hijau (seeds of *Phaseolus radiatus*; green bean). Boil in a cooking-pot. Expose the cooking-pot at night to the dew. Add some sugar. In the morning, eat and drink the contents.

195. Another medicine.

Take kayu manis (cinnamon); kapur Barus (camphor of *Dryobalanops*); and chěndana (sandal-wood). Reduce to a pulp. Apply this to the patient's forehead, and let him be relieved.

196. Fasal pada měnyatakan ubat pěnyakit sěriawan.

Sections to explain the medicines for the disease called Sěriawan.

Sprue. [Compare with 318-319, 326, and 389. Thrush is also called sěriawan; and, in Singapore, sěriawan is applied to diphtheria.]

Take daun pěria laut (leaves of *Momordica Charantia*; the bitter pumpkin). Pound the leaves by hand and make a gargle for daily use.

197. Another medicine.

Take daun gandariah (leaves of *Bouea macrophylla*); pati santan (the essence, or juice, of fresh coco-nut pulp); bawang merah (the onion of *Allium Cepa*), one onion; and as much as five fingers can hold (sa-jěmput) of adas manis (seeds of *Ane-thum graveolens*; dill). Bruise the leaves. Slightly scorch the onion. Grind all together. Make a gargle for daily use, and be relieved.

198. Moreover make medicines for the patient to drink.

Take buah tanjong yang muda (the young fruits of *Mimusops Elengi*); and pati santan (the essence, or juice, of fresh coco-nut pulp). Pound the fruits finely and take the juice. Mix it with the coco-nut essence. Drink this for three mornings.

199. Another medicine.

Take chěndana janggi (wood of *Pterocarpus santalinus*; red sanders wood); kulit (name omitted in the manuscript); and gětah jěrnang (resin of *Daemonorops spp.*; dragon's-blood). Rub these down on a stone. Then take ayer bunga raya puteh (juice from the large flowers of *Hibiscus Rosa-sinensis*, a white race). Squeeze the juice out by hand to the depth of one joint of the finger (sa-ruas jari). Mix. Drink this twice a day, and be relieved.

200. Fasal pada měnyatakan pěnyakit hati.

Sections to explain diseases of the liver.

Should there be heartburn (pědas hati). [Compare with 404.]

Take inggu (asafetida); and ayer limau nipis (juice of *Citrus aurantifolia*). Dissolve the asafetida in the lime juice. Take this medicine for three days, and be relieved.

201. Should there be spasmodic pains in the liver.

Take adas pědas (seeds of fennel); and ayer madu (honey). Reduce by boiling to one-third. Take this for three mornings.

202. Should the pain in the liver prevent breathing (jika sakit hati tiada boleh běr-nafas).

Take akar tuba (root of *Derris elliptica*), a piēcè half the length of the forefinger. Cut this into three. Rub one piece on a stone. Then rub (the paste) over the region of the gall-bladder, and be relieved.

203. Another medicine.

Take 12 cardamoms (buah pělaga); and a piece of cinnamon (kayu manis) the length of a finger. Reduce these to powder. Suspend in water to make one draught. Give this to the patient to drink. Repeat in the same manner for three mornings, and be relieved.

204. Should there be nausea (hati mědu).

Take buah goreng (fruits of *Caesalpinia Crista* and *C. Jayabo*).

Take the pulp of three fruits. Take also some daun gorek (leaves of this plant); jintan hitam (seeds of *Nigella sativa*); hajimuju (jěmuju; *Carum copticum* seeds); bawang putih (garlic), 7 pieces, or wrappers (ulas); and a lump of salt (garam). Grind these together finely. Take this on the mornings of three successive days.

205. Fasal pada mēnyatakan ubat sakit pėrut.

Sections to explain the medicines for pain in the stomach.

[Compare with 72-76.]

Should the pain be associated with hardness (enlargement) of the liver (kėras hati).

Take some buah kėrsani (Khorassan fruit; seeds of *Hyoscyamus*); some hajimuju (jěmuju; *Carum copticum* seeds); some jintan putih (seeds of *Cuminum Cyminum*); some jintan hitam (seeds of *Nigella sativa*); a nutmeg (buah pala); fourteen cloves (buah chěngkeh); some akar puchok (rhizome of *Saussurea Lappa*; the Indian kut); majakani (cynips galls from *Quercus lusitanica*), $\frac{1}{2}$ an oak-gall (sa-bělah); and biji chuchur atap (leaves, daun, probably not seeds, biji, of *Leptospermum flavescens*; hujung atap). Grind all these finely together. Then divide into three parts or doses. This medicine must be taken with the essence of the coco-nut (juice squeezed from fresh coco-nut pulp). Repeat the dose on three mornings, and be relieved.

206. Should there be borborygmus (pėrut bėrbunyi, gėmuroh dalam pėrut).

Take akar lėngkuwas (root of *Languas Galanga*; galingale). Pound it and take the juice. Then take a few white peppercorns (lada sulah); and a little salt (garam). Grind the white peppercorns, and dissolve them in the Languas juice with the salt. Drink this for three mornings, and be relieved.

207. Should there be a pain in the stomach that no other medicine can cure.

Now, take apiun (opium), a piece as large as a grain of Indian corn; kachu (gum of *Acacia Catechu*; cutch, or catechu); a half cent's weight (bėrat dua duit); and majakani (cynips galls from *Quercus lusitanica*), three gall-nuts. Reduce all these to pulp. Mix with putih tėlur (white of egg). The patient must take this medicine every morning and evening. Not even one dose may be missed, and let him be relieved.

208. Should there be sakit pėrut kėmbong, or a feeling of fullness in the stomach after meals.

Take daun mata pėlandok (leaves of *Ardisia*); and pati santan (the essence, or juice, of fresh coco-nut pulp). Reduce the leaves to pulp and mix with the coco-nut essence. Take this medicine for three mornings, and be relieved.

209. Should there be sakit pěrut naik bėsar, or dilatation of the stomach.

Take lipas (cockroaches), either 7, or 3, in number. Burn them and mix the ashes with water. Let the sick man drink this for three days in succession. Do not inform him what his medicine contains, and let him be relieved.

210. Should there be sakit pěrut bėsar kėmbong, or distention of the stomach.

Take biji sėsawi (mustard seed); a nodule (sa-buku) of fresh turmeric rhizome (kunyit hidup); a nodule (sa-buku) of ginger; a handful of daun sėkėntut (leaves of *Paederia foetida*); some kulit mėswi (bark of *Massoia aromatica*); and biji kėdaung (seeds of *Parkia Roxburghii*). Bake the seeds and take off the seed-coats. Then blend everything together, and divide into three parts. At the time of taking it, mix each part with honey. Repeat, in this manner, for three days, and be relieved.

211. Should there be sakit pěrut mėnyuchok-nyuchok, or piercing pains in the stomach. [Compare with 354 and 372.]

Take chėndana janggi (red sanders wood); a small quantity of jėrnang (resin of *Daemonorops* spp.; dragon's blood); and hajimuju (jėmuju; *Carum copticum*). Rub these down on a stone. Take this in rice gruel for three mornings, and be relieved.

212. Should there be sakit pěrut buang ayer darah, or pain in the stomach accompanied with diarrhoea, and the passage of blood.

Take akar kėrak-kėrak (root of *Bonnaya* and *Torenia*); a small quantity of kachu (gum of *Acacia Catechu*; cutch, or catechu); and a small quantity of jintan puteh (seeds of *Cuminum Cyminum*). Slice the root and catechu very finely. Chew them with the cumin seeds, in a betel-packet, according to native custom, and be relieved.

213. Fasal pada mėnyatakan ubat dėmam tiada bėr-tika. Sections to explain the medicines for an 'untimely', or 'unlucky', fever.

Take a small quantity of tėmu puteh (rhizome of *Curcuma Zedoaria*; zedoary); a small quantity of jintan puteh (seeds of *Cuminum Cyminum*); 7 pieces of sumbu darah ('lamp-wick'); 7 slices of halia (ginger root); and a small quantity of kulit mėswi (*Massoia* bark). Grind finely: Apply this over the whole body for three consecutive days.

214. Another medicine.

Take a small quantity of tėmu lawas (rhizome of *Curcuma xanthorrhiza*); and tėmu puteh (rhizome of *Curcuma Zedoaria*); one piece, or wrapper (ulas), of bawang merah (the onion of *Allium Cepa*); 7 pieces of halia bara (a variety of ginger); 7

fruits of chabai Jawa (Java long pepper); 7 grains of bēras unbroken, raw, husked rice); 7 pieces of mēkula (the embryo of *Nelumbium speciosum*; lotus germ); and a small quantity of kulit pēlasari (mēmpēlasari; bark of *Alyxia*). Grind all these together with water that has been kept overnight. Apply this over the whole body, and be relieved.

215. Another medicine.

Take the fallen blossoms of a young green coco-nut (mumbang kēlapa); hujung lēmukut (very fine rice dust); and mata kunyit (a stem-bud of fresh turmeric rhizome). Reduce these to pulp, and divide it into three parts or doses. At the time of taking this medicine, dissolve it in strong vinegar. Repeat the dose for three days, and be relieved.

216. Should these fail.

Take karong garam bēkas yang suda lama (an old salt bag). Burn this bag. Take the ashes. Add a little more salt to them. Then grind them finely with a little water. 'Shoot', i. e. spit this upon the stomach of the patient for three consecutive nights.

217. Fasal pada mēnyatakan ubat sēmbēlit bēngkak.

Sections to explain the medicines for congestion (passive) of the liver (sēmbēlit), accompanied with swelling 'of the hands, legs, and elsewhere'.

Take daun puding merah (leaves of *Graptophyllum hortense*); daun ěpēdu landak (leaves of *Barleria Prionitis*); a pinch (sa-jēmpu) of hujung lēmukut (very fine rice dust); and mata kunyit (a stem-bud of fresh turmeric rhizome). Reduce these to a pulp. Daub this over the affected parts, and be relieved.

218. Another medicine.

Take daun hati-hati (leaves of *Coleus atropurpureus*, and *C. Blumei*). Pound them and take the juice. Mix this with the essence, or juice (pati santan) expressed from the pulp of a green coco-nut. Drink as much as the joint of a finger measures in depth, for three days, and be relieved.

219. Should these fail.

Take one chupak of honey (ayer madu); one chupak of juice expressed from freshly pulped turmeric rhizome (pati kunyit hidup); and one chupak of green coco-nut milk (ayer kēlapa muda). Mix and boil them together until there is only enough left to make three draughts, or doses. The patient must drink this medicine in the mornings after he has bathed, and let him be relieved.

220. Moreover.

Take a quarter of a bottle of year-old vinegar (chuka mēnahan; vinegar that will keep); a handful of daun pulai (leaves of

Alstonia scholaris); a double handful (sa-chapak), of jintan hitam (seeds of *Nigella sativa*); 7 pieces, or wrappers (ulas) of bawang putih (garlic); as much as five fingers can lift of hajimuju (jěmuju; *Carum copticum* seeds); 7 fruits of chabai Jawa (Java long pepper); and 16 slices of halia (ginger). Reduce the leaves to pulp and take the essence, or juice. Treat all the rest in the same way. Then mix with the vinegar. This should be sufficient for three morning doses. Strain the medicine first before drinking it.

221. Fasal pada mēnyatakan pēnyakit chika iya anu muntah. Sections to explain the disease called Chika accompanied with vomiting. . .

A severe choleraic attack occurring at night. [See note to 76.]

Take a handful of daun mērunggai (leaves of *Moringa oleifera*; the horse-radish tree); an onion of *Allium Cepa* (bawang merah); and as much as five fingers can lift of jintan hitam (seeds of *Nigella sativa*). Grind finely. Let the patient take this as a draught.

222. Should it be accompanied with diarrhoea only (buang ayer sahaja tiada muntah ka-sungai sahaja).

Take 7 white peppercorns (lada sulah); and 7 pieces of tahi tikus (mouse dung). Put these into a betel-quid (sireh pinang). Give it to the patient to chew, in order that he may vomit. [Compare with 537.]

223. Should it occur between 2.0 and 3.0 a.m., on a full stomach accompanied with piercing pains (chika kēsiyangan kēna sakit waktu jam pukul dua, atau pukul tiga malam, itu-lah dia lagi pēnoh dalam pērut, dan mēnikam-nikam).

Take 3 slices of kunyit hidup (fresh turmeric rhizome); 3 slices of lēngkuwas (rhizome of *Languas Galanga*; galingale); 3 slices of bawang merah (the onion of *Allium Cepa*); 3 pieces, or wrappers (ulas), of bawang putih (garlic); and 7 white peppercorns (lada sulah). Grind finely. Give this for three mornings.

224. Should this fail.

Take a small quantity of adas pēdas (fennel); a small piece of kayu manis (cinnamon); some cloves (buah chēngkeh); a nutmeg (buah pala); three flowers of chēmpaka (*Michelia Champaka*); a small piece of bonglai (rhizome of *Zingiber Cassumunar*); and a small piece of tēmu kunchi (rhizome of *Gastrochilus Panduratum*). Grind these finely. Let this medicine be kept for one night, and then apply it, for three days, as a plaster to the stomach where the pain is felt.

225. Another medicine for the colic called Chika.

In order that chika may not affect a man for the whole of his life. The medicine will also keep away 'the seventy sorts of

disease'. Pound (tumbok) white peppercorns (lada sulah) and take an egg-shellful (suatu kulit telur); also take this egg-shell-full of honey (ayer madu); and of minyak sapi (ghi); powdered ginger, as much as five fingers can lift (halia sa-jemput); and jintan manis (seeds of *Pimpinella Anisum*), likewise. As required, mix with the yolk of an egg, and beat up well. This medicine must be taken when the moon is in eclipse.

226. Fasal pada mēnyatakan pēnyakit sēnggugut pada pērēm-puan.

Sections to explain the disease of women called Sēnggugut.

Whereupon, these diseases are in three classes. In the first place, sēnggugut lintah nama-nya. Secondly, sēnggugut bangkai nama-nya. Thirdly, sēnggugut bunga nama-nya.

Now should there be Sēnggugut Bangkai. Sapræmia following a miscarriage. [Compare with 112, 137, 143, and 146.]

Take umbi pandan (the very tip of the root of *Pandanus spp.*), a piece as long as the forefinger, from a screw-pine which has never flowered; bunga chēmpaka gading (flowers of *Michelia longifolia*), 3 buds which are not yet open; daun sēlaseh (leaves of *Ocimum spp.*; basil), a handful; buah mēngkudu (fruit of *Morinda citrifolia*), 3 half-ripe (mēngkal), fruits; and roman (padi-straw). Burn the rice stalks to ashes. Steep these ashes in water. Pull the bark off the Pandanus root, and slice it, as well as the flowers, the leaves, and the fruits. Put them into the water which contains the ashes. Expose this at night to the dew. In the morning, let the patient drink the clear part ('its liquor') for three mornings, and be relieved.

227. Should there be Sēnggugut Bunga. Dysmenorrhœa.

Take bunga pēkan (flowers of *Jasminum spp.*), a handful; and daun rukam (leaves of *Flacourtia Rukam*), a handful; a little hujung atap (leaves of *Leptospermum flavescens*); some halia padi (a variety of ginger); lada sulah (white pepper), to the number of three times 7 peppercorns; and bēras (raw, husked rice), a full open handful (sa-bujor tangan). Reduce these to a pulp, and make into wafer cakes. Eat one of these at bedtime, and be relieved.

228. Should there be Sēnggugut Lintah.

Take a handful of daun bēnalu (leaves of *Hemigraphis colorata*); seven white peppercorns (lada sulah); and a bulb of garlic (bawang puteh tunggal). Grind finely. Steep in strong vinegar. Drink this medicine for three days, and be relieved.

229. Fasal pada mēnyatakan pēnyakit mēroyan bagai pērēm-puan bēranak.

Sections to explain the diseases called mēroyan which are

associated with child-birth. [Pěnyakit Měroyan applies to any illness attributed to child-birth, either immediate, or remote. Compare with Ubat Měroyan in 119. See also 494.]

Take sulor tēbu (a shoot of the sugar cane); akar mērunggai (root of *Moringa oleifera*; the horse-radish tree); biji sēsawi (mustard seed), a small quantity; and 3 pieces, or wrappers (ulas), of bawang puteh (garlic). Grind finely. Steep in vinegar. Apply this over the body, and let her be relieved.

230. A medicine for Pěnyakit Měroyan Lamintah, an illness that causes much vomiting.

Take an onion of *Allium Cepa* (bawang merah); and a small quantity of jintan hitam (seeds of *Nigella sativa*). Chew these in a betel-quid (sireh pinang). The juice must then be 'spouted out', i. e. spat, upon the woman patient, 'from her neck right down to her breast.'

231. A medicine for Pěnyakit Měroyan Bunga.

Take kulit dēdap (bark of *Erythrina*); and biji sēsawi (mustard seed). Reduce to a fine pulp. Dissolve in vinegar. Rub this on the stomach, as well as on the back.

232. Should Pěnyakit Měroyan ascend, and penetrate into the woman's head.

Take daun ruku-ruku (leaves of *Ocimum spp.*; basil); akar ruku-ruku (the root of this plant); and three pieces, or wrappers (ulas), of bawang puteh (garlic). Reduce these to a fine pulp. Dissolve in vinegar. Rub this medicine from the patient's face all over her body, and let her be relieved.

233. Fasal pada mēnyatakan pěnyakit busong darah atas pēřempuan.

Sections to explain a disease of women called Busong Darah, which causes amenorrhoea. [Compare with 316. Busong, an obstruction, or stoppage, is also used for an Aneurism—Busong Darah. Compare also Dropsy—Busong Ayer.]

Take a handful of daun gandarusa (leaves of *Gendarussa vulgaris*); and some ibu kunyit (the fingers of a fresh turmeric rhizome). Bruise these and take the essence, or juice. Put it into a tea-cup (chawan), to the depth of one joint of the forefinger. Let her drink it for three mornings.

234. Should this fail.

Take jintan hitam dua chawan (two tea-cupfuls of *Nigella sativa* seeds); pati santan sa-chawan (a tea-cupful of the essence, or juice, of fresh coco-nut pulp); pati daun gandarusa sa-chawan (a tea-cupful of the essence, or juice, of *Gendarussa vulgaris* leaves). Reduce the *Nigella* seeds to a fine pulp. Dissolve it in the mixed juices. Let her drink this medicine for three days, and be relieved.

235. Should this also fail.

Take a small quantity of inggu (asafetida); some jadam (bitter aloes); and minyak sapi (clarified butter; ghi). Heat the clarified butter with the aloes and asafetida in an earthenware curry-pot (bĕlanga), until they melt, and when cool enough make into pills. Roll these in flour. Keep them well covered. Take one pill every other day, and be relieved.

236. Moreover.

Take some gaharu (resinous wood of *Aquilaria*); akar mĕrunggai (root of *Moringa oleifera*; the horse-radish tree); akar asam Jawa (root of the tamarind tree); and tĕras batang api-api (pith of *Sonneratia*). Rub all these down on a stone. Pour this into a tea-cup (chawan). Next, take 7 white peppercorns (lada sulah); and 7 pieces, or wrappers (ulas) of bawang puteh (garlic). Reduce these to a fine pulp. Add this to the tea-cup, and mix all together. Drink it for three days, and be relieved.

237. Fasal pada mĕnyatakan ubat chaching.

Sections to explain the medicines for 'a worm'.

A Tape-worm. [Compare with 37-39, 95, and 384-385.]

Take buah, (name omitted in the manuscript) yang tua; (probably a ripe fruit of *Sonneratia*, but perhaps a ripe pomegranate). Divide it and throw away the seeds. Keep it in the salt-box for a whole night. Give it to the child to eat in the morning. Let him eat it (the rind), for the three consecutive mornings. Perhaps (alang) he will pass the worm (alang chaching-nya nanti kĕluar), and be relieved.

238. Another medicine.

Take chĕndawan lar (the fungus *Cordyceps*). Chew this with betel. Stain the skin round the child's eyes (chĕlupakan pada mata) with this betel-juice for three days. Chĕndawan lar is like chĕndawan kukuran; its stems are black (batang-nya hitam).

239. Another medicine.

Take some daun mĕrunggai (leaves of *Moringa oleifera*); and chunam (prepared lime used in the betel-quid). Reduce to fine pulp. Apply this to the stomach and tie it on with a piece of cloth.

240. Another medicine.

Take akar pinang (root of the betel-nut palm; *Areca Catechu*). Rub it down (asah) on a stone. Stain the skin round the child's eyes with the juice, and let him be relieved.

241. Another medicine.

Take bawang puteh (garlic), one bulb; akar putarwali (root of *Tinospora crispa*), a piece the length of the joint of the index

finger (sa-ruas jari tĕlunjok); and a lump (sa-buku) of garam jantan (coarse, or long-grained salt). Grind to a fine pulp (pipis lumat-lumat). Strain after steeping in water. Give him this to drink for three days, and let him be relieved.

242. Fasal pada mĕnyatakan ubat muntah.

Sections to explain the medicines for vomiting.

Take bawang puteh (garlic); kunyit hidup (fresh turmeric rhizome), a nodule (sa-buku); mĕswi (*Massoia* bark); jantan hitam (seeds of *Nigella sativa*); jantan puteh (seeds of *Cuminum Cyminum*); and kĕtumar (coriander seeds). Take all these in small amounts. Grind finely. Divide into three portions, or doses. Take a dose every morning, and be relieved.

243. Should this fail.

Take akar tutup bumi (root of *Elephantopus scaber*). Chew scrapings of the root in a betel-quid (sireh pinang), and be relieved.

244. Should this also fail.

Take akar batang maja (root of *Aegle Marmelos*; bael fruit). Chop it up. Boil in water until reduced to one third. Drink this, and be relieved.

245. Should the vomit contain blood.

Take kayu manis (cinnamon). Grind it finely. Steep in water. Drink this, and be relieved. It will stop the vomiting.

246. Fasal pada mĕnyatakan dawuna al-hakim fasal daun sĕna terlalu mujarrab.

A subdivision to set forth the medicines of the physicians.

Concerning Senna leaves, a well proved drug.

Take daun sĕna sĕrta batang-nya dan kulit-nya (leaves of *Cassia angustifolia*; 'Mecca' or Tinnevely senna, along with its stalks and bark), about $\frac{1}{2}$ catty, ($\frac{1}{2}$ lb.). Dry well. Reduce to fine powder. Keep it well covered. When you wish to prescribe it, or are going to take any of it yourself, take 3 duits ($\frac{1}{4}$ cents, Penang; or pice, $\frac{1}{4}$ annas, India), by weight (timbang bĕrat tiga duit).

i. Taken with honey, senna keeps the chest free from disease.

247. ii. Taken with moist sugar, it warms and invigorates the body.

248. iii. Taken with sugar candy, it strengthens the bones and stomach.

249. iv. Taken for three days with clarified butter and moist sugar, it purges the body of manifold diseases, refreshes, and maintains health.

250. v. Taken with fresh butter, it dispels bad smells, relieves headaches, cools the brain, and prevents offensive breath.
251. vi. Taken with milk or curds, it neutralizes all poisons, and protects us from all harm. Such is its virtue!
252. vii. Taken with goat's milk, it invigorates, and promotes good appetite.
253. viii. Eaten with dates, it dispels pĕnyakit angin, [which see, 164], from both chest and mouth, and refreshes the body. Such is its virtue!
254. ix. Eaten with pomegranates, it keeps the old man young and lusty. Such is its virtue!
255. x. Eaten with grapes, it makes the dim eye bright. Such is its virtue!
256. xi. Taken with vinegar, it draws fever from the bones, dispels every kind of disease from the stomach, and eases the chest. Such is its virtue!
257. xii. Taken with the juice of the lime fruit, it draws heat from the stomach, and the lean become fat. Such, by God's mercy, is its virtue!
258. xiii. Taken with the morning dew, it brings sparkle and lustre to the eye. Such is its virtue!
259. xiv. Taken with a decoction of pomegranate rind, it removes diarrhoea (mĕngĕlurkan pĕnyakit buang-buang ayer dari dalam perut faedah-nya).
260. xv. Boiled in fresh coco-nut milk, it cures urinary disorders, and, moreover, expels gravel (mĕnhilangkan sakit kĕnching, dan lagi mĕng-kĕlurkan batu yang ada didalam zakar faedah-nya).

[Sections 261 to 270 deal with diseases attributed to evil spirits. The polong is thought to be the instigator of many different diseases; it is generally attended by a pilot, in the shape of an inverted-boat-shaped grasshopper, a familiar, often known as the pĕlĕsit, which gains entrance to the body, either through the skin, or by one, or other of the apertures of the body.]

261. Fasal pada mĕnyatakan suatu pĕnyakit bĕrnama polong sĕkam.

A section to explain the illness called Polong Sĕkam.

Whenever this sort of disease affects a man, he appears to be pretending to be sick; his (symptoms) only occur for an instant and quickly disappear: 'instantaneously there is; and instantaneously there is not.' [Compare this with the illness known as Pĕnyakit hidup, 350.]

Take kësumba (*Carthamus tinctorius*; safflower), the flowers of which yield a saffron dye; biji kapas (seeds of the cotton-bush); and garam Siam (salt from Siam). Reduce these to a fine pulp. Let him take this, and be relieved.

262. (ii). The illness known as Polong Kilat.

The pains are felt in the throat.

Take jintan hitam (seeds of *Nigella sativa*); daun gandarusa (leaves of *Gendarussa vulgaris*); a small quantity of mëswi (*Massoia* bark); three slices of bawang merah (the onion of *Allium Cepa*); and a large lump of garam jantan (coarse, or long-grained salt). Reduce these to a fine pulp. Mix with a small quantity of vinegar. Press this into the patient's ears, and let him be relieved.

263. (iii). The illness known as Polong Lokan.

The pains are felt in the body; they run, hither and thither, all over the body.

Take ibu kunyit (the fingers of a fresh turmeric rhizome); and bawang merah (the onion of *Allium Cepa*). Take these in small quantities. Grind them together finely. Apply this to the parts where the pain is felt, and be relieved.

264. (iv). The illness known as Polong Akap.

This is located in the ears.

Take some daun përia (leaves of *Momordica Charantia*; the bitter pumpkin); daun limau nipis (leaves of *Citrus aurantiifolia*); daun sëlaseh (leaves of *Ocimum spp.*; basil); daun bënalu (leaves of *Hemigraphis colorata*); kulit limau purut (rind, or peel, of *Citrus Hystrix*); akar jërangau (rhizome of *Acorus Calamus*; sweet flag); some jintan hitam (seeds of *Nigella sativa*); and three slices of bawang merah (the onion of *Allium Cepa*). Reduce all these to a fine pulp. Press this into the patient's ears. Rub the waste residue over his neck, and into the nape of his neck, and let him be relieved.

265. (v). The illness known as Polong Budak.

This is located in the loins, but the starting-point was in the eyes.

Take some daun luli (leaves of *Garcinia rostrata*); some asam Jawa (sour relish made from tamarind pods); three slices of bawang merah (the onion of *Allium Cepa*); some adas pëdas (fennel); and some kulit pëlasari (mëmpëlasari; bark of *Alyxia*). Reduce these to a fine pulp. Press this over the patient's eyelids. Rub the waste residue into his loins, and let him be relieved.

266. (vi). The illness known as Polong Khutub.

Extreme pain is felt all over the body.

Take warangan (white arsenic); daun maja (leaves of *Aegle Marmelos*; bael fruit); daun balek adap (leaves of *Mussaenda spp.*); daun limau nipis (leaves of *Citrus aurantifolia*); daun

limau purut (leaves of *Citrus Hystrix*); bawang merah tunggal (an onion of *Allium Cepa*); garam jantan tiga buku (three lumps of coarse, or long-grained salt); and biji kapas (seeds of the cotton-bush). Grind these finely. Steep in vinegar. Rub this over the whole of the patient's body, and let him be relieved.

267. (vii). The illness known as Polong . . . (name omitted in the manuscript).

This is located in the man's body, and in consequence, his body is just lean, and never becomes stout.

Take some jintan hitam (seeds of *Nigella sativa*); kětumbar (coriander seeds); bonglai (rhizome of *Zingiber Cassumunar*); halia padi (a variety of ginger); garam (salt); and some bėras (raw, husked rice). Reduce all these to a fine pulp. Rub this over the whole of the patient's body, and let him be relieved.

268. (viii). The illness known as Polong Hura.

The pains are those of extreme heat and extreme cold.

Take akar gandasuli (root of *Hedychium spp.*); pati santan (the essence, or juice, of fresh coco-nut pulp); and some asam Jawa (sour relish made from tamarind pods). Reduce these to fine pulp. Rub this over the whole of the patient's body, and let him be relieved.

269. (ix). The illness known as Polong Jantan.

This is like insanity.

Take limau purut (fruit of *Citrus Hystrix*); ibu kunyit (the fingers of a fresh turmeric rhizome); and biji asam Jawa (tamarind seeds). Reduce all these to a fine pulp. Strain and let the patient drink the juice. Rub the dregs over the whole of his body, and let him be relieved.

270. (x). The illness known as Polong Tikus.

The pains last for a time and then disappear; then they come again; the man feels as if he were being bitten by a mouse.

The starting-point was in the ears.

Take limau nipis (fruit of *Citrus aurantifolia*), one lime fruit; bawang merah (the onion of *Allium Cepa*), one onion (sa-buku); bawang putih (garlic), three pieces, or wrappers (ulas); and some jintan hitam (seeds of *Nigella sativa*). Grind these finely and mix with vinegar. Press this into the ears and nostrils. Rub the dregs over the whole of the patient's body, and let him be relieved.

271. Fasal pada mēnyatakan ubat kayap atau salamah.

Sections to explain medicines for Herpes zoster, or Shingles.

[Compare with 502 and 539.]

Take daun bėnalu merah (leaves of *Hemigraphis colorata*); daun gėlenggang (leaves of *Cassia alata*); daun sarampang, (see glossary); mata kunyit (a stem-bud of a fresh turmeric

rhizome); and hujung lēmukut (very fine rice dust). Grind all very finely together. Mix with some water. Apply this medicine where the pain of the shingles is felt, and be relieved.

272. Should it occur on the stomach.

Take daun kërtau padi (leaves of the little Kërtau plant; see glossary); daun pënjarang (leaves of *Cyathula prostrata*); and daun këmuning (leaves of *Murraya exotica*). Reduce all these to a fine pulp. Steep this in water. Strain it and give it to the patient to drink. Rub the dregs over the stomach, and be relieved.

273. Another medicine.

Take the pulp of pinang mēngkēlan (a diseased betel-nut); akar jēruju (root of *Acanthus*); akar gēlang (root of *Portulaca oleracea*; purslane); sumbu halus ('fine lamp-wick'; see Glossary); kēmēnyan puteh (white, or purest, gum benzoin); jintan hitam (seeds of *Nigella sativa*); and some pēlasari (mēmpēlasari; *Alyxia* bark). Boil all these together. Drink this for three days, and be relieved.

274. Another medicine.

Take daun gēlenggang (leaves of *Cassia alata*); and kayu manis (cinnamon). Grind finely. Apply this to the stomach, and be relieved.

275. Another medicine.

Take puchok nipah (young shoots of *Nipa fruticans*). Take its sago (pith pounded out of the shoots); and santan kēlapa (coco-nut milk). Mix together. Take this, and apply the dregs to the shingles, and be relieved.

276. Moreover.

Take buah bakau (fruit of a mangrove); and sagu mēntah (uncooked sago). Reduce these to a fine pulp. Apply this like a poultice to the painful eruption, and be relieved.

277. Fasal pada mēnyatakan ubat kurap losong.

Sections to explain the medicines for tinea imbricata.

A tropical scaly ringworm which affects the whole body.

Take chuka mēnahan (vinegar that will keep). Take a tea-cupful (sa-chawan), of some that has been kept for years. Take also, a tea-cupful (sa-chawan) of ayer dideh nasi (rice-gruel); and a tea-cupful of biji buah gēlenggang (seeds of *Cassia alata*). Mix the three together, and grind up finely. Get the patient ready. First of all, order him to well clean himself of the ringworm (scales). Then let him stand in the sun. Now, apply the medicine all over him, wherever the disease is, and let him be relieved.

278. Another medicine.

Take daun limau nipis (leaves of *Citrus aurantifolia*); chunam

(prepared lime used in the betel-quid); and akar saga kěchil (root of *Abrus precatorius*). Reduce to a fine pulp. Apply this to the ringworm, and be relieved.

279. Another medicine.

Take chunam (prepared lime used in the betel-quid); buah kěchubong (seeds of *Datura fastuosa*); daun lěmbega (rěmbega; leaves of *Calotropis gigantea*); kapur Barus (camphor of *Dryobalanops*); ayer limau nipis (juice of *Citrus aurantifolia*); arang para (lamp-black, or soot); and tuba tikus (white arsenic). Reduce all to fine pulp. Apply this medicine to the ringworm, and be relieved.

280. Moreover.

Take tanah sarang angkut-angkut (earth from a mason-wasp's nest). Take scrapings of the mud, and add them to the application prescribed above (279). A warning follows: be careful not to take anything that has scales, when this medicine is in use. It is absolutely forbidden for such time as this medicine is being used.

281. Fasal pada měnyatakan pěnyakit kědal kaki dan tangan. Sections to explain the disease called Kědal on the feet and hands. [Compare with 321, 322, 524, and 525.] Kědal causes desquamation of the soles of the feet and palms of the hands with cracks in the flexures. A later stage is called Bělang; the skin is now smooth, and mottled with pinkish discoloration. A less advanced stage is called Sopak.]

Take akar lěngkuwas (rhizome of *Languas Galanga*; galingale); limau purut (fruit of *Citrus Hystrix*), one fruit; a bulb of garlic (bawang puteh tunggal); and some bėras (raw, husked rice). Reduce all these to a fine pulp and steep it in strong vinegar. Rub this medicine into the skin whether it be affected by Kědal or Sopak, and be relieved.

282. Another medicine.

Take akar majakani (see Glossary); and ayer limau nipis (the juice of *Citrus aurantifolia*). Rub (the root) down with the juice of the lime fruit. Apply this medicine to the skin that is affected by Kědal, and be relieved.

283. Furthermore.

Take chuka yang asam (strong vinegar). Well bathe the patient's hands with this vinegar. Next, take akar jarak pagar, (root of *Jatropha Curcas*); těrusi (green vitriol; proto-sulphate of iron, or copperas); and ayer limau nipis (the juice of *Citrus aurantifolia*). Rub the root down with the copperas on a stone. Mix in some lime juice. Rub this on the diseased skin (kědal), and be relieved.

284. Should the fingers be desquamating (ka-luroh-an jari).

Take three sireh leaves (leaves of the betel-vine); some pepper-vine leaves (daun lada); and kapur makan (shell-lime used in betel-chewing). Grind together finely. Apply this to the affected fingers, and be relieved.

285. Another medicine.

Take a handful of daun inai (leaves of *Lawsonia inermis*; henna); and a little alum (tawas). Reduce to a fine pulp. Mix this with the juice of a lime fruit, and apply it to the affected fingers, and be relieved.

286. Fasal pada mēnyatakan pēnyakit angin pirai.

Sections to explain the disease called Angin Pirai. [See note on Pēnyakit Angin (164). Compare with 34 and 383.]

Jikalau ada orang mati datang-lah sakit-nya, jikalau tiada dēngar orang mati, tiada datang pēnyakit itu.

This sickness follows the news of a man's death, and only so.

Take a handful of daun maman hantu (leaves of *Gynandropsis pentaphylla*); some kapur Barus (camphor of *Dryobalanops*); and some chunam (prepared lime used in the betel-quid). Grind finely. Warm slightly over a fire. Rub this into the joints of the hands, feet, and any other joints that may be affected, and be relieved.

287. Another medicine to restore the appetite.

Take about a pint, or half a coco-nut shellful, of cow's milk (susu lēmbu sa-chupak); three whole garlic bulbs (bawang puteh tiga buku); half a bottleful of honey (ayer madu); some buah chabai tali (fruit of *Helicteres Isora*); and akar chabai tali (root of this plant); two nutmegs (buah pala); some mace (bunga pala); and some cloves (buah chēngkeh). Mix the spices together. Grind them finely with the others. Then mix with the milk and the honey. Add about 4 tahils (approximately 5½ oz.), by weight of minyak sapi lēmbu (beef dripping). When everything is well mixed, pour into a brass cooking-pot (bēlanga tēmbaga). Melt over a slow charcoal fire, with frequent stirring, until the proper consistency is attained. This is determined (tested) by dipping white cloth, made up like a torch, into the cooking-pot. When the cloth-torch burns freely on being set alight, the pot may be taken off the fire. Keep the preparation well covered. Whenever this disease (pēnyakit angin pirai) attacks a man, give him some of this preparation, and he will be relieved.

288. Fasal pada mēnyatakan bērnama pēnyakit bēsar.

Sections to explain the disease called Pēnyakit Bēsar. [Small-pox. Compare with 327, 340, 376, 391-392.]

Take two earthenware curry-pots (bēlanga), also two earthenware rice-pots. Half fill one curry-pot with water, placing

within it a rice-pot filled with about $\frac{1}{2}$ chupak of best beef dripping (minyak sapi). Then take the other rice-pot. Make small holes in the bottom of it. Throw in about 2 tahils (approximately, $2\frac{2}{3}$ oz.) of bruised (broken) sulphur (bĕlerang). Place this over the beef dripping. Fit the remaining curry-pot on as a tight cover, so that no air may enter. Place the pots over a charcoal fire until mid-day. Now remove the top (or covering) pot. Replace and reheat if any sulphur should remain. Remove finally, when all the sulphur has disappeared. Keep the preparation carefully in a bottle. A warning follows: any one suffering from Small-pox (Pĕnyakit Bĕsar) must be kept in a private place, or room, for the space of 40 days without seeing anybody except the doctor (bomor), and the sick man must be protected from the air. Moreover, he must abstain from taking anything that is antagonistic (bisa); that is to say, anything that may injure the virtue of the remedy. This medicine (the prepared dripping) is to be given to the patient in the palms of his hands. Let him lick it up with his tongue from both hands, and be relieved.

289. Furthermore, an external medicine, or oil is needed (mau-lah masak-kan minyak).

Take several sorts of leaves.

First, daun lĕnjuang putih (leaves of *Cordyline terminalis*; jĕnjuang or andong; garden dracaena); daun lĕnjuang merah (leaves of a red race of the same); daun bĕdara (leaves of *Zizyphus Jujuba*); daun rukam (leaves of *Flacourtia Rukam*); daun lĕmbega (rĕmbega; leaves of *Calotropis gigantea*); daun ribu-ribu (leaves of *Lygodium scandens*); daun hati-hati (leaves of *Coleus atropurpureus*, and *C. Blumei*); daun gandarusa putih (leaves of light-stemmed races of *Gendarussa vulgaris*); daun gandarusa hitam (leaves of dark-stemmed races of *Gendarussa vulgaris*); daun puding merah (leaves of *Graptophyllum hortense*); daun nilam baras (? patchouli; leaves of *Pogostemon*); daun ruku-ruku, leaves of *Ocimum spp.*; basil); daun sĕlaseh (leaves of *Ocimum spp.*; see Glossary); daun sĕmbong (leaves of *Blumea balsamifera*); daun bĕluntas (leaves of *Pluchea indica*); daun mĕngkudu (leaves of *Morinda citrifolia*); antan (perhaps for daun siantan; leaves of *Ixora spp.*; see Glossary); daun jĕrangau (leaves of *Acorus Calamus*; sweet flag); daun bonglai (leaves of *Zingiber Cassumunar*); daun pauh (leaves of a *Mangifera*; a wild mango); and daun kĕmangi (leaves of a race of *Ocimum basilicum* or *O. canum*, used for seasoning).

Pound all these leaves together in a mortar. Press well with the hands and take the essence or juices.

Now take some kalambak (gaharu of best quality, wood of *Aquilaria*); mĕswi (*Massoia* bark); puchok (rhizome of *Saussurea Lappa*; the Indian kut); ganti (rhizome of *Peucedanum*

japonicum); changkok (dried flowers of *Schima Noronhae*); sěduwayah (leaves of *Woodfordia floribunda*); halba (leaves of *Trigonella foenum-graecum*; fenugreek); and biji buah kěchubong (seeds of *Datura fastuosa*). Pound all these together finely. Mix with the juices already prepared.

Then, take two green coco-nuts. Scrape out the fresh pulp, and pound it by hand. Take its juice and mix all the juices together. Boil until all the essences are reduced to an oil. Anoint every part of the body that is covered with the eruption, and by the blessing of God the disease will be cured.

290. Fasal pada mēnyatakan suatu pēnyakit tujuh nama-nya pada pērēmpuan turun puteh-puteh.

Sections to explain a disease of women with seven names called Turun puteh-puteh. Leucorrhoea. [Compare with 110. No names are given; perhaps the seven prescriptions are meant.]

Take some pijar (borax); and gula batu (sugar candy), in equal parts by weight. Reduce to a fine pulp. Dissolve this in warm water. Drink it for three days, and be relieved.

291. Another medicine.

Take a large piece of ibu kunyit (the fingers of a fresh turmeric rhizome); kalambak (best quality of the resinous wood of *Aquilaria*); kayu manis (cinnamon); a ripe, peeled banana (pisang sa-biji); and some kapur Barus (camphor of *Dryobalanops*). Reduce all these to a fine pulp with warm water. Apply it to the stomach, and loins, and be relieved.

292. Another medicine.

Take ěmpėdu kambing hitam sa-biji (a biliary concretion from the gall bladder of a black goat); kapur Barus (camphor of *Dryobalanops*); and chėndana janggi (red sanders wood). Rub the camphor and the sandal-wood together on a stone with ayer mawar (rose-water). Mix this with the gall-stone, and beat all well together. Drink this for three days, and be relieved.

293. Another medicine.

Take some kayu manis (cinnamon); lada ekur (cubebs; the dried full grown unripe fruits of *Piper Cubeba*); kulit bunga tanjong (bark of *Mimusops Elengi*); ibu kunyit sa-buku (a finger taken from the part of a fresh turmeric rhizome); chėkur (the root of *Kaempferia Galanga*); and gaharu (resinous wood of *Aquilaria*). Rub all these down on a stone with some water. Apply this medicine over the pubes, to the loins, and stomach, and be relieved.

294. Another medicine (sa-bagai kalau turun puteh-puteh itu busok bau-nya).

Take gaharu (resinous wood of *Aquilaria*); chėndana (sandal-wood); and tėras api-api (pith of *Sonneratia*). Rub these down

on a stone with fresh water. Then, take daun inai (leaves of *Lawsonia inermis*; henna). Dry the henna leaves well and reduce them to powder. Add some of this to the former preparation. Drink this and be relieved. A warning is given: avoid taking anything acid for such time as this medicine is being taken.

295. Another medicine to be taken three days after stopping the medicine (294) prescribed above.

Take majakani (cynips galls of *Quercus lusitanica*); gaharu (resinous wood of *Aquilaria*); kapur Barus (camphor of *Dryobalanops*); and ibu kunyit sa-buku (a finger taken from a fresh turmeric rhizome). Reduce these to a fine pulp. Press out the essence, or juice. Drink this on three consecutive mornings, and be relieved.

296. Should there be fever.

Take a black fowl just about to lay. Kill it in the usual way (sěmběleh). Pluck the feathers and remove the entrails. Then let it remain as it is for the time being. Next take (as stuffing), halia padi (a pungent variety of ginger); jěmuju kěrsani (seeds of *Hyoscyamus*); and jintan hitam (seeds of *Nigella sativa*). Take all these in equal proportions, no more and no less. Stuff the fowl and tie it up well so that (no) stuffing may run out. Now take two new curry-pots. Place the fowl in one with some water. Use the other as a cover and let it fit very closely. Boil until the fowl becomes quite soft. Then throw away all the stuffing, and let the patient eat the flesh evening and morning. This will get rid of the fever, and she will be relieved.

297. Fasal pada měnyatakan angin dalam badan hati jadi takut.

Sections to explain an internal wind that creates fear at the heart, i. e. the sensation of fear and depression that accompanies palpitation.

Take gaharu tandok (second quality of the resinous wood of *Aquilaria*); chěndana janggi (red sanders wood); chěndana puteh (first grade sandal-wood; see glossary); and limau purut (fruit of *Citrus Hystrix*). Rub the resin and sandal-woods down on a stone with the juice of the lime. Drink this medicine for three days, and be relieved.

298. Should the hands and legs become weak owing to the state of the heart.

Take lěmak harimau (tiger suet); and minyak lěng (sesamum oil). Melt over a moderate fire. Rub this into the hands and legs, and be relieved.

299. Should it cause swelling of the hands and legs.

Take inggu (asafetida); lada hitam (black peppercorns); daun chěngkěreng (leaves of *Hedyotis glabra* and *H. capitellata*);

chabai tali (fruit of *Helicteres Isora*); and buah chěngkeh (cloves). Grind all these finely. Infuse (suspend) in minyak lěnga (sesamum oil); and some minyak tanah (crude petroleum). 'A gentle digestive is necessary.' (?) Mix in a warm mortar. Then rub this on the hands and legs, and be relieved.

300 Should the muscles of the shoulders become affected (sakit urat bėlikat).

Take akar pinang (root of *Areca Catechu*; the betel-nut palm); akar kělapa (root of *Cocos nucifera*; the coco-nut palm); and akar pisang Běnggala yang muda (root of a young banana tree of the race pisang Běnggala. Reduce to a fine pulp. Rub this into the shoulder-blades (bėlikat), and be relieved.

301. Should the disease progress until the hands and feet come to be crippled by this wind (sakit bėlikat sampai lumpoh kaki tangan sėbab angin-nya). [Compare this lameness (lumpoh) with the oedema and peripheral neuritis of Beri-beri.]

Take a double handful (sa-chapak) of daun maman hantu (leaves of *Gynandropsis pentaphylla*); buah chěngkeh (cloves); lada sulah (white pepper); buah pala sa-biji (one nutmeg); a large piece of ibu kunyit (the finger of a fresh turmeric rhizome); chabai tali (fruit of *Helicteres Isora*); chabai ekur (dried, unripe full grown fruit of *Piper Cubeba*; cubebs); and some daun kėchubong (leaves of *Datura fastuosa*). Grind them all finely. Then sprinkle some coarse lime (kapur tohor) over the mass. Infuse it in vinegar, with a 'gentle digestive' (a moderate degree of warmth). A few drops of oil should now be rubbed over the legs. Then apply the medicine and wrap the limbs up in datura leaves. Finally, wrap them up in a piece of cloth and send the patient to bed. Repeat in this manner for three nights, and let him be relieved.

302. Fasal pada měnyatakan ubat karang nanah dan darah kėdua.

Sections to explain medicines for gonorrhoea. [Compare with 125-133.]

Take some kapur Barus (camphor of *Dryobalanops*); and ayer limau nipis (juice of *Citrus aurantifolia*). Rub the camphor down on a stone. Dissolve it in the lime juice. Drink this for three days, and be relieved.

303. Another medicine.

Take daun dukong anak (leaves of *Phyllanthus spp.*), a closed handful (sa-gěnggam); jintan manis (seeds of *Pimpinella Anisum*; aniseed); and some gula batu (sugar candy). Reduce to a fine pulp. Put it through a strainer. Take the essence, or juice. Let the patient drink this for three mornings, and be relieved.

304. Another medicine.

Take akar kundur (root of *Benincasa cerifera*; the wax-gourd); akar bunga mēlur (root of *Jasminum Sambac*; the Indian jasmine); and daun bunga pukul ampat (leaves of *Mirabilis Jalapa*). Reduce to a fine pulp. Put it through a strainer. Take the essence, or juice. Let the patient drink this for three days, and be relieved.

305. Should there be pain and swelling in the knee joints (gonorrhoeal rheumatism).

Take buah pauh asam (the sour fruit of *Mangifera*; wild mango); buah kumak (fruit of ? a *Zalacca*); buah goreng (fruit of *Caesalpinia Crista* or *C. Jayabo*); bonglai (rhizome of *Zingiber Cassumunar*); kapur Barus (camphor of *Dryobalanops*); and some lada sulah (white pepper). Grind them all finely. Then 'infuse with fowl's blood' (mix into a paste with fowl's blood). Apply this to the affected parts, and be relieved.

306. Fasal pada mēnyatakan ubat panau, jadi sēperti kurap pada badan.

A section to explain a medicine for Panau (an eruption of white, or discoloured, spots on the skin), which comes out like a ringworm does on the body.

Take damar mata kucing yang putih (white 'cat's-eyes' resin; resin of *Hopea*). Reduce it to a fine pulp. Mix with coco-nut oil and rub it over the patient's body. Avoid bathing for three days, and be relieved.

307. Fasal pada mēnyatakan ubat buang ayer bēsar atau kēchil, dan angin-nya naik ka-atas.

Sections to explain medicines for obstruction.

Take daun paku gajah (leaves of *Alsophila evecta*; elephant, or big fern); daun bērēmbang (leaves of *Sonneratia acida*); daun gēlenggang (leaves of *Cassia alata*); and kēlapa landak (unidentified). Reduce to a fine pulp. Apply this as a poultice to the stomach. Bandage it on (barut-kan pada pērut-nya), and let him be relieved.

308. Should there be retention only.

Take arak nasi China (arrack; rice-spirit); and ayer kēlapa muda (fresh coco-nut milk). Boil these together. Give this to the patient to drink. A free discharge of urine will result, and this will bring relief.

309. Fasal pada mēnyatakan suatu angin pada dada jadi sērak. Sections to explain a wind in the chest which creates mucus in the throat and nostrils.

Take lada sulah (white pepper), about 14 peppercorns.

Reduce them to a fine pulp. Mix this with ayer limau kěsturi (the juice of *Citrus microcarpa*) and ayer limau nipis (the juice of *Citrus aurantifolia*). Put it on the roof of the mouth (buboh pada langit-langit), by means of the thumb. All the mucus in the throat and nostrils (sěrak) will be expelled, and this will bring relief.

310. Another medicine.

Take scrapings of the sweet inner bark of bunga tanjong (*Mimusops Elengi*); and some jintan hitam (seeds of *Nigella sativa*). Mix these together and grind them finely. Steep this in the juice of limau nipis (*Citrus aurantifolia*). Then squeeze the essence (juice) out into the palm of your hand, and draw the essence into both nostrils (sudah itu pėrah pada tapak tangan, hisap dėngan hidong kėdua).

311. Fasal pada mėnyatakan sakit batok lėlah-kan nama-nya, nafas tiada bėtul.

Sections to explain Spasmodic Asthma. [Compare with 154.]

Take some akar tėmu hitam (rhizome of *Curcuma aeruginosa*); kapur Barus (camphor of *Dryobalanops*); and bunga ruku-ruku (dried flowers of *Ocimum spp.*; basil). Mix them together. Chew this, little by little, and be relieved.

312. Should this fail.

Take bunga kėnanga (fresh flowers of *Canangium odoratum*); bunga pėria yang kuning (flowers of *Momordica Charantia*; the bitter pumpkin), some that have withered and fallen; and some white peppercorns (lada sulah). Reduce to a fine pulp. Divide the whole into three doses, for three mornings, and be relieved.

313. Fasal yang kėdua pada mėnyatakan ubat sakit mata tumbuh daging.

A second section to explain medicines for sakit mata tumbuh daging. Trachoma. [Compare with 186 and 407.]

Take akar kachang tulang puteh (root of a white flowered race of *Clitorea Ternatea*). Reduce it to a fine pulp. Steep this in milk from a woman newly delivered of a male child. Then squeeze the essence, or juice, out of the pulp into the sore eyes for three days, and be relieved.

314. Should the patient become blear-eyed (mata jadi bilis).

Take daun siku dėngan (leaves of *Oldenlandia corymbosa*; siku-siku); and sėndana (saltpetre). Reduce these to a fine pulp. Apply this to both the upper and lower eyelids (inner surfaces). Then open the eyes, release the overflow of tears, and be relieved.

315. Should his eyes become dim (mata jadi kabur). [Compare with 171.]

Take pinang muda yang bër-isi ayer (a green betel-nut which is only full of liquid); kulit pëlasari (mëmpëlasari; bark of *Alyxia*); bawang merah sa-buku yang tunggal (one onion of *Allium Cepa*); some këmukus (cubebbs); and këtumbar (coriander seeds). Split the (immature) green pinang nut in halves. Put the drugs into it. Then tie the halves well together. Throw the pinang nut into boiling rice which is just beginning to bubble, and let it remain until the rice is boiled to a gruel. Then take it out and expose it at night to the dew. In the morning, squeeze the essence, or juice, into the purblind eyes. Use this pinang nut (treatment) for three mornings, and be relieved.

316. Fasal pada mënyatakan ubat busong darah yang tiada boleh lihat bulan baharu tambah sakit.

Sections to explain the medicines for Busong Darah, which causes amenorrhoea. [Compare with 233.]

Take, and kill a black fowl. Carve the flesh off it. Take hajimuju kërsani (seeds of *Hyoscyamus*), one mas by weight; garam Hurmuz (salt from Ormuz), two mas by weight; and santan këlapa sa-biji (the milk of one green coco-nut). Grind the seeds finely with the salt. Put this with the fowl and the milk of the whole coco-nut, into a new earthenware cooking-pot. Boil, until it is well cooked. Let her eat it in the morning.

317. Should it cause an increase in pain. Dysmenorrhoea.

Take ayer këlapa hijau yang muda (the milk of young green coco-nuts). Bathe her with this, and let her be relieved (ambil ayer-nya mandikan pada dia).

318. Should there be ulceration of the tongue, or alimentary canal (sëriawan lidah, atau përut). [Compare with 196, 326, and 389.]

Take some adas manis (seed of *Anethum graveolens*; dill); and daun dëlîma (pomegranate leaves). Chew these, little by little, and be relieved.

319. Should this fail.

Take kulit batang turi (bark of *Sesbania grandiflora*). Steep it in water. Let her drink the infusion and be relieved.

320. Should it cause metrorrhagia (adat-nya tiada bëtul, suatu bulan ada, suatu bulan tiada).

Take pijar (borax), about 2 kupangs, by weight; and gula (sugar), about 2 mas, by weight. Dissolve them in hot water. Let her drink this for three mornings, and she will be relieved.

321. Fasal pada mënyatakan ubat bëlang, kaki dan tangan.

Section to explain the medicines for Bëlang, or white blotches on the feet and hands. [Compare note to 281.]

Take chuka yang asam (strong vinegar). Rub it over the feet

and hands. Then take some akar jungi (root of *Breynia reclinata*). Grind it finely. Rub this over the places where the vinegar has been applied. Repeat in this manner for seven days, and be relieved.

322. Should this fail.

Take daun asam susur (leaves of *Hibiscus surattensis*); daun bĕlimbing buloh (leaves of *Averrhoa Bilimbi*); daun limau hantu (leaves of a wild *Citrus*); daun limau nipis (leaves of *Citrus aurantifolia*); chunam (prepared lime used in the betel-quid); batang birah hitam (leaf-stalks of a black *Alocasia*); and batang birah putih (leaf-stalks of a white *Alocasia*). Take all these in small quantities. Cut them all into small pieces. Boil in an iron pan until they become soft. When it has cooled a little, dip the hands and feet into the pan. Let them remain in it until the skin begins to swell. Then scrape off the (sodden) skin, and dip the hands and feet in again, scraping the skin as before. After this, take minyak tahun (minyak gajah mĕnta; sebaceous secretion from the head of a rutting elephant). Apply this to the hands and feet. Rub it well in, twice a day, and be relieved.

323. Fasal pada mĕnyatakan ubat sĕgala pĕnyakit yang ada pada tuboh manusia.

A section to explain the medicine for every disease that the flesh is heir to. The panacea referred to in 70.

Take jadam (bitter aloes), 1 pauh by weight; ĩnggu (asafetida), 1 pauh by weight; kĕmukus (cubebs), 1 pauh; hajimuju (jĕmuju; *Carum copticum* seeds), 2 mas; jintan putih (seeds of *Cuminum Cyminum*), 1 pauh; gĕtah pulai (latex of *Alstonia scholaris*), 1 pauh; kapur bambu (tabashir; a concretion occasionally found in joints of large bamboos), 1 pauh; and halia (ginger), 2 mas by weight. Dry these well. Reduce them to fine powders and mix them together with honey. Take this for three mornings, and let the patient be relieved.

[The translator Inche' Ismail (munshi) now discontinues giving the headings of the sections in Malay.]

324. Sections to explain medicines for toothache caused by worms (sakit gigi yang bĕr-ulat). Dental Caries. [See also 456.]

Take daun lĕmbega hitam (leaves of *Calotropis gigantea*). Reduce them to a fine pulp. Apply this to the cheek on the side which is affected. For a certainty the worms will come out, and this will bring relief.

325. Another medicine.

Take nila (indigo); tĕrusi (blue vitriol; copper sulphate); sĕndawa (saltpetre); and garam Siam (salt from Siam). Take all these in equal proportions. Reduce them to a fine pulp, and

mix (into a paste) with lime water. Fill the hollow tooth, and be relieved.

[Malays commonly attribute dental caries to the action of worms.]

326. A section to explain a gargle for Sakit Sĕriawan. Sprue.

[See note to 196. Compare with 196, 318-319, and 389.]

Take daun nasi-nasi (leaves of *Callicarpa longifolia*). Grind them finely. Make a gargle. Let the patient gargle every evening and morning, and be relieved.

327. A section to explain a medicine for Small-pox (ubat orang sakit chachar), when it does not come out well, i. e. when the onset of the eruption is delayed. [Compare with 288.]

Take batang sĕtawar (stems of *Costus speciosus*). Bruise them and take the juice. Use this for wetting the body of the patient slightly (buat jĕlum pada badan-nya). Should his eyes become dim, expose some of the water to the dew at night. In the morning, drop it into his eyes, and let him be relieved.

328. A section to explain a medicine for headache (Sakit Kĕpala).

Take akar salah nama (root of ? *Santaloides spp.*). Rub it down on a stone. Steep in fresh water. Let it settle for some time. Give the clear part to the patient to drink, and apply the dregs to his head.

329. A section to explain a medicine for the prevention of premature loss of hair (rambut gugur). Also for any sort of ache that may affect the head. [Compare with 175 and 531.]

Take akar batang bulang (root of *Gmelina*). Rub it down on a stone. Apply this to the patient's forehead. Also take ayer daun akar batang bulang (the juice of the leaves of this plant). Use this for wetting the hair (buat jĕlum rambut), and be relieved.

330. Sections to explain medicines for Dĕmam Kura, or Ague.

Take akar mĕrkunchi (root of *Gastrochilus Panduratum*; tĕmu kunchi). Rub it down on a stone. Steep in water. Drink this, and be relieved. [Compare with 429-430.]

331. Another medicine.

Take daun mĕrkunchi (leaves of *Gastrochilus Panduratum*; tĕmu kunchi); and lada hitam (black peppercorns). Grind them together finely. Bandage this on to the stomach where the pain is felt (splenic region). Barut-kan pada pĕrut yang sakit itu.

332. A section to explain a medicine for diarrhoea (Sakit Berak-berak).

Take akar pĕchah piring (root of *Ixora spp.*). Rub it on a

stone with warm water. Take this to drink. Afterwards, take daun pĕchah piring (leaves of this plant); hujung bĕras (very fine rice dust); and mata kunyit (an opening bud of fresh turmeric rhizome). Reduce these to a fine pulp. Rub it over the stomach, and be relieved.

333. Concerning the preparation of Ubat Mĕroyan [see 119] (sa-bagai lagi fasal ubat kayu mĕmpoyan dan akar-nya buleh buat ubat pĕriok, dan banyak champur-nya, dan daun-nya jikalau digiling dĕngan lada hitam, jadi ubat mĕroyan). The bark and root of mĕmpoyan (*Rhodamnia trinervia*) does for ubat pĕriok and many mixtures; and the leaves, if ground down with black peppercorns, are suitable for ubat mĕroyan, and will bring relief.

334. Another medicine.

The root of kĕmunting (*Rhodomyrtus tomentosa*; the rose-myrtle), can be used as a poultice or plaster (pupok) for any kind of illness. Daun kĕmunting (the leaves of the rose-myrtle); hujung bĕras (very fine rice dust); and mata kunyit (a stem-bud of a fresh turmeric rhizome), mixed together and pounded, can be used as a poultice or plaster (pupok) in any kind of continued fever (kĕpialu).

335. A section to explain a medicine for Sakit Rĕstong, or ulceration, especially syphilitic, of the nasal cartilages. [Compare with 21, 172, 352, and 479.]

Take akar mĕntulang (root of ? *Euphorbia Tirucalli*). Rub it down on a stone. Apply this to the face and be relieved.

336. A section to explain a medicine for sore eyes with the lids stuck together, accompanied with dimness of vision. Conjunctivitis.

Take gĕtah akar tĕntawan (root-juice of *Conocephalus spp.*); and bunga mĕlur (flowers of *Jasminum Sambac*). Drop the mixed juices into the eyes, and be relieved.

337. A section to explain a medicine for a cough (sakit batok).

Take akar lĕnjuang puteh (root of *Cordyline terminalis*; garden dracaena); with sĕgĕli (gĕli-gĕli; *Lasia spinosa*). Give it to the patient to eat, and let him be relieved.

338. A section to explain the medicine for a wound when bleeding cannot be stopped.

Take both root and leaves of kayu laki ayer (? *Dalbergia*, see Glossary). Reduce them to a pulp. Apply this to the wound, and be relieved.

339. A section to explain a medicine for kayap kudis, or Itch. Scabies with Impetigo. [Compare with 425-426 and 464.]
Take daun pokok kayu kĕluak (leaves of *Pangium edule*). Reduce to a fine pulp. Apply this to the 'itches', and be relieved.
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340. A section to explain a medicine for Small-pox (sakit chachar). [Compare with 288-289, 327, 376, and 391-392.]
Take akar batang mĕmpunei (root of *Xylopia*). Soak (rĕndam) the root in water. Give this water to the patient to drink, and let him find relief.
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341. A section to explain a medicine for the ulcer called Pĕkong (ubat pĕkong yang mĕliau). A foul, running, syphilitic ulcer. [Compare with 360.]
Take akar mĕmpĕlas gajah (root of *Tetracera macrophylla*). Rub it down on a stone. Apply this to the 'loin' (ulcer—luka), and be relieved.
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342. A section to explain a medicine for Sakit Bĕngkak-bĕngkak. Swellings; probably Abscesses. [Compare with 412.]
Take akar mĕdang pĕrawas (root of *Litsea spp.*). Rub it down on a stone. Apply this to the swollen part, and be relieved.
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343. A section to explain a medicine for a woman in labour (ubat pĕrĕmpuan sakit bĕranak).
Take tĕlur ayam (a hen's egg); and minyak bijan (sesamum oil). Mix together and beat up well. Give it to her to drink. The pains will go away, and she will be relieved.
344. Another medicine.
Take daun tĕrong asam yang sudah gugur (fallen leaves of *Solanum ferox*). Take seven of these leaves and burn them to ashes. Mix the ashes with sesamum oil (minyak bijan). Rub this on her stomach, and let her be relieved.
-
345. Sections to explain medicines for the ulcer called Tokak (kalau orang kĕna tokak). A callous, undermined ulcer often met with on the shin. [Compare with 490.]
Take akar sa-tokak (sĕtokak; root of ? *Ervatamia*). Rub it down on a stone and apply it to the ulcerated sore. Also boil the leaves and use the water for washing the ulcer.
346. Should it be getting on better in one part, and growing worse in another part.
Take akar bĕlalai gajah (root of *Uncaria sclerophylla*; elephant's trunk root). Rub this down, with akar sĕtokak, on a stone. Apply this (paste) to the ulcer, and be relieved.
-
347. A section to explain Sakit Rĕstong Duri which causes pain

in the head (sakit-nya itu pada kĕpala). Sometimes there is a feeling of pricking all over the face, as if the face were being pricked with needles. (?) Rodent ulcer. [See note to 21.]

Take akar sa-tokak (sĕtokak; root of ?*Ervatamia*). Rub it down on a stone. Let it (the juice) be drawn in at the nostrils. Then take the leaves of this plant. Reduce them to a fine pulp. Rub this over the face, and be relieved.

348. Sections to explain medicines for a cough (sakit batok).

When one cannot sleep by night or day.

Take batang pĕnawar pahit (stems of *Eurycoma longifolia*); and ayer mawar hukah (rose water used in smoking the hookah). Rub the stems down with the rose water. Give this to the patient to drink every evening and morning.

349. Moreover.

Take the leaves of this plant (*Eurycoma longifolia*). Boil them. Bathe the patient with the water, and let him be relieved.

350. Sections to explain an illness which has no apparent cause.

[Compare with Sakit hidup. See notes at 261-270.]

Sakit suatu hari, dan baik suatu hari; sakit-nya tiada tĕntu.

The man is ill one day, and well again the next; the course of his illness is uncertain. Occasionally he has stomach-ache; now and again he has headache; from time to time his mouth is affected; sometimes his hands; and at other times his legs.

Take akar pulasan hutan (root of *Anthocephalus indicus*); changkok (dried flowers of *Schima Noronhae*); sĕduwayah (dried flowers of *Woodfordia floribunda*); biji kĕdaung (seeds of *Parkia Roxburghii*); and rumput angin (*Usnea spp.*). Take all these in small quantities. Add boiling water. Drink this evening and morning, as if drinking tea.

351. Moreover.

Take all the leaves out of the tea-pot. Add some chuchur atap (leaves of *Leptospermum flavescens*; hujung atap); and some kunyit hidup (fresh turmeric rhizome). Grind them all finely together. Now, beginning at the face, let this medicine be rubbed over the whole body right down to the feet, and be relieved.

352. A section to explain Sakit Rĕstong Otak, which causes a constant watery discharge from the eyes and nose (ayer mata dan ayer hidong-nya sĕntiasa kĕluar). Caries of the nasal bones. [See note to 21.]

Take akar tĕrong kuman (root of *Cyclea peltata*); and akar tampal bĕsi (root of *Callicarpa spp.*). Rub both together on a stone. Let the sick man draw it (the juice) into his nostrils. Also, take the leaves of these plants. Squeeze the juice out by

hand into raw rice water. Bathe the patient's head with this water, and let him be relieved.

353. A section to explain Sakit Rěstong Mata, which causes sore eyes accompanied with a continual flow of tears which can never be dried. [Compare with 21.]

Take daun asam puyoh (leaves of *Garcinia nigrolineata*); and a particle of salt (garam) as large as a speck of raw rice dust (sa-běsar hujung bėras). Rub the leaves with the salt in the palms of both hands. Then squeeze the juice into the patient's eyes, and let him be relieved.

354. Sections to explain the medicines for a man who has no ease, day and night, from pricking pains in a swollen stomach. [Compare with 211 and 372.]

Take akar tampal bėsi (root of *Callicarpa spp.*). Also take a nutmeg (buah pala). Divide it into four equal portions and take one portion. Boil these together with 7 cloves (buah chėngkeh). Drink this medicine every morning and evening.

355. Moreover.

Take daun tampal bėsi (leaves of *Callicarpa spp.*); and daun lėnggundi (leaves of *Vitex trifolia*). Boil both together. Bathe the patient with this water for three mornings only, and let him be relieved.

356. Should swellings on the hands, and in the legs, suddenly arise after this illness (354) has been cured. [Compare with 396].

Take akar sibėngkak (sėbėngkah; root of *Vitis spp.*). Rub it down on a stone. Apply it to the swollen parts, and be relieved.

357. Sections to explain Sakit Rěstong Urat, which causes lumps and nodules in the muscles (urat bėrbuku-buku, dan bėrbiji-biji, nama sakit itu rěstong urat). Nodular gummata in the muscles met with in late syphilis.

Take akar pokok rěstong urat (root of *Ervatamia spp.*); akar kėlor (root of *Moringa oleifera*; mėrunggai); hajimuju (jėmuju; *Carum copticum*); and halia bara (a pungent variety of ginger). Grind them all finely. Rub this medicine over the whole body.

358. Another medicine. [Compare with 473.]

Take the leaves of these plants (*Ervatamia* and *Moringa*). Put them into an earthenware cooking-pot, and close its mouth by tying on plantain leaves with string in order to keep steam from escaping. Bring to the boil. Place the cooking-pot under a chair. Now let the patient sit on the chair. Cover him with a thick blanket, or other coverlet, from his head right down to the legs of the chair so that no air may enter. Now, take a knife and make a hole in the covering of the cooking-pot to allow

steam to rise under the blanket and make him perspire. This treatment should be repeated for three days, and let him be relieved.

359. A section to explain the medicine for a man who has eaten poison and is coughing up blood at the time (orang këna makan rachun waktu bër-batok këluar darah). [Compare with 398 and 523.]

Take akar lima (root of *Aganosma sp.* &c.); and mëdang sila (gypsum; hydrous calcium sulphate). Steep these in water. Give it to the man to drink, and let him be relieved.

360. Sections to explain medicines for the ulcer called Pëkong (sakit pëkong mënahan sërta dëngan bëngkak-nya). A callous and swollen syphilitic ulcer. [Compare with 341.]

Take akar mëmpëlas gajah (root of *Tetracera macrophylla*); akar rami (root of *Boehmeria nivea*; rhea or China grass); and buah paku laut (spore-bearing fronds of *Acrostichum aureum*; sea fern). Rub these down on a stone. Apply this medicine to the ulcer called pëkong.

361. Another medicine.

Take daun mëmpëlas gajah (leaves of *Tetracera macrophylla*); daun këdaung (leaves of *Parkia Roxburghii*); and daun limau bësar (leaves of *Citrus maxima*; the pumelo). Boil all together. Wash the ulcer with this, and be relieved.

362. Sections to explain Pënyakit Lintang, which causes griping pains to come in the stomach for an instant and then disappear.

Take akar abu tarah (? akar arang para, root of *Erioglossum edule*, or *Nephelium hamulatum*); and some inggu (asafetida). Boil these together. Drink this evening and morning.

363. Another medicine.

Take kayu gaharu (resinous wood of *Aquilaria*); and kayu arang (wood of *Diospyros spp.*; ebony). Rub these down on a stone. Then rub this medicine over the patient's stomach, and let him be relieved.

364. A section to explain medicines for Sëmbëlit Mati, which causes chronic colonic obstruction. [Compare with 440.]

Take daun gëlenggang bësar (leaves of *Cassia alata*). Cook as a vegetable, and eat it with fish. Also take the root (akar gëlenggang) and make a decoction by boiling it. Drink this daily when eating the leaves as a vegetable, and be relieved.

365. Another medicine for constipation (sëmbëlit). [Compare with 82-84.]

Take akar gëlenggang këchil (root of *Cassia Tora*, and

C. obtusifolia); and some jadam (bitter aloes). Boil these. Drink the decoction daily.

366. Another medicine.

Take daun gëlenggang kěchil (leaves of *Cassia Tora*, and *C. obtusifolia*); daun lěmbega (rěmbega; leaves of *Calotropis gigantea*); and chuchur atap (leaves of *Leptospermum flavescens*; hujung atap). Take all these in small quantities. Reduce all to a pulp. Rub this on the head, as well as over the whole body, and be relieved.

367. Moreover, a medicine for Pěnyakit Rějan, or chronic constipation (banyak měngěrang tiada juga kěluar najis).

Take daun sěrunai laut (leaves of *Wedelia biflora*); puchok (rhizome of *Saussurea Lappa*; the Indian kut); měswi (bark of *Massoia aromatica*); ganti (rhizome of *Peucedanum japonicum*); kělěmbak (*Rheum*; Chinese rhubarb); kunyit (fresh turmeric rhizome); and kěsturi (musk). Take all these in small quantities. Reduce to a fine pulp. Steep in water. Straın. The patient should drink this for three days. Let him also rub the dregs over the pubes, and be relieved.

368. Sections to explain the medicines for Pěnyakit Singgah-singgah, which causes a woman to suffer grievous pain and miscarry.

Take daun inai (leaves of *Lawsonia inermis*; henna); daun kětumbit (leaves of *Leucas*); daun pauh (leaves of a *Mangifera*); buah chěngkeh (cloves); and halia (ginger). Take all these in small quantities. Reduce them to a fine pulp. Then wrap this in a plantain leaf, and put it amongst the hot ashes of a fire. Apply this over the pubes as hot as can be borne, and be relieved.

369. Another medicine.

Take ibu kunyit (the fingers of a fresh turmeric rhizome), a large piece; ganti (rhizome of *Peucedanum japonicum*); měswi (*Massoia* bark); puchok (rhizome of *Saussurea Lappa*; the Indian kut); and kulit sětěbal (bark of *Fagraea racemosa*). Take all these (except the turmeric), in small quantities. Add three fruits of chabai Jawa (Java long pepper). Reduce to a fine pulp. Steep in water. Give it to the patient to drink for three days, and let her be relieved.

370. A section to explain the medicine for a disease called Tucksir, in Hindustani, which causes pustules, resembling the pocks of Small-pox, to form inside the nostrils. [Tucksir is evidently the arabic word نکشیر = enlarging, which has

been adopted in Hindustani, not تَقصير = error, i.e. there is no suggestion of magic.]

Take kulit kēdaung (the bark of *Parkia Roxburghii*). Rub this down on a stone. Let the patient draw (the juice) into his nostrils. The pustules will burst, and will bleed a little.

371. A section to explain a medicine for either abscesses, or boils (sakit barah, atau bisul). [Compare with 19, 342, 387, 412, and 500–501.]

Take kulit kēdaung (bark of *Parkia Roxburghii*); and daun kēdaung (leaves of this tree). Rub the bark down on a stone. Apply this medicine and the abscess will burst. Then take the leaves. Boil them. Use the water for washing the broken abscess, or boil. Reapply the former preparation, and be relieved.

372. Sections to explain medicines for Basal Pěrut, which causes griping pains in a swollen stomach. Dropsy or Ascites.

Take daun tųtup bumi (leaves of *Elephantopus scaber*); and akar-nya (root of the same); puchok paku lipan (young fronds of *Blechnum orientale*); hujung bėras (very fine rice dust); and mata kunyit tiga mata (three opening buds of fresh turmeric rhizome). Reduce these to a fine pulp. Rub this over the stomach, and apply a bandage.

373. Another medicine.

Take akar bėdara laut (root of *Eurycoma longifolia*). Rub it down on a stone. Steep in water. Give it to the sick man to drink, and let him be relieved.

374. Sections to explain medicines for swelling of the whole body caused by a wind (sakit angin datang jadi bėngkak-bėngkak sarata badan). General Dropsy or Anasarca. [Compare with 396.]

Take daun mėmpunei (leaves of *Xylopiā*). Boil the leaves. Bathe the patient with the water. Also take the boiled leaves, and use them as a hot dry poultice (dėmah). See 124 (dėmah pada tėmpat bėngkak-bėngkak).

375. Moreover.

Take akar mėmpunei (root of *Antidesma spp.* &c.). Rub it down thickly on a stone. Steep in water. Leave it a while to settle. Let the patient drink the clear part for three days. Also apply the sediment to his head, and over the whole body, for three days, and let him be relieved.

376. A section to explain a medicine for either Small-pox, Chicken-pox, or Measles (kėna chachar bėsar, atau chachar ayer, atau champak). [Compare with 288–289, 327, 340, and 391–392.]

Take akar mēmpunei (root of *Antidesma* spp. &c.). Prepare as above (375). Let the patient drink this every day, and be relieved. It is a remedy, or antidote, for pains in the bones.

377. A section to explain a medicine for Lumpoh Mēroyan, which causes paralysis (lumpoh) in a woman's hands and legs, following childbirth.

Take kayu tulang-tulang (wood of *Euphorbia Tirucalli*); sarang burong pipit gunting (the nest of *Passer montanus malaccensis*); kunyit tērus (rhizome of the *Zingiber*, so-named) chēkur (root of *Kaempferia Galanga*); jērangau (*Acorus Calamus*; sweet flag); bawang putih tunggal suatu (a bulb of garlic); bawang merah tunggal suatu (an onion of *Allium Cepa*); jintan putih (seeds of *Cuminum Cyminum*); jintan hitam (seeds of *Nigella sativa*); ganti (rhizome of *Peucedanum japonicum*); and mēsui (*Massoia* bark). Take all these in small quantities. Grind finely. Rub this well over the whole body.

378. Sections to explain medicines for violent pains in the bones (sakit bisa-bisa dalam tulang).

Take akar mēntulang (root of ? *Euphorbia Tirucalli*). Rub it down thickly on a stone. Steep in water. Let it settle. Give the clear part to the patient to drink, and rub the sediment over the whole of his body.

379. Moreover.

Take daun mēntulang (the leaves of this plant). Grind them finely. Apply this medicine to the head, and be relieved.

380. Sections to explain a fever called Kēpialu . . . (name not fully given in the manuscript).

(sakit dēmam malam dan siang, dan mata-nya jadi kuning, dan kēnching-nya merah sēperti ayer teh, dan mulut-nya pun pahit, tiada boleh makan barang suatu apa-apa, rasa pahit sahaja; pēnyakit-nya itu nama-nya kēpialu . . .).

The patient has fever night and day; his eyes become yellow; and his urine is as red as tea; he has a bitter taste in his mouth; and everything he eats tastes bitter.

Malaria complicated with jaundice. [Compare with 532.]

Take akar chirit murai (root of *Willughbeia*, and allied genera). Rub it down thickly on a stone. Steep in water. Give it to him to drink, and let him be relieved.

381. Moreover, make a medicine for bathing his head.

Take daun lakum (leaves of *Vitis*). Soak them in raw rice water. Use this medicine (ubat jēlum-nya) for bathing his head, and body, without immersing him, and let him be relieved.

382. How to find out if the fever has left him or not.

Take batang birah hitam (the stem of a black *Alocasia*); and hati habok (ashes taken from the middle of a fire). Also take ganti (rhizome of *Peucedanum japonicum*); puchok (rhizome of *Saussurea Lappa*; the Indian kut); and mēswi (*Massoia* bark). Chew (mamah) bits of the ganti, puchok, and mēswi with sireh pinang, i. e. in a betel-packet. Put the ashes through a sieve (nyiru), and moisten them with spittle from the betel-chew. Rub down the ashes and saliva with the black *Alocasia* stem, and when it is ready, rub this preparation into the sick man's back. If he should feel itching, the fever has gone away; if he should feel nothing, the fever is still in him. This is the way to try to find out about this kēpialu fever, and bring relief to the sick man. [Compare with 461.]

383. A section to explain the disease called Pěnyakit Pirai.
[Compare with 34 and 286.]

On hearing the news of a death, a man gets pain in his bones; should he unexpectedly see the corpse, the pain increases, and affects the whole of the man's body.

Take akar chirit murai (root of *Willughbeia*, and allied genera); and kulit manis (cinnamon). Rub these down together. Add seven white peppercorns (lada sulah). Reduce to a pulp. Rub this medicine well over the whole body of the sick man, and let him be relieved.

384. Sections to explain medicines for intestinal worms.

These medicines are suitable, either for an old man, or a young child. [Compare with 37-39 and 237.]

Take akar putarwali (root of *Tinospora crispa*); and buah songsong harus (fruit of *Combretum spp.*). Rub these down on a stone. Let an old man drink half a tea-cupful (sa-těngah chawan) of this. Give less than half a tea-cupful to a child.

385. Another medicine.

Take daun putarwali (leaves of *Tinospora crispa*); and twenty-one black peppercorns (lada hitam). Grind these finely into a pulp. Apply this to the stomach. The worms will be expelled, and relief will be found.

386. A section to explain a medicine for children suffering from fever which is accompanied with a cough.

Take akar lěnjuang (root of *Cordyline terminalis*; garden dracaena). Rub it on a stone very thickly. Steep in water. Allow it to settle for a good while. Let the child drink the clear part for three days. Also, rub the dregs over him, from his head right down to his feet, for three days, and let him be relieved.

387. Sections to explain the medicine for boils (sakit bisul).

When a man is suffering excessively from pain with them.

Take akar mēmpēlam babi (root of ? *Terminalia phellocarpa*). Rub it down very thickly on a stone. Steep in water. Let it settle. The patient should drink the clear part. Apply the dregs to the boil by means of a feather. Keep continually wetting it with the dregs, and be relieved.

388. Another medicine.

Take daun mēmpēlam babi (leaves of ? *Terminalia phellocarpa*); and a pinch (sa-jēmput) of jintan puteh (seeds of *Cuminum Cyminum*). Reduce to a fine pulp. Put this all round the boil, but keep the swollen part free. Apply this preparation continually with the feather as before, and be relieved.

389. Sections to explain the disease called Pěnyakit Sėriawan, when the tongue and mouth are so cracked that it is impossible to eat a chilli (sakit lidah, dan mulut-nya habis mēřkah, tiada boleh makan chili). Sprue. [Compare with 196, 318–319, and 326.]

Take akar nasi-nasi (root of *Callicarpa longifolia* and others). Rub it on a stone. Steep in water. Give it to the patient to drink.

390. Moreover.

Take kulit nasi-nasi (bark of *Callicarpa longifolia* and other species). Grind it on a stone. Steep in water. Make use of it for cleaning the mouth, and be relieved.

391. Sections to explain medicines for Small-pox (sakit charchar). [Compare with 288–289, 340, and 376.]

Take akar pēlunchot (root of an unidentified plant, see Glossary). Rub it down on a stone. Steep in water. Give it to the patient to drink.

392. Another medicine.

Take daun pēlunchot (leaves, see Glossary). Squeeze them by hand, and soak them in water. Use this for bathing (without immersion) the whole of the patient's body (buat jėlum sa-rata-rata badan-nya), and let him be relieved.

393. Sections to explain the medicines for perforating wounds of the eye (sakit mata kėna kayu, atau kėna chuchok). [Compare with 182.]

Take puchok mahang (young shoots of *Macaranga spp.*); daun kėchubong (leaves of *Datura fastuosa*); mata kunyit (a stem-bud of a fresh turmeric rhizome); and hujung bėras (very fine rice dust). Grind them all to pulp. Put this into a piece of coarse, white cloth. Then squeeze the juice out into the wounded eye. [Note.—The use of *Datura* in this treatment is very sound, seeing that it would dilate the pupils.]

394. Another medicine.

Take akar mahang (root of *Macaranga spp.*). Rub it down on a stone. Steep in water. Give it to the patient to drink, and let him be relieved.

395. A section to explain a medicine for violent pain in the chest (sakit dada bisa). [Compare with 165.]

Take akar salah nama (root of ? *Santaloides spp.*); and kēmēnyan (gum benzoin). Rub these both together on a stone. Steep in water. Give it to him to drink. Rub the dregs into his chest, and let him be relieved.

396. Section to explain the medicines for Sakit Basal, which causes swollen hands and legs. General Dropsy, or Anasarca. [Compare with 356 and 374.]

Take akar pokok gaharu (root of *Aquilaria malaccensis*). Rub it down thickly on a stone. Steep in water. Give this to the patient to drink.

397. Moreover.

Take daun pokok gaharu (leaves of *Aquilaria malaccensis*). Take the young leaves. Grind them finely. Rub this medicine over the swollen hands and legs, and be relieved.

398. A section to explain a medicine for a man who has eaten poison (orang tēr-makan rachun). [Compare with 359 and 523.]

Take tēras api-api (pith of *Sonneratia*); and tēras podak (pith of *Pandanus inermis*). Rub these together on a stone thickly. Steep in water. Give it to him to drink evening and morning. Rub the sediment that remains in the cup into his chest, and let him be relieved.

399. A section to explain medicine for vomiting accompanied with diarrhoea (sakit pērut muntah berak).

Take akar mērajah kayu (root of *Canthium didymum*). Rub it down thickly on a stone. Steep in water. Give it to him to drink, and rub the sediment over his stomach. Then take an old hawser, and an old sail. Burn them to ashes. Mix these ashes with rice-gruel. Apply this also to the stomach, and be relieved.

400. Sections to explain medicines for a man who has come into contact with a hairy caterpillar (sakit kēna ulat bulu).

Take daun pēnawar bisa (leaves of *Eurycoma longifolia*, a substitute for snake root); hujung bēras (very fine rice dust); and mata kunyit (a stem-bud of a fresh turmeric rhizome). Reduce to a fine pulp. Apply this to the affected part, i.e. over the rash.

401. Should there be a wound.

[Serious wounds may be caused by the bristles of ulat bulu laut (*Chloeia flava*, A. G. Grube, Annelida), the 'hairy caterpillar of the sea'.]

Take akar pėnawar bisa (root of *Eurycoma longifolia*, a substitute for snake root). Rub it on a stone. Apply this medicine to the wound, and be relieved.

402. Sections to explain medicines for a man, either crippled, or tweaked, by the pain of rheumatism (sėngal). [Compare with 115.]

(lumpoh dalam tulang atau sėngal rasa-nya).

Take akar pinang kotai (root of *Agelaea Wallichii*). Boil it, and drink the decoction three or four times a day.

403. Moreover.

Take daun pinang kotai (leaves of *Agelaea Wallichii*). Reduce them to a fine pulp. Warm this. Apply it to the parts affected as warm as the patient can bear, and let him be relieved.

404. A section to explain a medicine for heartburn (bisa hati). [Compare with 200 and 505.]

Take akar jolok hantu (root of *Willughbeia spp.*); and seven black peppercorns (lada hitam). Add boiling water. Let the patient drink this daily like tea, and be relieved.

405. Sections to explain medicines for infants suffering from jaundice (sakit budak kėchil dėmam kuning nama-nya sakit itu). Icterus neonatorum.

Take akar jolok hantu (root of *Willughbeia spp.*); daun jolok hantu (leaves of the same plant); and akar hati-hati hutan (root of *Sonerila*). Boil these together. Bathe the infant with the water.

406. Moreover.

Take some daun hati-hati hutan (leaves of *Sonerila*); and some bėras (raw, husked rice). Grind them finely. Then rub this medicine all over the infant, from his head right down to the soles of his feet, and let him be relieved.

407. Sections to explain medicines for Sakit Mata Tumbuh.

(Spots or specks on the eye caused by scars left by old ulceration of the cornea). Trachoma. [Compare with 186 and 313.]

Take akar kėmunting (root of *Rhodomyrtus tomentosa*). Cut it into small pieces. Soak these with kėpala nasi (the top, or best, layer of boiled rice) in cold water. Squirt (instil) the water into the eyes that are affected with tumbuh.

408. Moreover.

Take daun kėmunting (leaves of *Rhodomyrtus tomentosa*).

Reduce them to a fine pulp. Apply this to the patient's forehead, and let him be relieved.

409. A section to explain a medicine for a continued fever (sakit dĕmam kĕpialu). [Compare with 23.]

Take batang akar sĕbasah (stems of *Aporosa spp.*, and allied plants). Rub them thickly on a stone. Steep in water. Allow it to settle. Let the patient drink the clear part. Rub the sediment into his chest, and let him be relieved.

410. A section to explain medicines for ulceration of bone (sakit bisa dalam tulang, atau puru dalam tulang). [Compare with 157.]

Take akar kachang-kachang (root of *Santaloides spp.*); seven fruits of chabai Jawa (Java long pepper); a pinch of cloves (buah chĕngkeh); and a nutmeg (buah pala). Throw away the contents of the nutmeg, and take the shell only. Boil and drink the water.

411. Another medicine.

Take daun kachang-kachang (leaves of *Santaloides spp.*); a very young green coco-nut (mumbang kĕlapa); and a small quantity of alum (tawas). Grind them all finely. Then rub this medicine well over the whole body, and be relieved.

412. Sections to explain medicines for Sakit Bĕngkak-bĕngkak. Swellings; probably Abscesses. [Compare with 342.]

When they have resisted all other forms of treatment.

Take akar rĕngas manok (root of *Melanorrhoea Wallichii*). Rub it into a thick paste on a stone. Warm this on a fire. Apply it to the affected part, as hot as the patient can bear, and let him be relieved.

413. Moreover.

Take daun rĕngas manok (leaves of *Melanorrhoea Wallichii*). Scorch them at a fire. Churn them in the palms of the hands, and then wrap them round the swelling, and be relieved.

414. A section to explain the disease called Sali Hantu. ('The Power of the Evil Spirit'), which causes fever in children at night accompanied with much sweating (budak-budak dĕmam malam, dan banyak pĕloh).

Take akar sĕnapu (the root of a plant as yet unidentified); paku bĕsi (an iron nail); buah kĕras (fruit of *Aleurites moluccana*; the candle-nut tree); and sireh sa-kapur (a quid of betel). Put these into a sĕkul, or round coco-nut shell used for holding liquids. Pour some water into it, and let it hang over the hearth from the evening until the next morning. Bathe the child with this

water in the morning. Repeat the bathing for three mornings, and let him be relieved.

415. Sections to explain a disease called Dēmam Sampu (a wasting fever in children). Sometimes this fever commences in the mornings and sometimes in the evenings; it seems to come upwards from the feet; the face, eyes, and body appear to be yellowish; (there is emaciation) but the navel is 'well and round', i. e. unaffected. [Compare with 507.]

Take about three fibres (urat) of akar chawat udi (the root of *Vitis simplex*). Boil them. Bathe the patient with this water, from his neck right down to his feet, and let him be relieved. A warning follows: never allow the water to wet the head.

416. Another medicine.

Take daun chawat udi (leaves of *Vitis simplex*); and bēras (raw husked rice), a pinch. Grind into a fine paste. Take some of this and rub it on the patient, from his head as far as his neck; on the second day, from his neck to his waist; and on the third day, from his waist right down to his feet, and let him be relieved.

417. A section to explain the disease called Měroyan Pitam.

There is a sudden rush of blood, and wind (angin mēroyan) to the head after child-birth, causing giddiness and dimness of vision. [Compare with 192 and 232.]

Take daun chēmpērai dadeh (leaves of *Urophyllum streptopodium*); and daun ambin buah (leaves of *Phyllanthus urinaria*); jintan hitam (seeds of *Nigella sativa*); and an onion of *Allium Cepa* (bawang merah). Reduce these to a fine pulp. Apply it to the head, and be relieved.

418. Sections to explain a disease called Pěnyakit Budak, or Thrush in infants. Should an infant, aged only three months, get this disease in his mouth, it (may) descend to his stomach, and cause looseness.

Take akar tahi budak (root of *Croton argyратum*). Rub it down thickly on a stone. Steep in water. Allow it to settle, and let the infant drink the clear part.

419. Moreover.

Take a piece, or wrapper, of garlic (ulas bawang puteh). Rub this on a stone with the sediment left over from the former prescription (418). Apply this medicine to the infant's navel, and bandage it on.

420. Moreover.

Take daun akar tahi budak (leaves of this climber). Boil them. When sufficiently cool, use the water for bathing the infant, and let him be relieved.

421. Sections to explain the medicines for burns.

When resulting from a fire; a resinous torch (damar), boiling oil, hot iron, or anything of that sort. [Compare with 468 and 529.]

Take akar sial mēnaun (root of *Pternandra*); akar mēmpēlas (root of *Delima sarmentosa*); and akar sudu-sudu hutan (root of *Euphorbia Synadenium*). Rub the three roots together on a stone. Apply this medicine thoroughly to the injured parts, and be relieved.

422. Should this fail.

Take daun sial mēnaun (leaves of *Pternandra*); and daun sudu-sudu hutan (leaves of *Euphorbia Synadenium*). Reduce them to a fine pulp. Apply this to the injured part, and be relieved.

423. Should this also fail.

Again take the leaves of these two plants (sial mēnaun, and sudu-sudu hutan). Scorch them at a fire until they become quite dry, and then reduce them to powder. Sprinkle this over the injured parts (the burns), and be relieved.

424. A section to explain a medicine for a male disorder of sex called Pēnyakit Laki-laki (sakit laki-laki yang kēluar sahaja daripada zakar-nya bērtali-tali sēpērti bēnang).

Take akar pinang kotai (root of *Agelaea Wallichii*); and daun kērating (leaves of *Smilax myosotifolia*). Boil both together. Take this three times a day, and be relieved.

425. Sections to explain medicines for a disease called Kayap Kudis or Itch, which attacks children as well as grown up persons. Scabies with Impetigo. [Compare with 339 and 464.]

Take puchok pētai bēlalang (young shoots of *Pithecellobium spp.*); a pinch of raw husked rice (bēras sa-jēmpūt); and a small quantity of mata kunyit (a stem-bud of a fresh turmeric rhizome). Grind them finely. Rub this medicine well over the whole body.

426. Moreover.

Take akar pētai bēlalang (root of *Pithecellobium spp.*); and a little alum (tawas). Boil these together. Use this for washing the body, and be relieved.

427. Sections to explain the disease called Sambaran Buta, or Urticaria (Nettle-rash). The man has heat-spots (sakit bintat-bintat) over his body, and is itchy all over his head; the hair on his head bristles.

[Buta appears to be a mis-spelling for bhuta or bhota, a giant; and sambaran bhota seems to refer to the action of an evil

spirit, e.g. a man while traversing the jungle may be the victim of a pounce or swoop (sambaran) by a gigantic hantu, or ghost. Compare with 483, 488, and 515.]

Take akar kachang-kacham (root perhaps of *Santaloides*; but see Glossary). Cut it into pieces the length of a joint of the forefinger. Bruise them, and then boil them. Take them out (of the pot) when ready (soft). Rub the boiled root all over the patient's body, and bathe him with the boiled water.

428. Moreover.

Take daun kachang-kacham (leaves perhaps of *Santaloides*; but see Glossary); and kulit pinang kering (dry betel-nut husk). Use both of these for fumigating (rabun) the patient with smoke. Repeat this medicinal fumigation for three days. It must be carried out at noon. A warning is given: avoid contact with the dew, otherwise this disease will return.

429. Sections to explain the medicines for Dĕmam Kura, or Ague. [Compare with 330.]

Take akar lĕnjuang (root of *Cordyline terminalis*; garden dracaena). Boil it all night from evening-time until the next morning. Use the water for bathing the sick man. Before bathing him, stroke his forehead three times with both hands. A warning follows: avoid wetting the head; bathe him only from the neck right down to his feet.

430. Another medicine. [Compare with 508.]

Take daun lĕnjuang (leaves of *Cordyline terminalis*). On the night of the first day (of treatment), take seven of these leaves. Apply a little oil to the leaves, and scorch them slightly in the flame of a torch. Churn them a little in the palms of both hands. Then bandage the hot leaves on the patient's stomach (splenic region), keeping their points upwards, and the leaf-stalks downwards. When scorching the leaves, the flame of a dammar torch must be used. On the second night, take five leaves; and three on the third night. The leaves cannot be bandaged on in the day-time; this must be done only at night. In the morning, take off the leaves, and place them over a salaiyan api (a slow fire like that used after a confinement), in order that he may be cured.

431. Sections to explain the medicines for Mĕroyan Tahi, or diarrhoea following child-birth.

Take a piece of akar sĕtambun (root of *Baccaurea spp.*); a pinch of cloves (buah chĕngkeh); a bruised nutmeg (buah pala); seven fruits of chabai Jawa (Java long pepper); and ibu kunyit (the finger of a fresh turmeric rhizome). Boil all these together. Give it to her to drink. A warning follows: she must not drink anything except this decoction.

432. Moreover.

Take daun sētambun (leaves of *Baccaurea spp.*); and a small quantity of bēras (raw husked rice). Grind them finely together. Rub this preparation over the whole of her body at night-time. Let her bathe at sunrise the next morning. Act in this manner for three days, and be relieved.

433. Sections to explain the medicines for a cut or wound, or an injury from a knock, that cannot be cured by other medicines.

Take akar raden galoh (gading galoh; root of *Chasalia curviflora*, &c.); and akar tērong asam (root of *Solanum ferox*). Rub both these down on a stone. Apply (the juice) to the injured part by means of a feather.

434. Moreover.

Take daun raden galoh (leaves of *Chasalia curviflora*, &c.). Boil them. Use the water for washing the wound, and be relieved.

435. Sections to explain the medicines for Bantal Budak, which causes griping pains in the stomach after child-birth (mulas dalam pērut-nya).

Take akar hati-hati hutan (root of *Sonerila*); and three nodules (buku) of ibu kunyit (the fingers of a fresh turmeric rhizome). Boil these together. Let her drink the decoction until she feels relief.

436. Another medicine.

Take daun kēlēmoyang (leaves of *Homalomena sagittifolia*). Take about seven leaves and apply a little fresh coco-nut oil to them. Scorch them slightly over the flame of a dammar torch. Bandage them on to the stomach, with the leaf-stalks pointing downwards. Apply five leaves on the second day; and three leaves on the third day, with the stalks pointing downwards, as mentioned above.

437. Furthermore.

When the third day has arrived, take the three nodules of fresh turmeric which have already been boiled (see 435); and a pinch of black peppercorns (lada hitam sa-jēmpūt). Grind them finely together and steep in vinegar. Warm this slightly in a small earthenware cooking-pot over a fire. Rub this medicine well over the whole body, with the exception of both the hands. Repeat the treatment in this manner until she feels relief.

438. Sections to explain medicines for a sore chest caused by coughing.

Take daun dada ruwan (leaves of *Aporosa*, &c.); daun kachang-kachang (leaves of *Santaloides spp.*); a pinch of raw husked rice (bēras sa-jēmpūt); and kunyit hidup sa-buku (a

nodule of fresh turmeric rhizome). Grind all these finely. Apply this medicine to the chest.

439. Another medicine.

Take akar dada ruwan (the root of *Aporosa*, &c.); gula batu (sugar candy); and kulit dēdap (bark of *Erythrina* spp.). Rub the root thickly on a stone and then rub all three together. Steep in water. Allow it to settle. Give him the clear part to drink. Apply the dregs to his chest where the former medicine (438), has not reached, and let him be relieved.

440. A section to explain a medicine for Sěmbělīt Makan Darah.

Chronic colonic obstruction (najis bērgintil-gintil sēpěrti najis kuda). [Compare with 364.]

Take akar sěmbělīt (root of *Cnestis*, &c., see Glossary); daun sěmbělīt (the leaves); and akar jěrami hutan (the root of a wild *Artocarpus*). Boil these together. Add a piece, or wrapper (ulas) of garlic (bawang puteh); and jintan hitam sa-jěmput (a pinch of *Nigella sativa* seeds). Drink this daily. Never drink anything else. When it is finished, make more of it, and continue to drink it, until the pain of the disease is relieved.

441. Sections to explain the medicines for Pěnyakit Sula Laut, which causes pain in the stomach accompanied with diarrhoea and the passage of blood (sakit pěrut berak-kan darah).

Take akar lěngsėkap (the root of a plant as yet unidentified); and pinang kěring (dried betel-nut). Boil well. Pour a little of it into a small cup. Then take a piece of tahi těngkoh (opium dross), the size of a peppercorn. Mix this in the cup until dissolved. Give it to the patient to drink.

442. Moreover.

Take daun lěngsėkap (leaves of this plant); halia (ginger); and a piece, or wrapper (ulas) of garlic (bawang puteh). Grind these three together. Warm slightly over a fire. Apply this medicine to the sick man's navel, and let him be relieved.

443. Sections to explain the medicines for wounds (sakit luka) that cannot be cured by other medicines.

Take akar buloh jantan (root of a big bamboo). Rub it very thickly on a stone. Apply it (the juice) to the wound by means of a feather.

444. Should this fail.

Take daun buloh jantan (leaves of a big bamboo); and some scrapings from the horn of a buffalo (kikis halus-halus tandok kėrbau). Grind both together finely. Apply this medicine to the wounded part, and be relieved.

445. Sections to explain the sort of fever called Kěpialu Radang, which causes high fever night and day without remission (sakit dėmam panas malam, dan siang, tiada bėrhěnti-hěnti).

Take akar sėtampin (root of *Mallotus Griffithianus*); akar lumbah (root of *Curculigo latifolia*); and umbi lumbah (the very tip of the root of the same plant). Put these into a vessel and pour cold water upon them. Let the patient drink this water frequently. Never allow any other drink.

446. Should this fail. [Compare with 511.]

Take daun lumbah (leaves of *Curculigo latifolia*); and seven unbroken grains of raw husked rice (bėras). Perfume them in the smoke of burning benzoin. Then press out the juice by hand. Let three drops fall on the crown of the sick man's head. Give him the rest to drink, and let him be relieved.

447. Sections to explain the sort of fever called Kěplalu Laut, which causes high fever at night-time and chills in the morning (sakit dėmam malam panas, dan siang sėjok). Malaria.

Take daun mėdang (leaves of an unidentified plant: see Glossary); and about seven kernels ('the pulp') of buah kėras (fruit of *Aleurites moluccana*; the candle-nut tree). Reduce both to a fine pulp. Apply this to the patient's head.

448. Should this fail.

Take akar mėdang (the root of an unidentified plant; see Glossary). Rub it very thickly on a stone. Apply this by rubbing it all over his body. Then cover him with a cloth or blanket, until he perspires, and is relieved.

449. Sections to explain the medicines for Barah, an Abscess. When it will not burst. [Compare with 19.]

Take daun jėlatang gajah (leaves of *Laportea stimulans*; the elephant nettle); a pinch of raw husked rice (bėras sa-jėmput); and a small piece of kunyit hidup (fresh turmeric rhizome). Grind the three finely together. Apply this round the swelling, but leave the centre part of it open.

450. Moreover.

Take kulit bawang merah (the skin of an onion of *Allium Cepa*). Apply this to the centre part that has been left open, in order to bring the abscess to a head (mata barah).

451. Should this fail.

Take akar jėlatang gajah (root of *Laportea stimulans*). Rub it on a stone very thickly. Then take a lump of kapur makan (shell lime used in betel-chewing), as large as a tamarind seed (sa-biji asam). Mix this with the root already rubbed down. Apply this, by means of a feather, all round the swelling. It will burst, and this will bring relief.

452. Sections to explain the sort of fever called Dēmam Kura Mēnahan, which causes fever to continue for two days, and to go away on the third day. Benign tertian malaria. [Compare the treatment with 477.]

Take akar běluru (root of *Entada spp.*). Cut the root into twelve pieces, each as long as the forefinger. Bruise them and boil them in an earthenware cooking-pot. When well boiled, pour the water into a basin. Place an iron chopper (parang), or a knife, on (across) the basin. Expose the basin at night to the dew. Next morning, bathe the sick man with the water that is in the basin.

453. Should this fail.

Take daun běluru (leaves of *Entada spp.*). Reduce them to a fine pulp. Steep this in vinegar. Mix a piece of jadam (bitter aloes), as large as the thumb, with it. Spread this medicine on a plantain leaf. Bandage it to the stomach, and be relieved.

454. Sections to explain the disease called Sawan Hulu, which affects the eyes, causing them to be continually red and swollen (sakit mata, dan mata-nya sëlalu merah jadi bēngkak).

Take akar kěkunyit (root of *Fibraurea chloroleuca*); and kunyit hidup (fresh turmeric rhizome). Cut these into thin slices. Add a small quantity of alum (tawas). Steep in cold water. Drop this into the patient's eyes.

455. Moreover.

Take daun tēbing hayu (leaves of *Cardiospermum Halicacabum* or *Leonurus sibiricus*). Grind them finely. Apply this medicine to the patient's forehead, and let him be relieved.

456. Sections to explain medicines for teeth that are eaten away by worms (sakit gigi di-makan ulat). [Compare with 324-325.]

Take akar sē-koyak (root of a *Bauhinia*). Rub it into a paste on a stone. Take some burnt coco-nut shell; and a strip of kulit jiring (bark of *Pithecellobium lobatum*), four fingers wide and a span (measured between thumb and index finger) long (maka bakar tēmpurong kēlapa, dan kulit jiring sēdikit, kira-kira ampat jari lēbar-nya, dan sa-jēngkal panjang-nya). Also take biji tērong asam (seeds of *Solanum ferox*). These seeds must be baked. Make a gargle out of the burnt coco-nut shell and strip of *Pithecellobium* bark by boiling them together in water. Roll the baked *Solanum* seeds in a dry plantain leaf and smoke it as a cigar. When the 'cigar' is finished, gargle with the decoction, as hot as it can be borne, and let the patient spit into a vessel, 'in order (that) the worms may come out'.

457. Moreover.

Apply the paste made from the *Bauhinia* root (see 456) to the cheek, and be relieved.

458. A section to explain a medicine for a spreading ulcer (sakit luka mēroyak-royak).

Take akar chēmpērai (root of *Cansjera*, or *Champereia*); and akar raden galoh (gading galoh; root of *Chasalia curviflora*). Rub them (into a paste) with warm water on a stone. Next, take sireh kērakap (coarse betel-vine leaves used for betel chambai, or inferior sireh). Boil them and use the water for washing the ulcer. Then lay the boiled sireh leaves on the ulcerated parts, and apply the paste obtained from the two roots, round the sireh leaves, and the ulcer will be cured.

459. Sections to explain the sort of fever called Kēpialu Balut.

There is a continued fever with headache; difficulty in lifting the head; and a bitter taste in the mouth; the head is hot; and (the body) from the neck to the feet is cold (sakit dēmam, kēpala-nya sakit tiada boleh angkat, dan mulut-nya pahit, kēpala-nya panas daripada leher sampai pada kaki-nya sējok).

Take akar lumbah (root of *Curculigo latifolia*); and umbi lumbah (the very tip of the root of the same plant). Bruise them. Soak them for a whole night in water. In the morning, let three drops of this water fall on the crown of his head. Then let him drink the rest of it. A warning follows: for the space of three days he may not drink anything else.

460. Moreover.

After the completion of the three days of prohibition, take daun lumbah (leaves of *Curculigo latifolia*); daun durian (leaves of *Durio zibethinus*; the durian); daun rēsam (leaves of *Gleichenia linearis*); and daun rambutan (leaves of *Nephelium lappaceum*; the rambutan tree). Squeeze the leaves well by hand, and pour water on them. Bathe the patient's head for three days with this water.

461. Moreover. [Compare with 382.]

After this, take pulp of birah (the root of an *Alocasia*, sliced, and ground down finely on a stone). Apply this to the sick man's forehead. If he should feel itching, the fever has gone away; if he should feel nothing, the fever is still in him.

462. Should these medicines fail.

Take daun lakum (leaves of *Vitis spp.*). Reduce them to a fine pulp. Apply this to the patient's head. Mix a little of the remainder with water. Bathe him all over the body, then cover him with blankets, from his neck right down to his feet, until he perspires. Then take them off, and he will be relieved by the perspiration.

463. A section to explain a medicine for Pěnyakit Bubul, which sprouts out (sakít tumbòh-tumbòh) on the sole of the foot until the man is unable to walk. One of the manifestations of Puru or Yaws.

Take scrapings of the root of kěľmoyang (*Homalomena spp.*); and a lump of kapur makan (shell-lime used in betel-chewing), as large as the finger can lift. Grind these together finely. Apply this medicine to the bubul sore. Then take daun kěľmoyang (leaves of *Homalomena spp.*). Take about seven leaves and wrap them round the foot. Next, dig a hole in the ground. Make a fire in it. Warm the foot over the fire until the leaves become quite dry. On the second day, reduce the number of leaves to five. On the third day, only take three. Do as above mentioned, and be relieved.

464. Sections to explain medicines for Kayap Ayer, which causes vesicles to form in the folds between the fingers and toes (sakít mělechét chělah jari tangan dan kaki). Simple Scabies. [Compare with 339 and 425-426.]

Take akar rami hutan (root of *Alchornea villosa*); kunyit hidup (fresh turmeric rhizome); and bėlerang (sulphur). Rub them all down thickly on a stone. Then add minyak kėlapa baharu (fresh coco-nut oil). Mix them and warm slightly in a vessel. Rub this on the affected parts, and be relieved.

465. Should this fail.

Take daun rami hutan (leaves of *Alchornea villosa*); kunyit hidup (fresh turmeric rhizome); and three lumps of garam jantan (coarse or long-grained salt). Grind them all finely together. Apply this to the parts affected, and be relieved.

466. Sections to explain medicines for Pěnyakit Kayap Sapupu, which causes fissures in the tongue and lips (sakít habis měřėkah lidah, dan bibir-nya).

Take akar pėchah pėriok (root of *Ixora spp.*). Rub it down thickly on a stone. Then take gėtah jantung pisang (viscous juice from the cordiform top of a still-flowering spike of bananas). Mix them both together. Rub this medicine on the broken, or divided, tongue and lips.

467. Moreover.

Take daun pėchah pėriok (leaves of *Ixora spp.*); and putek pisang kėlat (the very young fruit, just after the fall of the flower, of a banana tree of the race pisang kėlat). Boil these together. Use the water as a gargle every day, and be relieved.

468. Sections to explain the medicines for burns. When resulting from hot tin; or hot sugar; or similiar hot things falling on

the body (sakit di-timpa timah panas, atau gula panas, atau barang sa-bagai yang panas). [Compare with 421 and 529.]

Take akar mēmpēlas (root of *Delima sarmentosa*); daun bangun-bangun (leaves of *Coleus amboinicus*); and kapur makan (shell-lime used in betel-chewing). Rub the root down on a stone. Churn the leaves with the shell-lime in the palms of both hands. Mix them with the *Delima* root and grind both together. Apply this medicine to the parts that are affected.

469. Should this fail.

Take daun sudu-sudu hutan (leaves of *Euphorbia Synadenium*); gambir Siak (Sumatran gambier); and minyak kēlapa baharu (fresh coco-nut oil). Mix and grind them all together. Rub this over the affected parts, and be relieved. A warning follows: avoid wetting any injury caused by burns with cold water.

470. Sections to explain the medicines for penetrating wounds caused, either by wood, or by iron (sakit di-tikam kayu, atau kēna tikam bēsi).

Take daun bulangan kēchil (leaves of *Gmelina villosa*); kapur makan (shell-lime used in betel-chewing); tampok kēladi (spathe of an *Alocasia*); and sireh kērakap (coarse betel-vine leaves used for betel chambai, or inferior sireh). Grind all these finely together. Apply it, the paste, to the affected part. A warning follows: do not take this medicine off for three days, and do not let it come into contact with water during that time.

471. Moreover.

After the three days have passed, take sireh kērakap (coarse betel-vine leaves used for betel chambai, or inferior sireh); and tawas (alum). Boil the leaves and throw in a small piece of the alum. When it is warm enough, wash the wound with it as warm as the patient can bear, and sprinkle it over the wound until it is easy to take off the first medicine (see 470).

472. Moreover.

Now, take akar bulangan kēchil (root of *Gmelina villosa*); and a little jadam (bitter aloes). Rub them down on a stone with some water. Having previously put a piece of 'rag' (old coarse cloth) over the wound, now apply the medicine above the cloth, and be relieved.

473. A section to explain the disease called Pitam Badi, when everything seems to go black, and it is impossible to stoop, or rise up, without falling; or to bathe in deep water, without drowning; and it is not possible to climb a tree without falling for certain (sakit gēlap mata-nya, tundok tiada boleh, dan jika di-bawah bērdiri nanti jatoh, dan sēta tiada boleh mandi

ayer dalam nanti mati, dan sërta tiada boleh naik pokok kayu tẽntu jatoh). Vertigo. [Compare the treatment with 358.]

Take akar tina (root of *Myxopyrum nervosum*); daun tina (leaves of the same plant); jintan hitam sa-jẽmput (a pinch of *Nigella sativa* seeds); and bawang merah tunggal tiga buku (three onions of *Allium Cepa*). Boil these in an earthenware cooking-pot, having previously covered its mouth very closely to prevent the escape of steam. When the pot is boiling, take a large sheet or coverlet, and cover up the sick man so as to exclude the air. Place the cooking-pot (under the sheet) in front of him. Now, take a knife and make a hole in the cover to allow the steam to rise. This will make him perspire well, and will cure him.

474. Sections to explain a disease of women following child-birth, which is called Pẽnnyakit Mẽroyan Naik. Supposing a wind (angin mẽroyan) should rise in the pit of the stomach and ascend to the head, swimming in the head and nausea will ensue. Gastric vertigo. [See note to 229.]

Take daun ambin buah (leaves of *Phyllanthus Urinaria*); seven white peppercorns (lada sulah); and bawang merah tunggal tiga buku (three onions of *Allium Cepa*). Grind these all finely together. Mix some of this in a tea-cup (chawan), containing water to the depth of a finger joint. Give this to the woman to drink.

475. Should this fail.

Take akar ambin buah (root of *Phyllanthus Urinaria*); and kulit bonglai kayu (bark of *Oroxylum indicum*). Boil these together. Let her drink this until she is relieved.

476. Sections to explain the sort of fever called Kẽpialu Angin, which causes swelling in all the joints (sakit bẽngkak sakalian sẽndi-sẽndi). Rheumatic fever. [Compare with 519.]

Take akar pẽtaling (root of *Ochanostachys amentacea*); kulit kẽmpas (bark of *Koompassia*); and ẽmbalau Siam (Siamese lac). Rub the three together thickly on a stone with some warm water. Then rub this medicine (gently) on the joints and swollen parts.

477. Should this fail.

Take daun pẽtaling (leaves of *Ochanostachys amentacea*); kulit kẽmpas (bark of *Koompassia*); and one leng, or half chupak by measure, of coriander seeds (kẽtubar). Boil these. Commence to boil them in the evening, and after well boiling, pour into a basin. Set a piece of iron across the basin. Expose it to the dew. Then slightly warm the water in the basin. Bathe the sick man with it, and let him be relieved. [Compare this treatment with 452.]

478. A section to explain a medicine for a male disorder of sex (sakit laki-laki yang tiada boleh dĕkat dĕngan pĕrĕmpuan). [Compare with 59 and 542.]

Take akar bakong (root of *Crinum asiaticum*). Cut the root into three pieces, each the length of the sick man's foot. Soak these in a large basin. Bathe him with the water in the morning. Take the pieces of root out of the basin, and direct him to tread upon them (pijak pada kaki-nya). Repeat in this manner for three days. When the three days have passed, put the pieces of root into a bamboo cane. Let this hang over the hearth of a slow fire (salaiyan api) for all time until he is relieved of his weakness.

479. Sections to explain the medicines for Sakit Rĕstong.

Ulceration of the nasal cartilages, especially the gummatous ulceration met with in late syphilis. [Compare with 21-22.]

Take akar jĕlutong badak (root of *Ervatamia corymbosa*); three white peppercorns (lada sulah); bawang merah sa-buku (an onion of *Allium Cepa*); and three fruits of chabai Jawa (Java long pepper). Take only half of the onion, with the others, and only a small piece of the *Ervatamia* root. Rub them down on a stone. Put the preparation into the palm of the hand, and let the patient draw it into his nostrils.

480. Another medicine.

Take daun jĕlutong badak (leaves of *Ervatamia corymbosa*); a small quantity of jintan hitam (seeds of *Nigella sativa*); and a coat, or wrapper (ulas) of bawang merah (the onion of *Allium Cepa*). Grind them all finely together. Apply this to the patient's forehead until such time as he be relieved.

481. Another medicine.

Take batang jĕlutong badak (stems of *Ervatamia corymbosa*). Scrape off the outer bark and take the inner part only. Put this into a tea-cup (chawan). Pour a little water on it. Let the patient draw it into his nostrils, and be relieved.

482. A section to explain the disease called Jamu-i, which causes a feeling of hot pain reaching from the soles of the feet to the palms of the hands, accompanied with the sensation of 'pins and needles' (sakit panas daripada tapak kaki panas sampai pada tapak tangan-nya, sĕrta rasa-nya sĕmut-sĕmutan).

Take isi kunyit hitam (the centre part, or quintessence, of *Zingiber Ottensi*); and kunyit makan (rhizome of *Curcuma domestica*; tĕmu kuning or turmeric). Grind them together and warm the pulp in a vessel. Then rub this, every evening, over the parts that are affected by the cramp (sĕmut-sĕmutan), and be relieved.

483. A section to explain the disease called Sambaran Tujoh, a disease that causes stabbing pains, which, when they occur, seem to stab through from the chest to the back (sakit tikam-tikam-an waktu mēnikam pada dada sampai ka-bělakang-nya). [See note to 427.]

Take three young leaves of lobak hutan, or 'wild turnip' (leaves of *Orchidanthera longiflora*). Scorch the leaves at a fire (layur pada api). Form them into a ball and roll this over the painful parts. Repeat the rubbing, in this manner, for three days. Also take isi lobak hutan (the centre part, or quintessence, of the tuber). Grind into a fine pulp. Apply this to the affected parts, and be relieved.

484. Sections to explain about Batok Sisek or Whooping-cough.

This is a cough which occurs night after night with inability to expectorate; it is worse at night-time; it prevents sleep, and lessens in the morning (sakit batok tiap-tiap malam, dan batok pun tiada kěluar lěndir-nya, tiap-tiap malam sahaja lěbeh, tiada boleh tidur, dan waktu siang kurang).

Take akar pagar anak (root of *Ixonanthes*); akar těbu lanjong (the root of a long, thin variety of sugar cane); tiga biji buah mata kuching (three seeds of *Erioglossum edule*); and jintan puteh (seeds of *Cuminum Cyminum*), a pinch. Boil them all together. Expose to the dew at night. In the morning, give him three tea-cupfuls (chawan) to drink at a time. He must keep drinking this decoction until his cough is relieved.

485. Moreover.

Take daun pagar anak (leaves of *Ixonanthes*); and kunyit makan (rhizome of *Curcuma domestica*; turmeric). Char the leaves by burning them. Grind the fresh turmeric finely and take the juice. Dissolve the charred leaves in the turmeric juice. Then rub it on the patient's chest. If he feels itchy where the medicine has been rubbed, do not allow him to scratch the skin. Apply it for three days, and let him be relieved.

486. A section to explain a skin disease called Kayap Angin.

The outbreak (exacerbation) is like setting fire to the skin (sakit mělětup-lětup sěpěrti kěna api). ? Erysipelas or St. Anthony's Fire.

Take daun balek angin (leaves of *Mallotus*); daun běnalu api (leaves of *Hemigraphis colorata*); a small quantity of raw husked rice (běras sa-dikit); and some kunyit hidup (fresh turmeric rhizome). Reduce them all to a fine pulp. Warm this slightly over a fire. Then apply it to the parts that are affected. Every time before the medicine is applied, the patient must bathe, and well wash himself. Then apply it, and let him be relieved.

487. A section to explain the disease called Upas Gigi.

Ulceration of the gums due to blood poisoning (sakit luka gusi gigi luka-luka).

Take kulit akar ěmpědu tanah (bark of the root of *Psychotria*, see Glossary). Chew it (kulum dalam mulut-nya), all day long, and continue to do so, until relieved.

488. Sections to explain the disease called Sambaran Ta-kěna, or Delirium. There is high fever accompanied with excitement; insane rambling; and restlessness (sakit děmam datang panas radang, tiada běrtěntu sěpěrti hěndak gila, dudok tiada těntu). [See note to 427.]

Take daun ubah (leaves of *Glochidion spp.*). Take seven leaves. Put them into a white tea-cup (chawan). Pour some water on them and squeeze the juice out by hand. Strain the infusion through a piece of cloth. Pour as much as measures the depth of a joint of a finger (sa-ruas jari) into another tea-cup (chawan). Give this to the patient to drink for three consecutive days.

489. Should this fail.

Take akar ubah (root of *Glochidion spp.*). Cut the root into lengths the size of a finger joint (sa-ruas jari). Soak them in a cooking-pot full of water. Give him this infusion to drink every day until he is relieved. Do not allow him to take any other drink.

490. Sections to explain the ulcer called Tokak.

This ulcer develops from a patch of scurfy skin eruption (kudis) which festers and becomes large (sakit kudis jadi tokak sěbab di-makan tokak měliau měnjadi běsar). [Compare with 345.]

Take daun akar kayu mělokan (leaves of *Croton Griffithii*); běras (raw husked rice); some kunyit (fresh turmeric rhizome); and isi buah kěras (kernels of *Aleurites moluccana*; the candle-nut tree). Take three kernels. Grind them all finely together. Then apply it, by means of a feather, to the part that is affected.

491. Should this fail.

Take akar kayu mělokan (root of *Croton Griffithii*). Scrape the root very finely, and then sprinkle the scrapings over the part that is affected, and be relieved.

492. Sections to explain the medicines for a man suffering from griping pains in the stomach so (severe) that he cries out (sakit pěrut měmulas lalu běrtěriak-těriak).

Take akar rambutan pachat (root of *Xerospermum spp.*). Rub it thickly on a stone. Soak it in water and give him the infusion to drink.

493. Should this fail.

Take daun rambutan pachat (leaves of *Xerospermum spp.*);

and majakani (cynips galls from *Quercus lusitanica*). Take one oak-gall. Boil the leaves and throw in the oak-gall while they are boiling. Give this to him to drink, and let him be relieved.

494. A section to explain a medicine for Pěnyakit Měroyan, or diseases which are associated with child-birth.

Take akar muntah pělendok bětina (root of *Ardisia colorata*); a pinch of cloves (buah chěngkeh); three nutmegs (buah pala); lada hitam sa-jěmput (a pinch of black peppercorns); and seven fruits of chabai Jawa (Java long pepper). Boil these all together. Give her this to drink for forty days. A warning follows: do not allow her to drink any other drink.

495. A section to explain the disease called Sawan Bangkai, which causes fever in children with fits of crying, day and night, without cessation. [Compare with Sawan Tangis (sawan, convulsions; tangis, crying).]

Take akar pandan (root of *Pandanus spp.*); akar gading (root of *Chasalia curviflora*, and allied plants); and kulit tělur (an egg-shell). Burn them all. Mix the three sets of ashes together and moisten with rice-gruel. Draw an encircling ring round all the joints every evening (gělang-kan pada sakalian sěndi), until the disease is got rid of, and the child relieved.

496. Sections to explain the disease called Sakit Salah Pěmali, or the early stages of anaesthetic leprosy. The sickness (macular leprosy) is scattered all over the body (sakit sa-rata badan tětapi tiada jadi suatu běrtompok-tompok). [Compare this with the term Bunga Badam. See 51 and 526.]

Take akar gading (root of *Chasalia curviflora*); and daun gading (the leaves of this plant). Burn them. Steep the ashes in a little vinegar. Rub this over the affected parts.

497. Another medicine.

Take buah pisang raja yang masak (ripe bananas of the race pisang raja); tawas (alum), a lump as large as the thumb; and bělérang (sulphur), a lump of the same size. Grind the alum and the sulphur finely together and make the powder into pills. Take three pills and three bananas. Put one pill into each banana. Take (as a dose), three bananas, each containing a pill. Take this, three pills in three bananas, every day for forty days. Do as above mentioned and be relieved.

498. Sections to explain the medicines for a kind of kudis (scurfy skin disease) that resembles kudis buta, or true itch. This kind of kudis is always very small, but very itchy (sakit kudis sěpěrti kudis buta, kudis itu kěchil-kěchil tiada mau jadi bėsar, tětapi sa-lalu gatal).

Take akar manggis hutan (root of *Garcinia Hombroniana*; the wild mangosteen); santan kelapa (coco-nut milk); bĕlerang (sulphur); and lada hitam sa-jĕmput (a pinch of black peppercorns). Cut the root into small pieces. Put the coco-nut milk into an earthenware cooking-pot (bĕlanga). Throw in the pieces of root, sulphur, and the peppercorns, and boil all together. Rub this preparation over the whole body. A warning follows: be careful not to come into contact with water for three days.

499. Another medicine.

Take daun manggis hutan (leaves of the wild mangosteen); and majakani tiga buah (three cynips galls from *Quercus lusitanica*). Boil them together. Use this water for washing and bathing, and be relieved.

500. Sections to explain the medicines for Barah, or an Abscess.
[Compare with 19.]

Take daun puchok tĕntawan (young leaves of *Conocephalus spp.*); bĕras sa-dikit (a small quantity of raw husked rice); a piece of kunyit hidup (fresh turmeric rhizome); and a thoroughly peeled piece of rĕbong kĕchil (a shoot of an edible bamboo). Grind all together finely. Then apply this medicine all round the abscess, leaving the middle part of it open, in order that it may come to a head there, and burst.

501. Moreover.

Take akar tĕntawan (root of *Conocephalus spp.*); and akar chĕmpĕrai (root of *Cansjera* or *Champereia*). Rub these down together on a stone. Apply this medicine to the broken abscess, and be relieved.

502. A section to explain the disease called Pĕnyakit Salamah, or Herpes zoster, which blisters the body and gives the appearance of chicken-pox (sakit mĕlĕpoh-lĕpoh badan-nya sĕpĕrti chachar ayer rupa-nya). [Compare with 271 and 539.]

Take akar bĕdal-bĕdal lalat (root of *Diospyros argentea*). Rub it on a stone thickly. Apply this medicine to the affected part of the body, and be relieved.

503. Sections to explain the sort of fever called Khabu Kambing, which causes a cold fever, but without the biting pains of ague (sakit dĕmam sĕjok, tĕtapi tiada gigit sĕpĕrti dĕmam kura).

Take daun lĕmpoyang (leaves of *Zingiber spp.*); and arang para (either lamp-black or soot). Reduce them to a fine pulp. Divide the whole into three doses. Put a dose into a tea-cup (chawan), and add water to the depth of a finger joint (sa-ruas jari). A dose must be taken for three mornings.

504. Should this fail.

Take akar lěmpoyang (root of *Zingiber spp.*). Put it into a middle-sized earthenware cooking-pot full of water. Reduce to two thirds by boiling. Let the decoction cool, and when it has well cooled, give it to the patient to drink. If this medicine should be taken hot, it would be suitable for the disease called Kura Těmbikar (? kurap těmbikar).

505. Sections to explain the disease called Sěnggulong Hati, or Biliary Colic, which causes a violent pain in the liver with the sensation as if a pill-millepede (sěnggulong) were rolling itself up, as it were, inside the liver (sakit bisa hati běrgulung-gulong rasa-nya pada hati).

Take akar ěmpědal ayam (root of *Salacia spp.*). Peel off the outer coat and take the inner part of the bark. Chew this with betel in a betel-quid (sireh pinang).

506. Moreover.

Take akar ěmpědal ayam (root of *Salacia spp.*). Take the inner bark, as before, and cut it into small pieces. Take, also, daun dělima (leaves of the pomegranate); and lada sulah sa-jěmput (a pinch of white peppercorns). Boil them all together. Let the patient drink this every day, and be relieved.

507. Sections to explain the disease called Sampu Tahun (a chronic wasting fever in children). The fever comes night after night and is accompanied with sweating on the brows (sakit budak-budak děmam malam-malam, dan běrpěloh dahi-nya). [Compare with 415.]

Take akar kělepong (root of *Sterculia foetida*). Chop it into small pieces. Put them into a tub (pasu) full of water. Let them soak from 6 a.m. till 10 a.m. Bring the tub to the foot of the house-ladder. Make the child stand on the first step. Bathe, him or her, by pouring the water from the tub, over the body, from the neck to the feet. Be careful not to wet the head. Repeat in this manner for three days.

508. Should this fail.

Take daun kělepong (leaves of *Sterculia foetida*). Rub a little (oil) over them. Scorch them over the flame of a dammar torch until the colour fades (layur děngan api damar sampai layu). Now lay them on the child's stomach. On the first day, seven leaves; on the second, five; and on the third day, three only. The leaves must be bandaged on, each day, with a piece of cloth. When the leaves are taken off the patient's stomach, they must be placed over the hearth (for curative fumigation), and let the child be relieved. [Compare this treatment with 430.]

509. Sections to explain the sort of fever called Kěpialu Kěmudian. Heat-Stroke or Thermic fever.

The reason this continued fever is so called is, because it suddenly attacks a man who has been walking in the sun. It comes on after (kěmudian) he has got home, undressed, and has had a bathe.

Take daun běntangur jantan (leaves of *Calophyllum spp.*). Score the leaves (turis turis-kan). Soak them in water. Throw in three lumps of garam jantan (coarse, or long-grained salt). Give this to the patient to drink every morning.

510. Moreover.

Take akar běntangur jantan (root of *Calophyllum spp.*). Soak it in water that has been kept overnight (ayer běrmalam). In the morning, bathe the patient's head. Do this for three mornings, and let him be relieved.

511. Sections to explain the sort of fever called Kěpialu Kura.

This fever comes night after night; and furthermore, it is very obstinate, and accompanied with a bitter taste in the mouth (sakit-nya pada tiap-tiap malam děmam, dan děmam pula těr-lalu kěras, dan mulut-nya jadi pahit). Malarial fever.

Take a handful of daun ludai api (leaves of *Macaranga populifolia*), tightly held (sa-gěnggam rut). 'Top and tail' them (kěrat ekur kěpala-nya). Perfume them in the smoke of burning gum benzoin. Then press out the juice by hand and remove the scum by straining through a piece of cloth. Drop a few drops on the patient's head, and let him drink the rest. Act in this manner for three mornings. [Compare this treatment with 446.]

512. Moreover.

Take akar ludai api (root of *Macaranga populifolia*). Boil it. Bathe the patient with the (medicated) water on three consecutive days. On the first day, in the morning; on the second day, at 10 a.m.; and on the third day, in the afternoon, in order that he may be cured.

513. Sections to explain the medicines for fever patients who drink water immoderately whilst feverish, and whose feet become dropsical (sakit děmam dan waktu těngah děmam itu těr-lalu kěras minum ayer, dan kaki-nya jadi basal).

Take akar-nya (no name written in the manuscript, probably akar ludai api, root of *Macaranga populifolia*). Rub it on a stone with cold water. Rub this medicine well over the whole of the patient's body at bed-time.

514. Moreover.

Take its leaves (name omitted in the manuscript, probably

daun ludai api, leaves of *Macaranga populifolia*); bawang merah (the onion of *Allium Cepa*); and a pinch of black peppercorns (lada hitam sa-jěmput). Pound all these together. Put the pulp into a coco-nut shell. Warm it over a fire. Then put it into a sumpit or small rice-bag made of plaited pandanus leaves. Bandage the rice-bag to the left side of the patient's stomach (splenic region). Let it remain there for three days. Then remove it, and let him be relieved.

515. Sections to explain the disease called Sambaran Salah Nama, or a Stitch in the Side. A certain wind coming from the flanks rises to near the pit of the stomach and then it is impossible to draw the breath, (because) it can neither go down, nor come up (sakit datang suatu angin, datang-nya daripada rusok, naik pada hulu hati, lalu tiada boleh tarek nafas, itu turun tiada boleh, naik pun tiada boleh). [See note to 427.]

Take daun pěnaga laut (leaves of *Calophyllum Inophyllum*). Scorch them at a fire. Wrap the hot dry leaves in a piece of cloth so as to form a round bundle. Press this (děmah) against the parts that are affected with pain.

516. Moreover.

Take akar pěnaga laut (root of *Calophyllum Inophyllum*). Rub it thickly on a stone. Let the patient take this (juice) for three days, and be relieved.

517. Sections to explain the disease called Rěstong Pěrut, or Ulcerative Colitis (sakit rěstong pěrut orang itu berak-berak lěndir).

Take akar lada-lada (root of *Ervatamia spp.*); and kulit batang bėlimbing bėsi (bark of *Connaropsis monophylla*). Boil both together. Give it to the patient to drink when cool.

518. Another medicine.

Take daun lada-lada (leaves of *Ervatamia spp.*); and mumbang kělapa (a very young green coco-nut). First bury this coco-nut in hot ashes. Then remove it and grind it up with *Ervatamia* leaves. Warm this in a vessel over a fire. Next, wrap the hot pulp in a piece of cloth and make a round bundle of it. Rub this bundle over the patient's stomach wherever he complains of pain. Then let him sit upon it. This procedure must be repeated for three days. Act in this manner, and be relieved.

519. Sections to explain the sort of fever called Kěpialu Angin, or Rheumatic fever. A continued fever accompanied with swelling of all the joints and lameness (sakit kěpialu bėngkak-bėngkak sakalian sěndi-sěndi sěrta lumpoh kaki-nya). [Compare with 476.]

Take akar kĕmpas rumah (root of ? *Crudia Curtisii* or *Trigonochlamys Griffithii*); and kĕmĕnyan (gum benzoin). Rub both together on a stone. Apply this medicine to all the joints. Then massage them (pichit), where the medicine has been applied.

520. Moreover.

Take daun kĕmpas rumah (leaves of ? *Crudia Curtisii* or *Trigonochlamys Griffithii*); and akar kĕlapa (root of *Cocos nucifera*; the coco-nut palm). Bruise them both. They must then be boiled at night-time. In the morning, warm this water until it becomes as warm as the sick man can bear, and bathe him with it. Do this in like manner for three days, and let him be relieved.

521. Sections to explain the medicines for a swelling inside the ear which will not disperse (sakit tĕlinga bunting di-dalam sahaja tiada sampai kĕluar).

Take either the root (akar) or the fruit (buah) of a big epiphytic orchid (anggĕrek jantan); bawang merah (the onion of *Allium Cepa*); and jintan hitam sa-dikit (a small quantity of *Nigella sativa* seeds). Split the orchid root (or the fruit). Put a piece of onion and a few of the seeds inside it. Bury it in the hot ashes of a fire. When it is as hot as the patient can bear, squeeze the juice into the ear.

522. Moreover.

Rub the remainder down on a stone. Apply the pulp to the outside of the ear, and let him be relieved.

523. A section to explain the medicine for a man who has eaten poison (sakit tĕrkĕna makan rachun). [Compare with 359 and 398.]

Take daun kanching baju (leaves of *Bidens pilosa*); chĕndawan kĕlĕmumur (a fungus, see Glossary); and tanah liat (clay). Squeeze the three together in the hand, and give him the liquid part to drink. Rub the residue on his chest, and let him be relieved.

524. A section to explain the disease called Kĕdal.

This skin disease (kĕdal), breaks and cracks all the skin on the feet and hands (sakit kĕdal dan pĕnyakit kĕdal itu pĕchah-pĕchah, dan mĕrkah-mĕrkah sĕmua-nya kaki tangan-nya). [See note to 281.]

Take akar sireh hantu (root of *Piper spp.*; a wild pepper); and a small quantity of kapur (the lime eaten with sireh). Grind both finely together. Put the pulp into a vessel and warm it over a fire. Apply it to the affected parts of the skin as warm as the patient can bear. Then rub it hard (sĕntal) into the affected areas. After this, dig a hole in the ground, and make a

fire in it. Roast the feet and hands at the fire (*ganggang pada api*) until the medicine becomes quite dry. Repeat this until the disease is quite cured.

525. A section to explain the disease called Sopak.

Sopak develops into bělang on the feet and hands, because the skin is attacked by sopak and becomes bělang, or piebald (*sakit sopak dan pėnyakit itu mėnjadi-kan bělang kaki tangan karna di-makan-nya kulit kita-kita jadi-lah bělang*). [See note to 281.]

Take daun kėrakap rimau (leaves of *Piper porphyrophyllum*; kapur makan (shell-lime used in betel-chewing); and bělerang (sulphur). Grind them together and apply the pulp to the feet. Make a hole in the ground and light a fire in it. Warm the hands and feet (*tangas-kan*) at the fire. Act in this manner until the disease is cured.

526. A section to explain the disease called Sakit Salah Pėmali, or the early stages of anaesthetic leprosy. The sickness (macular leprosy) is in patches like kurap ayam (tinea capitis, ringworm of the head), but without the biting pain of that kind of ringworm (*sakit mėnompok-nompok sėpėrti kurap ayam, tėtapi tiada bėrgigit sėpėrti kurap itu*).

Take daun sėlėpat tunggal (leaves of ? *Ipomoea*; see Glossary); daun gėlenggang (leaves of *Cassia alata*); damar batu (low grade resin from species of *Dipterocarpus*); and ubat bėdil (gunpowder). Reduce to a fine pulp. Warm this first and then apply it to the affected parts. Apply it only in the evenings until the disease is cured.

527. A section to explain a medicine for sword-cuts, or wounds caused by a chopper (*sakit kėna tuna pėdang atau parang*).

Take daun sėrunai laut (leaves of *Wedelia biflora*); and kapur makan (shell-lime used in betel-chewing). Mix a little of the lime with the leaves and churn them in the palms of the hands until froth rises. Apply this froth to the wound, and be relieved. A warning follows: be careful not to come into contact with water, for three days, and be relieved.

528. A section to explain a medicine for a disease called Sakit

Kudis, which causes scurf, or dry miliary scabs, on the body.

Take akar bėbiri (the root of a plant as yet unidentified); and a little gambir Siak (Sumatran gambier). Rub the root thickly on a stone with the gambier. Then take daun bėbiri (leaves of this plant). Boil them. First bathe the patient with the water. Then apply the gambier preparation, and let him be relieved.

529. Sections to explain the medicines for any kind of burn (sakit tērbakar barang sa-suatu pada-nya). [Compare with 421 and 468.]

Take akar bakau (root of the mangrove); and kanji (rice-gruel). Rub the root down on a stone with the rice-gruel. Apply this medicine to the burn.

530. Should this fail.

Take daun bakau (leaves of the mangrove). Scorch them until they are quite dry. Reduce them to powder. Mix this with rice-gruel. Apply this to the injured part, and be relieved.

531. A section to explain a medicine for premature loss of hair following a continued fever (sakit dēmam kēpialu habis gugur rambut kēpala-nya).

Take puchok rotan bini (shoots of *Flagellaria indica*); and daun rotan bini (leaves of *Flagellaria indica*); and santan kēlapa (coco-nut milk). Bruise the leaves well. Then steep, or soak them, in the coco-nut milk. Expose this to the dew at night and in the morning bathe the patient's head with it. Repeat in this manner for three days, and be relieved.

532. A section to explain a medicine for jaundice following fever. There is yellowness of the soles of the feet and eyes (sakit dēmam tiada dēmam tapak kaki-nya kuning, dan mata-nya pun kuning).

Take batang pinang kanchil (the stem of ? *Anisophyllea disticha*); daun pinang kanchil (leaves of this plant); and akar kēlapong (root of *Sterculia foetida*). Boil these in tidal river water in a pēriok, or earthenware cooking-pot. Cover the mouth of the pot with plantain leaves in order to prevent steam from escaping. Expose it to the dew at night. In the morning, warm this (brackish) water slightly and bathe him with it. Do this for three mornings, and let him be relieved.

533. Sections to explain delirium in fever.

A man sick with fever behaves like a madman; he is seized with sudden fear (hysteria) at seeing the ghost of a murdered man (sakit dēmam, dan fa'al-nya sēpērti orang gila, tērkēna badi orang mati di-bunoh). [Compare with 488.]

Take daun puwar merah (leaves of *Ocimum basilicum*). Bruise them well. Apply (the pulp) all over the patient's body at bed-time, and let him be relieved.

534. Moreover.

Take daun sa-bisa (sēbisa; leaves of ? *Eurycoma longifolia*). Bruise them by hand and put them in cold water. Expose to the dew at night. In the morning, bathe his head with it for three days, and let him be relieved.

535. Sections to explain the disease called Barah Bisa, or Carbuncle. This is a boil (barah) caused by blood poison (bisa), and so called, because it has many heads (mata); furthermore, flesh (dead tissue) oozes out of them (sakit barah bisa, dan sebab namakan barah bisa, mata-nya banyak, dan lagi, daging mēngurut kēluar).

Take daun paku jantan (leaves of ? *Ceratopteris thalictroides*); daun tēntawan (leaves of *Conocephalus spp.*); and kēpala nasi sa-dikit (a little of the top, or best, layer of boiled rice). Reduce these to a fine pulp. Apply this to the affected part, but do not cover the whole surface of the swelling. Leave a part open where the (true) head (mata) should form.

536. Moreover.

When the carbuncle has broken down.

Take akar paku jantan (root of ? the fern *Ceratopteris thalictroides*); and akar tēntawan (root of *Conocephalus spp.*). Rub both these roots on a stone. Then apply this medicine to the carbuncle by means of a feather.

537. A section to explain the disease called Chika Kēdadak, which causes severe colic accompanied with violent diarrhoea.

[Compare with 76 and 222.]

Take pēlēpah paku rambut (*Adiantum spp.*; hair fern). Take the fronds (pēlēpah); some ginger (halia); and three lumps of garam jantan (coarse, or long-grained salt). Grind them all together. Rub this medicine into the dorsal muscles (urat bēlikat), and into the tendo Achilles (kēting) of both heels. Also bandage the dregs to the patient's navel, and let him be relieved.

538. A section to explain the disease called Pēnyakit Dampa.

This is a scurvy skin disease which is like the eruption of measles (sakit kudis sēpērti champak).

Take daun pandan Sērani (leaves of *Cordyline terminalis*; garden dracaena); daun paku Sērani (leaves of *Lycopodium cernuum*); some dried leaves of sēlara pandan wangi (*Pandanus odoratus*); and kain kēlapa (coco-nut matting). Burn all these and reduce them to ashes. Dissolve the ashes in English vinegar. Rub this medicine all over the body and be relieved. A warning is given: bathing is not allowed for three days.

539. A section to explain a medicine for Sakit Salamah, or Herpes zoster. [Compare with 271–276 and 502.]

Take akar siak-siak (root of *Dianella ensifolia*); daun siak-siak (leaves of this plant); kēpala ikan sēmbilang (the head of the fish, *Paraplotosus albilabris*); and sēngat-nya (the spines from its fins). Burn all these reducing them to ashes. Mix the ashes with new

coco-nut oil. Then rub it on the body (where it is affected). Should there be any eruption on the head (face), apply the medicine there also. A warning is given: bathing is not allowed; wash the head (face) with warm water.

540. Sections to explain the sort of fever called Kěpialu Tulang. A continued fever accompanied with violent pains in all the bones (sakit dėmam kěpialu bisa sagala tulang).

Rheumatic fever, or perhaps Dengue fever.

Take daun pitis-pitis bunga (leaves of *Sarcolobus globosus*); and twelve kernels of buah kėras (nuts of *Aleurites moluccana*; the candle-nut tree). Grind both together finely. Rub this medicine into every joint for three consecutive days.

541. Should this fail.

Take anak pisang batu (a young banana of the race pisang batu). Cut the fruit off the tree with one stroke, i.e. with a clean cut of the parang, or chopper, and catch the juice. Give the juice to the patient to drink for three days, and he will be cured.

542. A section to explain a medicine for a male disorder of sex (sakit laki-laki yang suda lama yang tiada boleh bėrsuka hati dunia). [Compare with 59 and 478.]

Take akar kėrating (root of *Smilax myosotifolia*); and akar pinang kotai (root of *Agalaea Wallichii*). Put them into a pėriok, or earthenware cooking-pot full of water. Reduce by boiling to two-thirds. Give this to the patient to drink every day, until he is relieved of his inability.

543. A section to explain a medicine for severe pain in the elbow joints, accompanied with swelling, extending to the joints of the hands and feet (sakit bisa pada siku-nya bėngkak-bėngkak sampai sėndi tangan dan kaki).

Take akar gėlenggang simbat (root of a *Cassia*); and daun gėlenggang simbat (the leaves of this plant). Grind these finely. warm over a fire and add a little water to it.

[The manuscript here ends.]

GLOSSARY AND INDEX

Abroma, see kapas hantu.

Abrus, see saga kěchil.

abu tarah. No plant is known to us by this name; but the use recommended in 362 enables us to suggest that abu tarah stands for arang para, abu, meaning ashes, displacing arang, meaning charcoal. The mērtajam and pulasan trees, *Erioglossum edule*, Blume, and *Nephelium mutabile*, Blume, as well as *N. hamulatum*, Radlk., are called arang para, and their astringent roots used in draughts for disorders of the stomach.

Acacia, see laksana and kachu.

Acanthus, see jěruju.

Acorus, see jěrangau.

Acrostichum, see paku laut.

adas or **adas manis** (sweet adas), dill, seed of *Anethum graveolens*, Linn., imported into Malaya chiefly from India and from Japan. It is aromatic and carminative, and a well-known drug. The seed of *Illicium verum*, Hook. f., from China, is a substitute; but it should be called adas china. For internal use, 32, 39, 65, 162, and 318; in a gargle, 197; for external use, 33, 39, and 40.

adas pėdas (pungent adas), fennel, seed of *Foeniculum vulgare*, Gaertn., imported from Java and elsewhere. It is aromatic and carminative. For internal use, 134 and 201; for external use, 224 and 265.

Adenanthera, see saga.

Adiantum, see paku rambut.

Aegle, see maja.

Afzelia, see malapari.

Aganosma, see lima.

Agathis, see dammar.

Agelaea, see pinang kotai.

Aglaia, see rambutan pachat.

akar manis china (sweet Chinese root), dried roots of one or another of the species of *Glycyrrhiza* which yield Chinese liquorice, *G. uralensis*, Fisch., *G. echinata*, Linn., and *G. glabra*, Linn., imported into Malaya. For internal use, 86 and 142. The Chinese use it freely.

akar salah nama (climber with an objectionable name, a polite avoiding of a vulgar name, which unfortunately obscures the identity of the plant intended). It is prescribed alone in a draught, 328, for headache, and with benzoin in another, 395, for pain in the chest. *Santaloides rugosum*, Kuntze (*Rourea rugosa*, Planch.) is quite likely to be indicated.

akar sětokak (root for the ulcer called tokak). No plant is known to us by this name; but the uses are those of *Ervatamia*, see lada-lada. Externally, 345 (root and leaves) and 346 (root), and within the nostrils 347 (leaves).

akar tahi budak is evidently *Croton argyratum*, Blume, which is well known as akar cheret budak (root for diarrhoea in children). Root, stems, and leaves, alike arrest diarrhoea. For internal use, 418 (roots); for external use, 420 (leaves).

Albizzia, see langir.

Alchornea, see rami hutan.

Aleurites, see buah kėras.

Allium, see bawang.

Alocasia, see birah, kėladi, and tampok kėladi.

Aloe, see jadam.

Alstonia, see pulai.

Alum, see tawas.

Alyxia, see pėlasari.

Amaranthus, see bayam and bayam bėrduri.

ambin buah or **dukong anak**, *Phyllanthus Niruri*, Linn., and *P. urinaria*, Linn. These are much used in the East, both internally and in poultices. Taken internally their action is diuretic: this Boorsma attributes to the large amount of potash which they contain (*Meded.'s Lands Plantentuin*, 52, 1902, p. 25). A bitter substance which poisons fish is also present. Internal, 303 and 474 (leaves), and 475 (roots); external, 417 (leaves).

Amomum, see pėlaga.

andong, see lėnjuang.

Anethum, see adas.

anggėrek jantan (big orchid), doubtless any large epiphytic orchid, a *Dendrobium* being the most probable. The juice warmed and dropped into the ear, 521, the remainder applied over it, 522.

Angiopteris, see paku gajah.

Anise, see adas.

Anisophyllea, see pinang kanchil.

antan, prescribed in 289 for external use, may stand for daun siantan. Several species of *Ixora* and *Randia* are known as siantan.

Anthocephalus, see pulasan.

Antidesma, see mėmpunei.

Ants, black, to the magic number of 7, crushed, in a mixture dropped into the eye in neurasthenia, 46.

api-api, a name for several diverse plants, but chiefly, on the one hand Avicennias, and on the other Loranth. The Sundanese, Javanese and Madurese apply the name to the first, and probably the writer of the Medical Book did so

likewise. The juice of *Avicennia* is supposed to be a contraceptive; the bark contains tannin. Internal, 236, 294, and 398 (the pith of the stem); external also in 398.

Aporosa, see dada ruwan and sēbasah.

Aquilaria, see gaharu.

arang para, soot, the sooty cobwebs which accumulate over an open hearth, lamp-black. Internally, 503; externally, 279, 280. **Pokok arang para** is *Erioglossum edule* and some species of *Nephelium* (see abu tarah).

Archytaea, see yang-yang.

Ardisia, see mata pēlandok and muntah pēlandok.

Areca, see pinang.

Aromadendron, see lung-lung.

arsenic, see warangan.

Artocarpus, see jērami and nangka.

Arytera, see kayu tulang and rambutan pachat.

asafetida, see inggu.

asam jawa (Java sour relish), *Tamarindus indica*, Linn. The bark and the seeds are astringent; the other parts of the tree aperient. For internal use, 71 (roots), 138 (fruit-pulp), 236 (roots) and 269 (seeds); for external use, 190 (bark), 192 (shoots), 265 and 268 (fruit-pulp), and 269 (seeds).

asam paya (marsh sour relish), *Zalacca edulis*, Blume. The juice of the sour fruits in a lotion, 105.

asam puyoh (quail's sour relish), *Garcinia nigrolineata*, Planch. The juice of the leaves in a lotion for the eyes, 353.

asam riyang-riyang (cicada's sour relish), *Vitis hastata*, Miq., and some similar species. These are not uncommonly used for poulticing. The pulped leaves in a plaster for numbness of the feet, 90. Cf. yang-yang.

asam susur; susur indicates the sepals which serve as a sour relish and 'border' the fruits, *Hibiscus surattensis*, Linn., and *H. Sabdariffa*, Linn. A decoction of the leaves for a skin-complaint, 322.

ashes 'from the heart of the fire', wood ashes, thoroughly burned. Such ashes consist largely of potassium carbonate and contain a little caustic potash. Internal, as a vehicle in pills for thread worms, 95; externally, 29, 62, 105, 124, and 382.

ashes of a fabric which has been saturated with salt, external 216 (an old salt-bag) and 399 (an old sail or hawser), in both cases applied to the abdomen.

ashes of coco-nut sacking, 538.

ashes of various materials: *Artocarpus*, see jērami; cockroaches, 209; *Cordyline terminalis*, see pandan Sērani; *Dianella ensifolia*, see siak-siak; egg-shell, see egg; gading root, see gading; *Lycopodium*, see paku Sērani; leaves of pagar anak

see pagar anak; *Pandanus*, see pandan; rice-straw, see rice; head of sēmbilang fish, see sēmbilang; *Selaginella*, see paku mērak; *Solanum Melongena*, see tērong; sparrow's nest, see sarang burong pipit.

Atalantia, see limau hantu.

atap, see hujung atap.

Averrhoa, see bēlimbing and sunti.

Avicennia, see api-api.

ayer mawar, rose water, the distillate of rose-flowers from which the otto has not been removed, an import into Malaya from Persia and north-western India. An agreeable vehicle used in 292. It is not evident that ayer mawar hukah, used for the same purpose in 348 differs from ordinary rose water. Rose water is often used for scenting the tobacco and charcoal pellets prepared for smoking.

Baccaurea, see setambun.

bachang, *Mangifera foetida*, Lour. The bark is irritant. A decoction in a medicinal bath, 148.

badak, see rhinoceros.

Baeckia, see hujung atap.

bakau, the mangroves collectively. Of them the species of *Bruguiera* are preferred for medical uses. The commonest is *B. eriopetala*, Wight; but *B. gymnorhiza*, Lam., *B. caryophylloides*, Blume, and *B. parviflora*, W. & A., are plentiful. All are characterized by the presence of large quantities of tannin, and owe their medicinal value to it. External, 276 (fruit), 529 (root), and 530 (leaves).

bakong, *Crinum asiaticum*, Linn., a bulbous plant of the sea-shores of Tropical Asia, Malaysia, and Polynesia. In a mystic washing and ceremony, 478.

balek adap, *Mussaenda spp.*, the commonest in Malaya being *M. glabra*, Vahl, and *M. mutabilis*, Hook. f. The leaves infused in vinegar for making an application, 266.

balek angin, species of *Mallotus* and *Macaranga*, which have leaves white at the back, *Mallotus paniculatus*, Muell.-Arg. (*M. cochinchinensis*, Lour.), being the most likely to be used. The leaves in an application, 486.

bamboo, see buloh.

Bambusa, see buloh.

bangun-bangun, *Coleus amboinicus*, Lour. (*C. carnosus*, Hassk.), which is cultivated rather sparingly throughout Malaya. Its thick soft leaves in a paste for burns, 468.

Barleria, see ěmpědu landak, and pěnawar sěgala bangsa.

Barringtonia, see putat.

baru, *Hibiscus tiliaceus*, Linn. A sea-shore tree used as a febrifuge. Internal for the reduction of fever, 27 (leaves and bark).

basil, see sělaseh.

Bauhinia, see sěkoyak.

bawang merah, the reddish onion of *Allium Cepa*, Linn., a very common excipient. Internal, 39, 56, 60, 152, 153, 170, 172, 179, 221, 223, and 474; in a gargle, 197; in the nostrils, 479; in the eyes, 46, 193, and 315; in the ears, 79, 262, 264, and 521; external, 26, 37, 39, 40, 90, 93, 113, 132, 214, 230, 263, 264, 265, 266, 270, 377, 417, 450, 479, 480, 514, and 522; for steaming, 473.

bawang puteh, garlic, the white bulb of *Allium sativum*, Linn., a common excipient. Internal, 1, 2, 72, 84, 100, 115, 119, 138, 170, 172, 204, 223, 228, 236, 241, 242, 287, 440, and 442; in the eyes, 187; in the ears, 77 and 270; external 92, 187, 220, 229, 232, 270, 281, 377, 419, and 442.

bayam, spinach-yielding plants of the genus *Amaranthus* and *Celosia*. The starchy seeds, prescribed for a poultice for a broken bone, 158, could be got more readily from *Celosia* than from *Amaranthus*. **Bayam bėrduri** is the American *A. spinosus*, Linn., now common in the East. Its roots enter into a powder used like a cosmetic for madness, 40. There is a little saponin in the plant.

bėbėran. This plant-name is probably from bėra or bėrak, meaning flushed or swollen, and it should be written bėbėra or bėbėrak. *Chasalia curviflora*, Auctt. (see p. 474), is indicated, which is commonly used both in draughts and for poulticing. In 131 bėbėran infused with other materia, is drunk for gonorrhoea, the lees serving as an application. Saddle-sores are treated in Java by poulticing with *Chasalia*.

bėbiri has not been recognized. In 528 a decoction of its leaves is prescribed for scurf on the body.

bėdak, see buah bėdak.

bėdal-bėdal lalat (fly-cracker), *Diospyros argentea*, Griff., and *D. Wallichii*, King & Gamble. The waxy leaves burn with a crackling and a strong smell of acroleine, and are used by Malays to drive away flies. In 502, the root in a paste for herpes.

bėdara, from the sanskrit badari, *Zizyphus Jujuba*, Lam., the eastern jujube tree. It contains tannin. The bark and the leaves are admitted to be an effective astringent in dysentery, and to be useful in other complaints. Internal, 68 (bark) and 69 (root); external, 69 (roots) and 289 (leaves).

bėdara laut, the drug lignum colubrinum; in Malaysia wood of *Strychnos ligustrina*, Blume, or beyond the limits of this bitter tree, particularly in Malaya, the wood of *Eurycoma longifolia*, Jack. The lignum colubrinum described by the pharmacologists of the sixteenth and seventeenth centuries as from India and Ceylon, was obtained from other plants.

All serve as bitter tonics. The *Strychnos* contains the poisonous alkaloid brucine. *Bédara laut* is prescribed internally in 373 and in a gargle in 14.

bělalei gajah (elephant's trunk), *Uncaria spp.* on account of the curved grapples on the stem and more rarely *Artabotrys spp.* on account of the curved prehensile peduncles. External, the root in poulticing an ulcer, 346.

bělangkas, the King-crab, *Limulus moluccanus*, Linn. The shell in a gruel for malaria, 32.

bělerang, sulphur. In pills, 497; in a confection, 288; for external application, 464, 498, and 525.

bělimbing, *Averrhoa Carambola*, Linn., and in a lesser measure *A. Bilimbi*, Linn., and species of *Connaropsis*. *Sunti* is a pickle made by salting various fruits, but chiefly those of *A. Carambola*, which is prescribed in tonics and electuaries, 46, 58, and 92. A decoction of the astringent bark of **bělimbing běsi** enters into a draught for dysentery, 517; and this name is given to the above-named plants.

bělimbing buloh, *Averrhoa Bilimbi*, Linn. The fresh leaves in a lotion, 322.

běluntas, *Pluchea indica*, Less., a tidal swamp plant, much used as a sudorific and in diarrhoea in various parts of Malaysia, but prescribed in 289 in a complex oil for small-pox. Where *Pluchea* is not available, as is the case in inland localities, *Conyza*, *Erythroxyton*, *Gardenia*, or *Clitoria* may be used instead, and the name *běluntas* transferred to them.

běluru, *Entada spiralis*, Ridl., and *E. phaseoloides*, Merr. (*E. Schefferi*, *Ridl.*), which give a bark serving commonly as soap. Saponin is present. For external use, 452 (root) and 453 (leaves).

běnalu, *Hemigraphis colorata*, Hall. f., a red-leaved ornamental plant, the leaves of which tricksters chew in fairs as a preliminary to chewing glass. Internal, 228; external, 264, 271, and 486, in all cases the leaves. The name occurs in the manuscript in some places abbreviated to *alu*.

Benincasa, see *kundur*.

běntangur, *Calophyllum spp.* The species of this genus are distinguished with difficulty, and *běntangur jantan* prescribed in 509 and 510 is probably any large *Calophyllum*, but in particular, because most easily obtained, *C. inophyllum*, Linn. For internal use, 509 (leaves); for external, 510 (roots).

benzoin, see *kěmėnyan*.

běřembang (the haunted), *Sonneratia alba*, Smith, and some other trees. *Sonneratia* is a well-known skin remedy. For external use, 307 (leaves). Perhaps the fruit, internally, 237.

bětek, the papaya, *Carica Papaya*, Linn. The latex is well-known as a vermifuge, and is prescribed as such in 38 and 95.

betel nut, see pinang.

Bidens, see kanching baju.

bijan or *Sesamum*, see minyak bijan.

birah, *Alocasia* spp. and some allied plants all of which carry needle-crystals in their tissues such as irritate sensitive surfaces. For proving the skin sensitive, in 461 birah is prescribed alone, and in 92 with spices, pickles, onion, and lime.

birah hitam (black birah) is a name which Malays give to the American *Xanthosoma violaceum*, Schott, but probably used in times past for dark-coloured species of *Alocasia* such as *A. Lowii*, Hook. f. Externally, 26 (tender shoots), 29 (stems), 52, 322, and 382 (leaf-stalks).

birah puteh (white birah) may be any *Alocasia* without dark colour in it, and which the Malays regard in consequence as milder than those with dark colour. It is prescribed in 322 for application to the hands and feet when the skin is thickened, and after boiling.

bitter aloes, see jadam.

Bixa, see kěsumba.

Blechnum, see paku lipan.

Blumea, see sěmbong.

bolai, = the next.

bonglai (as distinct from bonglai kayu), *Zingiber Cassumunar*, Roxb. A ginger which appears so successfully to escape insect-attacks, that Malays ascribe to it protective functions, first to crops and secondly to themselves. Internal, 32 (the rhizome); external, 25, 26, 90, 117, 132, 151, 224, 267, and 305 (the rhizome), and 289 (the leaves).

bonglai kayu, *Oroxylum indicum*, Vent., a tree widely medicinal in the East, but unsuited to the south of the Peninsula and therefore somewhat unfamiliar there. The seeds are imported or brought south, and under the name biji lunang are prescribed in a bolus, 136. A decoction of the bitter bark is used to form a lotion in 475.

Bonnaya, see kěrak-kěrak.

Borassus, see kayu laki.

borax, see pijar.

Boschia, see dada ruwan.

Bottle gourd, see labu.

Bouea, see gandariah.

Brassica, see sěsawi.

Breynia, see jungi.

Bruguiera, see bakau.

buah bėdak, balls of a cosmetic. The common cosmetics are made from a basis of rice fermented and pounded into a fine flour to which ingredients are added such as ginger, &c. External for gouty twinges, 116.

buah chěngkeh, cloves, the dried flower-buds of *Eugenia aromatica*, Kuntze (*E. caryophyllata*, *Thunb.*), a flavouring, a stimulant, and antiseptic. For internal use, 2, 32, 58, 59, 67, 70, 72, 102, 109, 134, 138, 141, 142, 143, 150, 179, 205, 287, 354, 410, 431, and 494; in a gargle, 14; for external use, 23, 143, 150, 174, 224, 299, 301, and 368.

buah kėras (hard fruit), *Aleurites moluccana*, Willd. The oily kernels serve like linseed in poultices, 83, 447, 490, and 540. Buah kėras jantan as recognized in Penang is a race with small and hard rounded fruits. Its kernels are prescribed externally in 66 and 414, and its leaves in 83 and 132 along with the kernels.

buah kėrsani (Khorassan fruit) and hajimuju kėrsani (Khorassan 'Carum copticum'), seeds of henbane, *Hyoscyamus niger*, Linn., and *H. albus*, Linn., collected in Persia and imported via India into Malaya; oily seeds which are sedative on account of the alkaloid hyoseyamine. Internal, 1, 2, 58, 205, 296, and 316.

buah pala, nutmeg, the seed of *Myristica fragrans*, Houtt., an agreeable flavouring, and fragrant. For internal use, 1, 2, 32, 57, 102, 134, 141, 142, 150, 170, 205, 287, 354, 431, and 494; for external use, 150, 174, 224, and 301.

The astringent outer fruit wall is prescribed in 410 for a draught drunk for ulceration of the bones. In 96 a nutmeg is used as a weight.

buffalo's horn. In a gargle, 14; and scraped fine in an application to a wound, 444. Water in which fine scrapings have been placed for an eye lotion, 183.

bulang or **bulangan**, *Gmelina villosa*, Roxb., and other species, or, *Gmelina* not being available, *Canthium horridum*, Blume, and similar thorny species of its genus. The Portuguese took up the trade in this drug under the name of Rais Madre de Dios, shipping supplies of the root from Malacca to Goa. Koenig, when visiting Malacca at the end of the eighteenth century, took the trouble to go out of the town to examine the shrub, and proved it to be a *Gmelina*. The root is bitter; the leaves surrender to water, a substance which froths but is not a saponin: the fruit is sweet and bitter at the same time. Internal, 5 (juice of the fruit) and 145 (part not named); external, 329 (root and leaves), 470 (leaves), and 472 (root).

In 470 and 472 bulangan kėchil is named; this suggests that the writer of the Medical Book knew that more than one plant supplied the physicians with bulangan. Bulangan kėchil is a name fitting *Gmelina* better than *Canthium*.

buloh, bamboo. The shoots, roots, and leaves, as emollients for poulticing wounds. In 21 it is stated that any bamboo

may serve. In 500 the word *rěbong* is used, which means that one of the bamboos used as a vegetable is to be used. In both prescriptions other substances are mixed with the bamboo; but in 443 a big bamboo is used alone. In 21, the poultice being within the nose, a very young shoot is required.

Bamboo leaves in a poultice, 444. A bamboo as a receptacle in 478.

bunga pala, mace, the aril of *Myristica fragrans*, Houtt., a pleasant flavouring in internal medicaments, 1 (where a rather large amount is used), 57, 134, and 287.

bunga pukul ampat (four o'clock flower) *Mirabilis jalapa*, Linn. A plant with a lost medicinal reputation. For internal use, the juice of fresh leaves in a draught for gonorrhoea, 304.

bunga raya (big flower), *Hibiscus rosa-sinensis*, Linn. The Malays make considerable use of this bush, and consider that it is best when white-flowered. Internal in a draught, 199.

bunga Siam (Siamese flower), see *laksana*.

bunga tanjong (headland flower), *Mimusops Elengi*, Linn. For internal use, 198 (young fruits); within the nostrils, 310 (an infusion of the inner bark); and for external use, 190 and 293 (bark).

butter, as an excipient, 250.

Caesalpinia, see *gorek* and *sěpang*.

Callicarpa, see *nasi-nasi* and *tampal bėsi*.

Calophyllum, see *běntangur* and *pěnaga laut*.

Calotropis, see *lěmbega*.

camphor. The camphor of Malaysia is *laevo-borneol* from *Dryobalanops aromatica*, Gaertn. It is *kapur Barus* in order to distinguish it from other camphors, and is so called in all but two of the prescriptions. Its action within the body is expectorant and antispasmodic. Internal 6, 58, 75, 109, 129, 179, 292, 294, 295, 302, and 311, in most cases the amount to be used being specified; external 21, 113, 185, 195, 279, 280, 286, 291, and 305.

Canangium, see *kěnanga*.

Canavalia, see *kachang parang*.

Candle-nut, see *buah kėras*.

Cannabis, see *ganja*.

Cansjera, see *chěmpėrai*.

Canthium, see *bulang* and *mėrajah*.

Carallia, see *mėrpuying*.

cardamom, see *pėlaga*.

Cardiospermum, see *těbing hayu*.

Carthamus, see *kěsumba*.

Carum, see *jěmuju*.

Cassia, see *gělenggang* and *sěna*.

Casuarina, see ru.

catty, see kati.

Celosia, see bayam.

cent, used as a weight in 1 and 58; $\frac{1}{2}$ cent in 207; $\frac{1}{4}$ cent, Penang, in 57, 143, 164, and 246.

Ceratopteris, see paku jantan.

Ceriops, see tēngar.

chabai ekur (tail pepper), see kēmukus.

chabai Jawa (Java long-pepper), *Piper retrofractum*, Vahl.

This pepper is very like Indian long pepper, but stronger in taste, and is preferred. For internal use, 2, 57, 97, 142, 143, 220, 369, 410, 431, and 494; within the nostrils, 479; and for external use, 90, 92, 143, and 214.

chabai tali (rope pepper), the twisted fruits of *Helicteres Isora*, Linn., which are imported into the southern parts of the Malay Peninsula, but can be found wild, though sparingly, in the northern parts. They are not peppery in taste. The roots are not a trade-product. Internal 159 and 160 (fruits) and 287 (fruits and root); external, 299 and 301.

chadaya, for sēduwaya, q.v.

Champereia, see chēmperaī.

changkok, *Schima Noronhae*, Reinw. The dried flowers are a trade-product of medicinal use. Internal, 144 and 350; external, 289.

changku tamal. It is impossible to be sure what this substance is, but it is thought that the first part of the name is the Sanskrit word *tangka* indicating borax. See pijar.

charcoal of teak wood, see jati.

Chasalia, see bēbēran, gading, and kayu tulang: also p. 474.

chawan, a Chinese tea-cup. It is frequently used as a measure, especially towards the end of the manuscript, e.g. in 155, 161, 179, 234, 236, 277, 384, 474, 481, and 484.

chawat udi, *Vitis simplex* (*V. pyrrhodasys*, Ridl., *V. adnata*, Wall.); but this identification rests upon a single record, and is not firmly established. The Medical Book prescribes the root, 415, and the leaves, 416, for external use along with magic observances.

chēkur, *Kaempferia Galanga*, Linn., a spice cultivated through Malaysia called chēkur by the Malays, and kēnchur in Batavia. Internal, 31, 32, and 173; external, 27, 90, 113, 293, and 377.

chēkur manis, the vegetable *Sauropus albicans*, Blume, and as a substitute *Phyllanthus reticulatus*, Poir. The leaves infused in coco-nut milk, 175, as a lotion for baldness.

chēmēmar, *Micromelum pubescens*, Oliv., *M. pubescens*, Blume and *Clausena excavata*, Burm. The leaves in a paste, 156, for ringworm.

- chěmpaka**, *Michelia Champaka*, Linn. The seeds pounded, and used in a bolus, 136, taken for cramp: the flowers in a poultice, 224, for colic.
- chěmpaka gading**, *Michelia longifolia*, Blume. An infusion of the flower-buds in a draught, 226.
- chěmpěrai**, *Champerea Griffithii*, Hook. f., *Lepionurus sylvestris*, Blume, or *Cansjera zizyphifolia*, Griff. The root applied to abscesses, 458 and 501.
- chěmpěrai dadeh**, *Urophyllum streptopodium*, Wall., and probably other closely similar species. The leaves in a poultice, 417.
- chěndana**, sandal wood, wood of *Santalum album*, Linn., imported into Malaya from the east of the archipelago. It is graded before sale, the whiter the costlier. It is a common ingredient in cosmetics, and is used medicinally on account of its pleasant scent. Internal, 32, 67, 114, 145, and 294; in a gargle, 14; external, 23, 25, 26, 90, and 195.
- chěndana janggi**, red sandal wood, red sanders wood, the wood of *Pterocarpus santalinus*, Linn., when obtained from India, or of varieties of *P. indicus*, Willd., when obtained in Eastern Malaysia. Internal, 75, 134, 170, 199, 211, 292, and 297.
- chěndana puteh** is capable of two interpretations; it may denote white or first grade sandalwood; or it may denote wood of *Eurycoma longifolia*, Jack, and also of *E. apiculata*, Benn., which as bėdara laut serve the Malays for *Strychnos ligustrina*. In prescription 70 chěndana and chěndana puteh occur side by side; and in it the second interpretation of chěndana puteh may be taken. In 75 and 297 chěndana puteh is placed against chěndana janggi or red sanders wood, and with sea-borne drugs. This makes white sandal wood the more likely interpretation. All are taken internally.
- chěndawan kėlėmumur** (scurf fungus). An undetermined fungus, used internally with clay in an antidote, 523, for poison.
- chěndawan kukuran**, mentioned in 238, but not as a drug; it remains unidentified.
- chěndawan lar** (insect fungus), *Cordyceps sinensis*, Sacc. This fungus grows upon the caterpillars of Agrotid moths, and is traded in by the Chinese in little bundles, consisting of about a dozen of the dried caterpillars with the fungus attached. In age the preparation blackens, and is then considered most effective. Sympathetic magic determines its use to expel worms; and in 238 it is to be chewed with betel and smeared round the eyes of a child.
- chěngkėring**, the plants used for treating the abscess of this name, in the first place species of *Hedyotis* as *H. glabra*,

- R. Brown, and *H. capitellata*, Wall., and in the second species of *Erythrina*. Fresh leaves are prescribed, for the making of an ointment, 299.
- chěra** **merah**, *Plumbago rosea*, Linn. The plant is purgative, and in 87 the fresh root is prescribed for a cough associated with constipation.
- chicken, see fowl.
- Chilocarus*, see chirit murai.
- china root, see gadong china.
- chirit murai** (magpie-robin's chirit, or plant for diarrhoea), is applied to a group of round-fruited laticiferous climbers of the Apocynaceae, including *Willughbeia*, *Leuconotis*, and *Chilocarpus*. Species of the first of these genera appear to be used most. The fresh root enters into a draught, 380, for malaria, and into a poultice, 383, for the disease called pirai.
- chuchur atap**, see hujung atap.
- chunam**, see lime.
- chupak**, a measure of capacity, $\frac{1}{4}$ gantang (see gantang), or approximately as much as a half coco-nut shell holds, 168, 287.
- Cinnamomum*, see kayu manis and sintok.
- cinnamon, see kayu manis.
- Citrus*, see limau.
- clay, see earth.
- Clerodendron*, see lima and pělunchot.
- Clitorea*, see kaching tulang.
- cloth, ashes of, see ashes.
- cloves, see buah chěngkeh.
- Cnestis*, see kachang-kachang and sěmbělit.
- cockroaches, ashes of, for dilatation of the stomach, 209.
- coco-nut palm, the nut when mature: its endosperm applied externally, 108; the juice from its endosperm or pati, internally, 165, 198, 205, 208, and 234; in a gargle, 197; externally, 191, 168, and 289; its milk or santan, internally, 169, 179, and 316; externally, 62, 175, 268, 275, 498, and 531; shell, ashes of, in a gargle, 456; externally, 8, 73, and 135.
- coco-nut palm, the nut when just immature, kělapa muda; its endosperm, taken from a nut which a squirrel has bitten into and drained with the object of feeding on it, externally, 176; juice from the endosperm or pati, internally, 218; milk or santan, internally, 58, 219, 260, and 308; externally, 175 and 317.
- coco-nut palm, the ovary soon after fertilization; mumbang kělapa, externally, 12, 411, and 518; in 215 it is required that the flower should have aborted and fallen, and an infusion of it is used internally.
- coco-nut palm, the root: externally, 300 and 520.
- coco-nut palm, the oil: externally, 47, 52, 306, 436, 464, 469,

508, and 539. In 47, 52, and 306 it is specified that the oil must be new. The oil used in 301 would be coco-nut oil. coco-nut palm, fibre: the ash of burned coco-nut matting in an application, 538.

Cocos, see coco-nut.

Coleus, see bangun-bangun and hati-hati.

Colocasia, see kěladi and tampok kěladi.

Combretum, see songsong harus.

Commersonia, see pulut-pulut.

Connaraceae, see sěmbělít.

Connaropsis, see bělimbing.

Conocephalus, see těntawan.

Conyza, see běluntas.

copper sulphate, see těrusi.

Corchorus, see kanching baju.

Cordyceps, see chěndawan lar.

Cordyline, see lěnjuang and pandan Sěrani.

coriander, see kětumbar.

Coriandrum, see kětumbar.

Cosciniun, see kěkunyit.

Costus, see sětawar.

cotton, see kapas.

crab, see kětam.

Crinum, see bakong.

Crocus, see koma-koma.

Croton, see akar tahi budak, maměluk, and mělokan.

Crudia, see kěmpas rumah.

cubebs, see kěmukus.

Cuminum, see jintan puteh.

cummin, see jintan puteh.

Curanga, see ěmpědu tanah.

Curculigo, see lumbah.

Curcuma, see kěenchur, kunyit, and těmu.

curds, as a vehicle, 251.

cutch, see kachu.

Cyathula, see pěnyarang.

Cyclea, see těrong kěmang.

Cynips, see majakani.

Cyperus, see lamp-wick.

dada ruwan (the aruwan fish's breast), a well-known plant-name, but very diversely applied, though always to trees. It is recorded for *Aporosa Prainiana*, King, *Boschia Griffithii*, Mast. (but possibly in error for dendurian), *Eugenia oblata*, Roxb., *Homalium caryophyllaceum*, Benth. (*H. frutescens*, King), *Litsea machilifolia*, Gamble, and *Ostodes macrophylla*, Benth. The writer of the Malay Book mis-spelt the name,

as dadaron. Internal, 439 (root); external, 438 (leaves) and 439 (root).

Daemonorops, see jěrnang.

Dalbergia, see kayu laka.

dammar. The chief dammars used by the Malays are obtained from species of *Hopea*, *Dipterocarpus*, *Shorea*, and *Agathis*. The clearest, known as damar mata kuching, is derived from *Hopea*. **Damar mata kuching** is prescribed internally, 168; and externally, 306. A lower grade dammar is prescribed externally, 526, under the name **damar batu laut**, and would be the produce of *Dipterocarpus*. Dammar torches are used in 436 and 508.

dates, as an excipient, 253.

Datura, see kěchubong.

dědap, *Erythrina spp.* The two uses set down in the Medical Book are familiar in Malaysia. Internal, the juice of the bark for cough, 439; external, the bark in an embrocation, 231, and in a poultice, 439.

Delima, see měmpėlas.

dėlima, the pomegranate, *Punica Granatum*, Linn. The roots, fresh leaves, fresh blossoms, fruit, and seeds are equally medicinal. Internal, 3 and 55 (fruit juice), 136 (seeds), 159 and 160 (roots), 170 (fallen blossoms), 318 and 506 (leaves).

Dendrobium, see anggėrek.

Derris, see dada ruwan and tuba.

Dianella, see siak-siak.

Diospyros, see bėdal-bėdal lalat and kayu arang.

Diplospora, see gading.

Dipterocarpus, see dammar.

dirham, a small persian silver coin, equal to 48 grains in weight, 57 and 164.

dragon's blood, see jěrnang.

Dryobalanops, see camphor.

duit, a half cent used as a weight, 143 and 207. A Penang coin.

dukong anak (written in the MS. dukong-dukong), see ambin buah.

durian, *Durio zibethinus*, Linn. The juice of fresh leaves in a lotion for fevers, 460.

earth. Clay both cooked and uncooked, is eaten in very many parts of the world. Malays are among the people who eat it. Earth is considered as an antidote for poisons and is so prescribed in 523. In 34, earth, spat upon, is prescribed for external application.

ebony, see kayu arang.

Eclipta, see urang-arang.

eggs, raw, as an excipient. Internal, the whole, 161, 163, and

343; the white, 207; the yolk, 43, 56, 60, 111, 166, 169, and 225. A fried egg in 114. External, the white, 47; the yolk, 191. In 56, 161, and 169 it is specified that the egg must be one of a black hen.

egg-shell, ashes of, in an application, 495. It is used as a measure in 56.

Elaeocarpus, see sělěpat tunggal.

Elaeodendron, see mēmpunei.

elephant, sebaceous secretion of, see minyak tahun.

Elephantopus, see tapak leman.

ěmbalau Siam (Siamese lac), stick-lac, the tests of *Tachardia lacca*, Kerr, with the lake dye still in them, which the Chinese use as a plaster for unhealthy sores. External, 476.

ěmpědal ayam or **pědal ayam** (fowl's gizzard) is a name applied to species of *Salacia*. The peeled roots are used by the Malays for several complaints. Internal, 505 and 506.

ěmpědu kambing or goat's gall, see goat.

ěmpědu landak, pokok or bunga, (porcupine-gall flower), *Barleria Prionitis*, Linn., better known as bunga landak. The leaves internally, 82; and in an application, 217.

ěmpědu tanah (earth gall), a name for certain bitter plants, the chief being *Curanga fel-terrae*, Merr., a herb of the family Scrophulariaceae. The name is given also to species of *Psychotria*, *Rennellia*, and to *Gynochthodes coriacea*, Blume, which are shrubby. As in prescription 487 the bark is used, the writer indicates one of the shrubs. The prescription is for the cure of toothache by holding the bark in the mouth.

Endospermum, see-mělokan.

Entada, see běluru.

Erioglossum, see abu tarah, arang para, and mata kuching.

Ervatamia, see jělutong badak (the taller species) and lada-lada (the smaller species); also sětokak and pokok rěstong urat.

Erythrina, see chěngkěring and dědap.

Erythroxyton, see běluntas.

Eugenia, see buah chěngkeh and dada ruwan.

Euphorbia, see sudu-sudu, měntulang and tulang-tulang.

Eurycoma, see bėdara lăut, chěndana puteh, and pėnawar bisa, pėnawar pahit, and sėbisa.

Fagraea, see sětěbal.

fennel, see adas pėdas.

Feronia, see maja.

Ferula, see inggu.

Fibraurea, see kėkunyit.

fire-flies, *Luciola spp.*, as illuminating obscurity, in the treatment of madness, internally, 163.

Flacourtia, see rukam.

Flagellaria, see rotan bini.

flies, a paste of flies and salt externally for retention of urine and stoppage of the bowels, 118.

Foeniculum, see adas pēdas.

foot, the patient's foot as a measure, 478.

fore-finger, 'to the depth of the first joint of the fore-finger,' a measure for a dose of a liquid medicine, 241 (sa-ruas jari tēlunjok), 427, 432, and 452.

fowl, the blood of, applied externally to swollen and painful knees, 305. Compare the use of lake-dye on joints: see ěmbalau.

fowl, the feathers of a white fowl with yellow legs, for a magic application round the eyes, 186.

fowl, the flesh of, as an excipient for an internal medicament, 296 and 316, the fowl being black; in a poultice 48 and 49; as a support for fractured bones, 158.

gading usually denotes *Chasalia curviflora*, Auctt. (see p. 474), and frequently species of the closely allied genera *Tarenna*, *Diplospora*, and *Pavetta*, which are very similar in appearance to the *Chasalia*. Sometimes it denotes the less similar species of *Randia*. It is recorded that *Chasalia* is known as **gading galoh** in Malacca, which name as raden galoh appears in the Medical Book. The plant is prescribed for external use only, 433 (roots), 434 (leaves), 458 (roots), 495 (ashes of the roots), and 496 (ashes of leaves and roots).

gadong china, the imported tuberous roots of *Smilax China*, Linn., radix chinae, which in the sixteenth century had a great reputation as a cure for syphilis and other diseases. For internal use in 1.

gaharu, resinous wood of *Aquilaria malaccensis*, Lam., *A. Agallocha*, Roxb., and sometimes of *Gonostylus bancanus*, Baill. The resin spreads through the wood under pathological conditions, and the material comes to market in varying degree of saturation: it is then graded for sale. **Kalambak** is a name for first-grade wood; which is at the same time gaharu lampan: gaharu tandok is a name for second grade wood. In the Medical Book gaharu is often prescribed for internal use, and in several places it is added that the quality must be good: twice kalambak is prescribed. Internal, 45, 58, 75, 109, 114, 123, 146, 166, 236, 294, and 295. Gaharu tandok is prescribed for internal use in 165 and 297. External, 289, 291, 293, and 363.

The root of the tree is prescribed for internal use in 396, and its leaves for external use in 397.

gall, goat's, see goat.

galls, see majakani.

gambir Siak (gambier of Siak in Sumatra), from *Uncaria Gambier*, Roxb., a tannin. External, 469 and 528.

gandaria, *Bouea macrophylla*, Griff., a fruit-tree. It is called gandariah in Sundanese, but kandongan and rumëniya in Malay. The leaves are prescribed, in a gargle, 197, and in a poultice, 178.

gandarusa, *Gendarussa vulgaris*, Nees. This plant has an inexplicable reputation. It occurs in two races, the one with purplish sap and called gandarusa hitam, the other green, and called gandarusa puteh. There is no further difference. It has no peculiar medicinal merit. Internal, 7 (root), 32 (leaves), 50 (root), 125, 233, and 234 (juice); within the mouth applied to an aching tooth, 15 (leaves); external, 151, 175, 262, and 289 (leaves). It is required that gandarusa hitam shall be used in 7 and 50; gandarusa puteh in 15; moreover both are required in 289.

gandasuli, *Hedychium spp.* The fresh root pulped in an embrocation, 268.

ganja, dried tops of *Cannabis sativa*, Linn., grown in a warm climate (*Cannabis indica*), a narcotic, prescribed for internal use in 1, the amount to be used omitted.

gantang, a measure of capacity, used in 99 and 154. Four chupaks make a gantang (see chupak).

ganti, the rhizome of *Peucedanum japonicum*, Thunb. (*Ligusticum acutilobum*, Sieb. & Zucc.), imported from China and perhaps also from Japan, apparently carminative and sudorific like the European *P. Ostruthium*, Koch. Internally, 32, 138, 146, 367, and 369; externally, 113, 289, 367, 377, and 382.

garam, see salt.

Garcinia, see asam puyuh, luli, and manggis hutan.

Gardenia, see bëluntas.

garlic, see bawang puteh.

Gastrochilus, see tēmu kunchi.

gëlang, the purslane, *Portulaca oleracea*, Linn., a vegetable common and easily obtained, and used for poulticing. It is recommended for internal use, 273; for a disordered stomach with herpes.

gëlenggang and **gëlenggang bësar**, the American *Cassia alata*, Linn., which is now common in the East, and a certain remedy for various skin diseases on account of the chrysophanic acid which it contains. Taken internally it relieves constipation. Internal, 364 (leaves and root); external, 271 and 274 (leaves), 277 (seeds), 307 and 526 (leaves).

gëlenggang këchil (little gëlenggang), *Cassia obtusifolia*, Linn., and *C. tora*, Linn., species similar enough to pass under one name. The uses are the same as those of the last. Internal, 365 (root), and external, 366 (leaves).

gëlenggang sembat, presumedly a *Cassia* in which the leaves

overlap in a peculiar way (sembat) ; but it cannot be identified with precision. The leaves and roots are prescribed in what seems to be a poultice, 543.

gĕli-gĕli, *Lasia spinosa*, Thwaites (*L. aculeata*, *Lour.*), gĕgĕli and sĕgĕli, a marsh-plant used as a flavouring in curries, &c., and to some extent medicinal. It is cyanogenetic. It is prescribed in a bolus for cough, 337.

Gendarussa, see *gandarusa*.

ghi is called minyak sapi equally with mutton suet, see minyak sapi.

ginger, see *halia*.

Gleichenia, see *rĕsam*.

Glochidion, see *ubah*.

Gluta, see *mĕmpĕlam babi*.

Glycyrrhiza, see *akar manis china*.

Gmelina, see *bulang*.

goat, the brain, in a jelly, 2, taken for debility.

goat, the bones, in a mystic eye-wash, 171.

goat, the dung, in an application for rheumatic pains during the puerperium, 117. The goat must be black.

goat, a biliary concretion, taken internally, 292, for leucorrhoea.

goat, the milk, see *milk*.

goat, the suet, see *minyak sapi kambing*.

gold. Pure gold is prescribed in 89 for numbness of the feet ; and in 168 for debility. Filings of gold are prescribed in the writings of such authorities as Ibn Sena : gold leaf is commonly used in some parts of the East in medicine. **Ayer ĕmas** or gold water enters into 41, for lunacy.

Gomphandra, see *kayu kĕsturi*.

Gonocitrus, see *limau lĕlang*.

Gonostylus, see *gaharu*.

gorek, *Caesalpinia Crista*, Linn., and *C. Jayabo*, Maza. Kĕlichĭ is another name for them. Internal, 115 (leaves), 179 (young leafy shoots), 204 (leaves and pulp of the fruit) ; external, 37 (the part not named), 107 (leaves) and 305 (fruit).

Gossypium, see *kapas*.

grapes. Internal, 255.

Graptophyllum, see *puding merah*.

guava, see *jambu biji*.

gula, see *sugar*.

gunny bag, ashes of, see *ashes*.

gunpowder, see *sĕndawa*.

Gynandropsis, see *maman hantu*.

Gynochthodes, see *ĕmpĕdu tanah*.

gypsum, see *mĕdang sila*.

hajimuju, see *jĕmuju*.

hajimuju kĕrsani, see *buah kĕrsani*.

halba, fenugreek, *Trigonella foenum-graecum*, Linn., the imported leaves. There is a substitute available in *Lysimachia foenum-graecum*, Hance, imported from China. Fenugreek is prescribed in a very complex oil, 289, for small-pox.

halia, ginger, the rhizome of *Zingiber officinale*, Rosc., of which plant the Malays grow three races—halia bara, halia padi, and halia hudang. In the Medical Book, halia padi or little ginger is prescribed chiefly for internal use, and halia bara for external. Internal, 1, 7, 50, 58, 86, 87, 137, 142, 167, 179, 210, 220, 225, 227, 296, and 323 (halia padi being specified in 7, 50, 86, 87, 227, and 296, and in 142 dry ginger is specified); within the nostrils, 164; external, 47, 92, 113, 174, 213, 214, 267, 357, 368, 442, and 537 (halia bara is specified in 174, 214, and 357; halia padi in 113 and 267).

Ginger pickle enters into a draught, 111, and a bolus, 134.

halia puteh (white ginger) may indicate a *Zingiber*: if not, a *Globba*. It enters into an embrocation, 174, for madness.

handful, frequently used as a measure, e.g. a handful of leaves as full as possible (sa-tangan tĕrak) in 115; a handful tightly held (sa-gĕnggam rut) in 126; a closed handful of leaves (sa-gĕnggam) in 131 and 303; and a closed handful of white peppercorns in 152; a handful of boiled rice (sa-kĕkal) in 135; a double handful of cummin seed (sa-chapak) in 220; and a double handful of leaves in 301; a full open handful of raw rice (sa-bujor tangan) in 227.

hati-hati, *Coleus atropurpureus*, Benth., and *C. Blumei*, Benth. Internal, 218 (leaves), 435 (roots); external, 289 (leaves).

hati-hati hutan (wild hati-hati). This name has been recorded for *Sonerila ? heterostemon*, Naud.: it is quite likely that it is applied also to other plants. As *Sonerila* is used by Malays for poulticing, the identification may be accepted. Internal, 435; external, 405, in both cases the root; 406 (leaves).

hawser, ashes of, see ashes.

Hedychium, see gandasuli.

Hedyotis, see chĕngkĕring.

Helicteres, see chabai tali.

Hemigraphis, see bĕnalu.

hĕmpĕdal ayam, see ĕmpĕdal.

hĕmpĕdu kambing, see goat.

hĕmpĕdu landak, see ĕmpĕdu landak.

hĕmpĕdu tanah, see ĕmpĕdu tanah.

Hibiscus, see asam susur, baru, bunga raya, and kapas hantu.

Homalium, see dada ruwan, kayu tulang, and mĕntulang.

Homalomena, see kĕlĕmoyang.

honey or ayer madu is a frequent addition to medicines.

Internal, 2, 4, 43, 56, 57, 60, 68, 71, 88, 89, 114, 134, 157,

159, 162, 166, 169, 170, 201, 210, 219, 225, 246, 287, and 323; also in 113.

Hopea, see dammar.

Hoya, see sětěbal.

hujong atap or **chuchur atap**, dried leaves of *Leptospermum flavescens*, Smith, *Baeckea frutescens*, Linn., and sometimes, *Leucopogon malayanus*, Jack, which are commonly on sale. Internally, 114, 167, 205, and 227; externally, 351 and 366.

hujong bee-ur murbat, prescribed for external use in 93. No certain identification can be made; but it is suggested that **hujong biya madat** is meant. Biya madat is a pill of the opium substitute, *Mitragyne speciosa*, Korth., prepared for smoking; and hujong would be used for flour as in hujong lēmukut, which is the rice flour so frequent in applications to the skin.

Hydrocotyle, see pënggaga.

Hyoscyamus, see buah kěrsani.

Illicium, see adas manis.

Imperata, see lalang.

inai, henna, leaves of *Lawsonia inermis*, Linn. (*L. alba*, Lam.), imported chiefly, and sold dry, both as daun inai and as **daun pachul** (leaves for forcing out, as matter from an abscess). Daun pachar kuku, meaning leaves for forcing out, relative to the finger or toe nail, is a well-known name used in Javanese and Sundanese, the leaves being employed for poulticing a gathering under the finger nail, probably involving the loss of the nail. Internal, 294; in a gargle as daun pachul, 17; external, 285 and 368.

Indian hemp, see ganja.

indigo and *Indigofera*, see nila.

inggu, asafetida, the oleo-gum-resin of *Ferula asafoetida*, Linn., *F. alliacea*, Boiss., *F. Narthex*, Boiss., and others, imported from beyond India via Bombay. Its action is nervine stimulant, expectorant, laxative, and carminative. Internal, 84, 200, 235, 323, and 362; applied to teeth, 16; external, 23 and 299.

intaran, the nim-tree, *Melia indica*, Brandis (*M. azadirachta*, Linn.), a tree rare in Malaya, but well known in surrounding countries. The name used in the Medical Book is current in eastern Java and Bali. The febrifuge qualities of the tree are widely recognized. In 31 an infusion of the leaves, and in 123 a decoction containing the gum for treating continued fever. The gum also in a medicinal bath, 123.

Ipomoea, see sělěpat tunggal.

iron. Malay dyers use a preparation called ayer banyar, which is kept active by daily dipping into it a hot iron. The same use of a hot iron is prescribed in 143, a draught for amenorrhoea, and appears to be an example of mysticism. Other prepara-

tions into which iron enters are not for internal use. Opium is rubbed upon an iron along with the juice of a lime, 184, and then applied over the eyelid for wounds of the eye. An iron nail, doubtless rusty, lies for a night in the preparation, 414, used for bathing a child with a fever. Dross of iron is used in 18, an application for aching teeth. Ayer běsi (iron water), batu kawi, i.e. haematite, or else red rust in water, enters into a cosmetic, 41, for madness caused by evil spirits. Těrusi (q.v.) is iron sulphate.

Ixonanthes, see pagar anak.

Ixora, see antan, mata pělاندok, and pěchah piring.

jadam, bitter aloes, the dried juice which runs from peculiar yellow cells in the cut leaves of *Aloe succotrina*, Lam., *A. vera*, Linn., *A. ferox*, Mill., and other species. It is traded from Africa and Arabia to India and forward to Malaya, where it gets the name jadam. It is purgative. Internal, 84, 134, 235, 323, and 365; external, 453 and 472.

jağong, maize, *Zea Mays*, Linn. A fresh ear pounded with other materials, 70, for a sore throat. The grain is used as a measure in 2 and 207.

jalamudi cannot be identified. The leaves are prescribed in 142, for use internally along with a series of substances stocked dry in drug-shops.

jambu biji, the guava, *Psidium Guajava*, Linn. The bark in a cosmetic, 40, for hystero-epilepsy.

jarak pağar (hedge castor-oil, or, perhaps better, hedge *Plumbago*, for jarak is from a Sanskrit name for the Indian purgative *Plumbago*), *Jatropha Curcas*, Linn., an American plant now widely spread through the East. External, 283, for the skin-disease, kědal.

Jasminum, see mělor and pěkan.

jati, the teak, *Tectona grandis*, Linn. Powdered wood in a bolus, 170, taken for stomach-ache: its charcoal in a draught, 31, for malaria.

Jatropha, see jarak.

jěduwayah, see sěduwayah.

jělatang and **jělatang ġajah**, *Laportea stimulans*, Miq. The fresh leaves for a poultice upon a blind abscess, 449; and if they do not cure, the fresh roots, 451.

jělutong badak, *Ervatamia corymbosa*, King and Gamble, and other species of the genus such as *E. hirta*, King and Gamble, being those which grow to above the height of a man. There is an oleo-resin in the latex, with an action akin to that of copaiba. An infusion of the root, 479, or of the inner bark, 481, is to be drawn into the nostrils for the treatment of ulceration due to syphilis; and a poultice containing the leaves, 480, is to be used.

jěmuju or **hajimuju**, ajwain seed, seed of *Carum copticum*, Benth., imported into Malaya from India, and also in recent years from Japan. It is aromatic, stomachic, and carminative, and is commonly used medicinally. Internal, 71, 100, 134, 142, 204, 205, 211, 220, and 323; external 174 and 357; in a steam bath, 358.

jěnjuang, see lěnjuang.

jěrami, *Artocarpus integra*, Merr., and *A. Champeden*, Spreng. The ashes of the roots internally in 120, and the bark in a poultice, 117. It must be added in comment that to use ashes of the leaves is more usual among the Malays and Javanese.

jěrami hutan (wild jěrami). *Artocarpus elastica*, Reinw. (*A. Kunstleri*, King), would appear to be the artocarp most entitled to this name. The root is prescribed in a draught, 440.

jěrangau, the sweet flag, *Acorus calamus*, Linn., cultivated in Malaya to which it has been brought from China or India. Its malay name is from the chinese. The aromatic rhizome is used. Internal, 32, 134, and 173; external, 26, 33, 113, 117, 151, 264, and 377. Its leaves are prescribed in the complex oil, 289.

jěrnang, dragon's blood, resin of *Daemonorops spp.*, the kino found within the fruit wall, useful on account of the abundance of tannin which it contains. Internally, 170, 199, and 211; painted round the eyes, 186.

jěruju, *Acanthus spp.* *A. ebracteatus*, Wall., is the commonest species in Malaya: the taller *A. volubilis*, Wall., is relatively rare; and *A. ilicifolius*, Linn., is only in the north. All three possess the name jěruju. Internal, 273 (the root); external, 94 and 175 (the leaves).

jintan hitam, seed of *Nigella sativa*, Linn., imported into Malaya from beyond India. It stimulates the digestion and is the commonest of flavourings in the Medical Book. In 133 it is given internally by itself. Internal, 32, 56, 59, 72, 91, 109, 133, 150, 161, 204, 205, 220, 221, 234, 273, 296, and 440; drawn into the nostrils, 270 and 310; squeezed into the eyes, 193; into the ears, 262; external, 8, 21, 37, 90, 92, 106, 107, 150, 174, 230, 264, 267, 270, 377, 417, 480, 521, and 522; in a steam-bath, 473. Jintan is prescribed in 388; but it is not said which.

jintan manis, seed of *Pimpinella Anisum*, Linn. For internal use, 225 and 303.

jintan puteh, seed of *Cuminum Cyminum*, Linn., imported into Malaya from India and a common flavouring. Internal, 1, 23, 32, 91, 109, 205, 212, 242, 323, and 484; for the eye, 182; external, 24, 25, 90, 174, 213, 377, and 388.

jintan saru. This drug is mentioned only in 134. It appears to be juniper berries which are valued highly by the Arabs, and traded in from northern India: Bombay imports them

via Persia. It must be rare for them to arrive in the ports of Malaya.

jiring, *Pithecellobium lobatum*, Benth. The astringent bark enters into a gargle, 456, for caries of tooth.

jolok hantu may be considered as denoting species of *Willughbeia*. The root enters in decoction into a draught, 404, for heartburn. External, 405.

jungi, *Breynia reclinata*, Hook. f. The root in an application, 321, for discoloured skin. Malays frequently resort to this plant for such treatment.

Juniperus, see jintan saru and kayu kęsturi.

kachang hijau (green bean), *Phaseolus radiatus*, Linn. (*P. Mungo*, *auctt.*, non Linn.), or possibly another species, as, though seeds of *P. radiatus* are in the bazaars of all the towns of Malaya, pods, which are prescribed with them, are not easily obtained; and if another species, probably *Pueraria phaseoloides*, Benth., for it is kachang hijau hutan or wild green bean. The pods and the seeds in decoction enter into a draught, 194, for vertigo.

kachang kacham, prescribed in 427 (roots) and 428 (leaves) for external use, seems to stand for kachang-kachang; but we have not ventured to change it. The name kacham belongs to various species of the family Myrsinaceae; but no kacham-kacham is known; nor any kachang kacham.

kachang-kachang (bastard bean), a name for several plants of the Connaraceae, the fruits of which are like small beans: among them species of *Santaloides* (*Rourea*) and *Cnestis* are the most likely to be used medicinally. Internal, 410 (root): external, 411 and 438 (leaves).

kachang parang (chopper bean), Sword bean, *Canavalia gladiata*, DC. The juice of fresh leaves squeezed into the eyes, 46.

kachang tulang puteh (white bone bean), *Clitoria Ternatea*, Linn., a white flowered race. The juice to be squeezed with milk into the eyes, 313.

kachu, catch, the inspissated gum of *Acacia Catechu*, Willd., and allied species, imported from India. It contains tannin. Internal, 170, 207, and 212. In 170 kachu puteh is prescribed: this means the best catch, and sometimes gambier.

Kaempferia, see chękur and kęnchor.

kalambak, see gaharu.

kanching baju (coat button), a name used for several plants of the family Compositae, whose spherical flower-heads suggest coat buttons, the chief being *Bidens pilosa*, Linn. It is used also of species of *Hyptis* in which the flowers are crowded, and of *Corchorus capsularis*, Linn., which has button-like fruits. Internal, the juice in a draught, 523, for poison.

kapas, cotton. The commonest species in Malaya is *Gossypium brasiliense*, Macfad. The pulped seed in a bolus, 261, and in an embrocation, 266, for diseases attributed to evil spirits. Cotton floss is mentioned in 191 for conveying a lotion to the face; cotton cloth in 187 and 193.

kapas hantu (ghost's or wild cotton). In the Malay Peninsula this name is applied usually to *Hibiscus Abelmoschus*, Linn. In the second place it is applied to *Abroma fastuosa*, R. Brown, particularly outside the Peninsula. *Hibiscus Abelmoschus* is mucilaginous. The leaves in a poultice, 81.

kapur or lime, see lime.

kapur angin, the lichen *Usnea*, more usually called rumput angin, q.v.

kapur bambu, tabashir, a bezoar-like concretion found abnormally in the joints of bamboos. It occurs in the shape of irregular fragments which when clean are of an opaque white or blueish opalescence, and contain about 70 per cent. silica with 30 per cent potash. Tabashir is prescribed in a draught, 323, for all diseases.

kapur Barus, see camphor.

karat bēsi, iron rust, in a preparation, 18, for applying to a tooth.

kati, a weight which equals one pound, 246.

kayu arang, ebony, the wood of various species of *Diospyros* and *Maba*. Powder of it is prescribed internally in 170 and externally in 363.

kayu kēsturi, juniper wood, wood of *Juniperus chinensis*, Linn., or other species; and when this is not available wood of *Gomphandra lanceolata*, King, or in the Dutch Indies of *Xanthophyllum adenopodum*, Miq. Internally in 146.

kayu laka, wood of *Dalbergia parviflora*, Roxb., which possesses a colour suggestive of blood. Internally in the electuary, 58.

kayu laki ayer is prescribed in 338 (leaves and roots) for stanching wounds. It cannot be identified. Kayu laki is *Borassus flabellifer*, Linn.; but no variety or ally is known as kayu laki ayer. Kayu laka is *Dalbergia parviflora*, Roxb.; but no ally is known by the name kayu laka ayer. We have been told that kayu laki ayer is a tree growing in streams which nods to the current.

kayu manis (sweet wood), cinnamon, bark of *Cinnamomum zeylanicum*, Breyne. This fragrant bark is a stomachic as well as an aromatic. Kulit manis (sweet bark) is synonymous; but the writer of the Medical Book uses 'kayu' usually in prescribing internal medicines, and 'kulit' when prescribing external medicines. Internal, 57, 58, 59, 138, 170, 203, and 245; external, 195, 224, 274, 291, 293, and 383.

kayu manis China (Chinese cinnamon) is prescribed in-

ternally in a draught, 91, as a tonic; should be the bark of *Cinnamomum Cassia*, Nees, which is exported from southern China. The item 'akar kayu manis China' prescribed in an application, 69, to the neck is of uncertain identification; the word China has been added above the line: without it root of *Cinnamomum zeylanicum* would be meant: with it one is brought up against the difficulty that root of *Cinnamomum Cassia* is not an export to Malaya. It is possible that the twigs which are used have been mistaken for roots.

kayu manis Jawa (Javanese cinnamon), bark of *Cinnamomum Burmanni*, Blume, the smell of which suggests sassafras rather than cinnamon, a well-known medicine for diarrhoea; and prescribed in a bolus, 80, for gripes, and 32, in a gruel for malaria.

kayu puteh, *Melaleuca Leucadendron*, Linn., cajeput. The wood, internally, 70.

kayu tulang (bone wood), prescribed for external use in 54 and 377, cannot be determined with precision. The name is used for *Arytera*, *Chasalia*, *Homalium*, *Kurrimia*, *Maesa*, *Memecylon*, *Randia*, and others.

kěchubong, *Datura fastuosa*, Linn., anodyne and poisonous from the presence in all parts of the alkaloid scopolamine. Internal, twenty-one seeds in a bolus, 102, for debility: so few would not cause any ill effect: juice from the plant in a lotion for the eye, 393: external, leaves applied to external piles, 13, and to boils, 19, in a poultice for rheumatism, 301; the fruits in an application for a ringworm, 279 and 280, and the seeds in a complex oil for small-pox, 289.

kědaung, *Parkia Roxburghii*, Don. Internal, decoction of the seeds, 350, and a bolus containing the endosperm and embryo, 210; within the nostrils, 370 (bark); external, 191 (seeds), 361 (leaves), and 371 (leaves and bark).

kěděkai, see majalawai.

kěkunyit (bastard turmeric), *Fibraurea* and *Cosciniun*, which contain the yellow alkaloid berberine in their tissues. The Malays possess *Fibraurea chloroleuca*, Miers, *Cosciniun Wallichianum*, Miers, and *C. Blumeanum*, Miers, the first being the most used. For an eye lotion, 454.

kěladi, *Colocasia esculenta*, Schott (*C. antiquorum*, Schott). The fresh leaf is to be wrapped round a bolus of mustard seed and garlic, 119, which after lying so all night is consumed with magic observance; but it is not made clear that the leaf is to be eaten, and probably would not be. Its leaves are often used as wrappers: cf. Skeat's *Malay Magic*, 1900, p. 431. Tampok keladi, the spathe of *Colocasia*, or, as being more easily obtained of an *Alocasia*, is prescribed in a poultice, 470.

kělapa, see coco-nut.

kělapa landak is a substance prescribed in 307 for an application to the abdomen, which has not been identified, though we suspect that gělīga landak, the bezoar stone from a porcupine, may be meant.

kělaponġ, *Sterculia foetida*, Linn. External, 507 (infusion of the root), 508 (leaves as a counter-irritant), 532 (decoction of the root).

kělěmbak, chinese rhubarb, the root of *Rheum officinale*, Baill., and *R. palmatum*, Linn. Internal for constipation, 367.

There is a misleading similarity between the words kělěmbak and kalambak, which caused Pigafetta in his *First Voyage round the World* to write of rhubarb trees when he meant gaharu trees (see Hirth and Rockhill, *Chau Ju-kua*, 1911, p. 50). Inche' Ismail appears equally confused: he has written khalumbak in 289 and 367; khalambak in 146 and 291; and khabombak in 45; and on account of the way in which the substance is used, we assign 367 to kělěmbak, but the others to kalambak or first grade gaharu wood. See gaharu.

kělěmoyang, *Homalomena* spp. The fresh leaves and the very aromatic rhizome are prescribed for external use. The fresh leaves, oiled, may be applied hot for the afterpains of labour, 436; and *H. sagittifolia*, Jungh., is likely, as its leaves are large and it is easy to obtain. In 463 a yaws-sore is treated by means of the leaves and magic. The rasped rhizome is used for poulticing, 463.

kělichi, see gorek.

kělör, see mērunggai.

kěluak, *Pangium edule*, Reinw. The somewhat poisonous leaves in a poultice for itch, 339.

kěmangi is a name applied to the milder races of *Ocimum basilicum*, Linn., and to *O. canum*, Linn., which serve for the seasoning of food. External, 289. Sělaseh is a name for the same plants.

kěmėnyan, or benzoin, the fragrant resin obtained in Sumatra from *Styrax Benzoin*, Dryand., and in Siam from *S. benzoides*, Craib. Benzoin consists of a brown matrix, in which a white almond-like substance is embedded; and the more abundant the latter is, the more valuable the resin; **kěmėnyan puteh** is the whitest. Internal, 58, 139, 140, 141, 172, 273, and 395 (in 139, 140, 141, and 273, kėmėnyan puteh being prescribed); external, 36 and 58 (kėmėnyan puteh) and 519. Fumigation with benzoin is prescribed in 446 and 511.

kěmpas, *Koompassia malaccensis*, Benth., and *K. excelsa*, Taub. A decoction of the bark in a lotion for rheumatism, 476 and 477.

kěmpas rumah. This name has not been recorded for any

plant; kēmpas rimau (tiger's kēmpas) is recorded for *Crudia Curtisii*, Prain, and kēmpas roman (with the shape of kēmpas) for *Trigonochlamys Griffithii*, Hook. f., a resinous tree of dense forest. It may be that the latter is intended. The root in an embrocation for rheumatic fever, 519, and the leaves in a bath, 520.

kēmukus or **chabai ekur**, cubebs, peppercorns of *Piper Cubeba*, Linn., in action, stimulant and antiseptic diuretic, also in some measure expectorant. Internal, 32, 57, 58, 102, 134, 160, 287, and 323; in the eyes, 315; external, 92, 293, and 301.

kēmuning, *Murraya exotica*, Linn., an aromatic tree. The leaves by infusion in a draught for herpes on the stomach accompanied by offensive breath, 272, and the lees applied externally.

kēmunting, *Rhodomyrtus tomentosa*, Wight, a common bush of open places, used by Malays in making draughts, but in the Medical Book not prescribed for internal use. An infusion of the root, used as an eye-lotion, 407; external, 334 (root and leaves) and 408 (leaves).

kēnanga, *Canarium odoratum*, Baill. The fragrant flowers carry in small quantity a principle which mitigates fever, and they are sold dried for the purpose in Java. In the Medical Book they are prescribed fresh, 312, in a draught for cough.

kēnchor, a name used chiefly in Batavia for chēkur, *Kaempferia Galanga*, q.v., and also for *Curcuma Zedoaria*, Rose.

kērak-kērak and **kērak-kērak nasi**, the species of *Bonnaya*, *Lindernia*, and *Torenia*, of which the following are easily obtained in the Malay Peninsula, *Bonnaya antipoda*, Druce (*B. veronicifolia*, Spreng.), *B. ciliata* (*B. reptans*, Spreng.), *B. serrata* (*B. brachiata*, Link & Otto), *Lindernia cordifolia*, Merr. (*Vandellia pedunculata*, Benth.), *L. crustacea*, F. Muell. (*V. crustacea*, Benth.), and *L. viscosa*, Merr. (*V. hirsuta*, Benth.), *Torenia ciliata*, Smith, and *T. peduncularis*, Benth. The fresh roots are prescribed in 212, to be eaten with betel for diarrhoea.

kērakap rimau, *Piper porphyrophyllum*, N. E. Brown, more commonly called sireh rimau (tiger's betel). The leaves for an application, 525.

kērating or **tongkat Ali**, *Smilax myosotiflora*, DC. A decoction of the rhizome, which has a great reputation as a sex-tonic, for senile debility, 542, and a decoction of the leaves in 424.

kērtau padi (little kērtau) cannot be identified. The name apparently means the little plant of the evil spirit which Malays call kērtau; and an infusion of its leaves is prescribed in a draught for herpes on the stomach accompanied by

offensive breath, 272. Alvins recorded as a Malacca name for *Litsea amara*, Blume, mēdang kērotau; but as it appears unlikely to serve as an internal medicine, it scarcely gives a clue to what the Medical Book prescribes.

kěsimbukan as a plant-name is more or less synonymous with sēkěntut, and denotes collectively *Paederia spp.*, *Saprosma spp.*, and those species of *Lasianthus* which possess a strong faecal smell. *Saprosma glomerulatum*, King and Gamble, and *S. ternatum*, Hook. f., are forest shrubs obtained readily in Malaya. *Paederia foetida*, Linn., *P. tomentosa*, Blume, and *P. verticillata*, Blume, occur in somewhat open places, and are found about villages. Kěsimbukan is prescribed in a draught, 112, as a foul smelling plant to cure a foul discharge.

kěsturi, musk, the secretion of the preputial glands of the asiatic stag, *Moschus moschiferus*, Linn. It is imported from China. Internal, 58 and 367; external, 367.

kěsturi, kayu, see kayu kěsturi.

kěsumba, safflower, dried flowers of *Carthamus tinctorius*, Linn., for which the seeds of *Bixa orellana*, Linn., are sometimes substituted. In 261 it enters into a bolus for a disease caused by evil spirits.

kětam, a crab. The shell is powdered and given in rice gruel, 32, for fever. *Portunus pelagicus*, L. A. G. Bosc, is the crab most commonly used in Java and perhaps also in the Malay Peninsula.

kětumbar, coriander, seed of *Coriandrum sativum*, Linn., imported into Malaya. It is aromatic and carminative. Internal, 2, 4, and 242; in the eye, 315; external, 174, 267, and 477.

kětumbit, *Leucas lavandulifolia*, Smith, and in a less measure *L. zeylanica*, R. Brown. The leaves applied externally, 53 and 368.

kiambang, *Pistia stratiotes*, Linn. The fresh leaves internally, 130, for acute gonorrhoea.

king-crab, see bēlangkas.

koma-koma, saffron, dried stigmas of *Crocus sativus*, Linn., imported via Bombay. Internally, 2, 57, and 145; externally, 164.

Koompassia, see kēmpas.

kuini, *Mangifera odorata*, Griff. External, the bark, 40, in hystero-epilepsy.

kulit manis, see kayu manis.

kumak has not been identified, but is probably **kumbak** or **kumbar**, *Zalacca Wallichiana*, Mart. Its fruit enters into an application, 305, for a swollen knee in a way not unlike the way in which the fruit of a *Zalacca* is used in 105.

kunang-kunang, fireflies. In 163 internally for madness.

- kundor**, the wax-gourd, *Benincasa cerifera*, Savi. Internal, 42 (a decoction of the fruit) and 304 (an infusion of the root).
- kunyit, kunyit makan**, turmeric, rhizome of *Curcuma domestica*, Valetton. The rhizome may be prescribed fresh or dry, but it is usual to use it fresh; in 161, rhizomes which have been kept for three years are prescribed. Sometimes the heart of the rhizome is prescribed; sometimes the fingers under the name of ibu or elemental portion; sometimes the part at which a new shoot is appearing, mata kunyit. Internal, 43, 56, 60, 71, 110, 114, 125, 138, 139, 140, 173, 210, 215, 219, 223, 233, 242, 269, 295, 367, 369, 431, and 435; in the eye, 183, 188, and 454; external, 24, 51, 81, 94, 149, 178, 189, 191, 192, 217, 263, 269, 271, 291, 293, 301, 332, 334, 351, 367, 372, 393, 400, 425, 437, 438, 449, 464, 465, 482, 485, 486, 490, and 500. The shoots are prescribed for internal use in 146.
- kunyit hutan**, wild turmeric, is prescribed in 482 along with cultivated turmeric for cramps, used externally. *Curcuma Zedoaria*, Rosc., may be meant.
- kunyit tĕrus** is applied to species of *Zingiber*; but as yet it is not clear exactly how Malays use it. In 174 it occurs alongside halia bara, which is a race of the *Zingiber officinale*, for external use. It is prescribed for external use also in 377, and internally in 161 and 172.
- kupang**, a coin of the value of 10 cents in Penang, used as a weight in 320.
- Kurrimia*, see kayu tulang and mĕntulang.
- Labisia*, see mata pĕlandok.
- labu puteh**, the Bottle gourd, *Lagenaria vulgaris*, Ser. The boiled fruit after exposure all night, to be eaten, 98, for colic, and the head bathed in the water used for boiling it. The juice of the leaves on the head for baldness, 177. The neck of the fruit with lime-juice, 189, in an application for pimples.
- lac, see ĕmbalau Siam.
- lada**, pepper, fruits of *Piper nigrum*, Linn. **lada hitam** or black pepper if the fruit-wall be still in place; **lada puteh**, white pepper, or **lada sulah** if it be removed. Febrifuge, stomachic, and antiperiodic. Internal, 2, 57, 59, 84, 115, 130, 136, 137, 141, 152, 153, 157, 170, 179, 206, 222, 223, 225, 227, 228, 236, 309, 312, 333, 404, 474, 479, 494, and 506; in the ears, 77; external, 20, 26, 33, 76, 90, 116, 117, 174, 299, 301, 305, 331, 383, 385, 437, 498, and 514. The leaves of 'lada' are prescribed externally, 284, for a skin disease.
- lada ekur**, see kĕmukus.
- lada-lada**, the smaller species of *Ervatamia*, which do not attain to the height of man, as *E. cylindrocarpa*, King and Gamble. **Pokok rĕstong urat** used in 357 is a synonym.

Susun kělapa is a synonym, but is applied also to the species called jělutong badak. It is used in 143 and 173. Internal, 143, 173, and 517 (a decoction of the root); external, 143 and 357 (the root), 518 (the leaves), and in 358 in a steam bath.

Lagenaria, see labu puteh.

laka, see kayu laka.

laksana or **bunga Siam**, *Acacia farnesiana*, Willd., an American plant which has been in the East for about three centuries. Internal, 139 (flowers), 141 (leaves).

lakum, the mucilaginous species of *Vitis*, such as *V. diffusa*, Miq., *V. furcata*, Lawson, *V. japonica*, Thunb., *V. mollissima*, Wall., and *V. trifolia*, Linn. Internal, 30 (juice of young shoots), 123 (a decoction of leaves so young as to be still red); external, 28 and 123 (a medicinal bath), 381 (a lotion from the leaves), and 462 (a poultice of leaves).

lalang, *Imperata arundinacea*, Cyrill. A decoction from the runners, 128, as a draught for acute gonorrhoea.

lamp-black, see arang para.

lamp-wick. The old-fashioned wick is the stem of the sedge *Cyperus Haspan*, Linn., or a similar sedge. Such wicks are laid with a corpse in a grave. A fine lamp wick is prescribed in 273, a draught for a crop of herpes on the stomach. Seven wicks, there called sumbu darah, enter into a paste, 213, applied to the body for fever.

landak, see porcupine.

langir, the bark of *Albizzia saponaria*, Blume, traded through Malaysia as soap. External, 104 and 190, apparently as an excipient; but it may act as an antiseptic. Also the leaves, 104.

Languas, see lěngkuwas.

Laportea, see jělatang.

Lasia, see gěli-gěli and sěgěli.

Lasianthus, see kěsimbukan.

Lawsonia, see inai.

lěmak harimau, tiger suet. External, 298.

lěmbega or **rěmbega**, *Calotropis gigantea*, R. Brown, a laticiferous somewhat succulent shrub. Internal, 71 (well-baked roots); external, 279, 289, 324, and 366 (leaves). In 324 a dark coloured plant is preferred. The medicinal use of this plant in a large measure is Indian.

lěmpoyang denotes certain gingers, and as the genus has not yet received adequate study it is difficult to determine exactly how the writer of the Medical Book applied this name. *Zingiber aromaticum*, Valetton, and *Z. Zerumbet*, Smith, are the most likely to be indicated. Internal, 143 (rhizome), 503 (leaves), and 504 (rhizome); also in 143 the lees used externally.

- lěmpoyang pahit** (bitter lěmpoyang). In Java this name denotes *Zingiber amaricans*, Blume, a ginger not proved as yet to be in the gardens within the Malay Peninsula, very like *Z. Zerumbet*, Smith, in appearance, and perhaps overlooked. Internal, 61, 96, 112, and 146; external, 25 and 90. The rhizome is used in all cases.
- lěmpoyang wangi** (fragrant lěmpoyang). *Zingiber aromaticum*, Valeton, would appear probable; but it is uncertain in what way a Malay would interpret the name; and in prescription 32 it is mentioned along with so many dry drugs, that perhaps a medicament is indicated rather than a simple. It is used internally for fever.
- leng**, a measure of capacity, $\frac{1}{2}$ chupak (q.v.) used in 477. The manuscript adds that it equals 4 oz.
- lěnga**, see minyak lěnga.
- lěnggundi**, *Vitex trifolia*, Linn. The fresh leaves are prescribed. Internal, 150 and 179; external, 106, 107, 150, and 355.
- lěngkuwas**, rhizomes of *Languas Galanga*, Burkill (*Alpinia Galanga*, Swartz), or failing it of *L. conchigera*, Burkill (*A. conchigera*, Griff.), or of *L. scabra*, Burkill (*A. scabra*, Benth.), which are rich in cineol. Internal, 137, 138, 143, 169, 206, and 223; external, 76, 143, and 281. The rhizomes are prescribed in all cases.
- lěngkuwas China**, the imported rhizome of the Chinese *Languas officinarum*, Burkill (*A. officinarum*, Hance). Internal, 58 and 59.
- lěngkuwas kěchil** (little lěngkuwas), *Languas conchigera*, Burkill. The rhizome internally, 166, for pain in the chest.
- lěngsěkap**, an anodyne plant which has not been recognized. A decoction of the root in a draught, 441, and the leaves in an application, 442.
- lěnjuang, andong, or pandan Sěrani**, *Cordyline fruticosa*, Backer (*C. terminalis*, Kunth), the garden 'dracaena'. Internal, 337 (root of a red race) and 386 (root); external, 40 (young shoots), 289 (leaves, both red and white striped), 386 (root), and 538 (ashes). In 430 the leaves, heated, applied to the abdomen, and in 429 the root in a medicinal bath.
- Leonurus*, see těbing hayu.
- Lepionurus*, see chěmpěrai.
- Leptospermum*, see hujung atap.
- Leucas*, see kětumbit.
- Leuconotis*, see chirit murai.
- Leucopogon*, see hujung atap.
- Ligusticum*, see ganti.
- lima**, probably an abbreviation of **sěkati lima** (blood money), which as a plant-name is applied to the climbers *Aganosma marginata*, Don, and *Urceola spp.*, and is recorded also for

Clerodendron deflexum, Wall. Lima and lĕmak are used also for *Xanthophyllum* spp. An infusion of the (? uninjured) root in a draught, 359, for coughing up blood.

limau bĕsar (big Citrus), the pomelo, *Citrus maxima*, Merr. (*C. decumana*, Linn.). A decoction of the leaves in a lotion, 361.

limau hantu (ghost's or wild Citrus). This name is not applied with precision. It is given to species of *Atalantia* as well as to wild plants assignable to the genus *Citrus*. External, 174 (fruit) and 322 (leaves).

limau kĕrat lintang (the Citrus divided into segments), *Citrus medica*, Linn., var. *sarcodactylis*, Swingle, a fixed abnormality in which the carpels grow into detached fingers, 'Buddha's hand', very fragrant and much valued by the Chinese as medicine. External, 174 (the fruit).

limau kapas (cotton Citrus), *Citrus medica*, Linn., a race with a globose fruit, and rather thick skin, but not always, as the name is given to similar somewhat acid fruits of other species. External, 181 (leaves).

limau kĕsturi (musk Citrus), *Citrus microcarpa*, Bunge. The juice of the fruit in a mixture applied within the mouth, 309.

limau lĕlang, *Paramignya angulata*, Burkill (*P. longispina*, Hook. f.), and probably other species of the genus. The fruit in a draught, 75, for biliary colic.

limau mata kĕrbau (buffalo's eye Citrus), a race of *Citrus medica*, Linn. The fruit, which is lemon-shaped, externally, 174.

limau nipis (thin-skinned Citrus), the common lime, *Citrus aurantifolia*, Swingle. The juice is considerably used. Internal, 7, 50, 84, 129, 143, 172, 173, 200, 257, 302, 309, and 310; within the mouth, 18 and 325; within the nostrils, 22; externally, 143, 174, 184, 189, 270, 279, 280, 282, 283, and 285. The leaves, externally, 264, 266, 278, and 322.

limau purut, *Citrus Hystrix*, DC. The fruit of this is used for washing the hair, and is commonly sold for the purpose; it contains saponin. Internally, 72, 137, 269, and 297; within the mouth, 16; its rind in the pills, 95, and the draught, 179; externally, 174, 179, 264, 269, and 281. Its leaves are prescribed for external use in 266.

lime or **kapur**, calcium carbonate. It is prepared in two forms, fine from the burning of shells, called kapur makan, and coarse for other purposes, and then called kapur tohor. The best lime is prescribed for internal use and for applications over sores where the skin is broken. The following are or may be assigned to kapur makan: internal 143; within the nostrils, 21; external, 9, 25, 94, 143, 284, 451, 463, 468, 470, 524, 525, and 527; and it may be added that in many cases the prescriptions

- are unusually simple. The following are or may be assigned to kapur tohor: external, 25, 53, 54, 92, 117, 156, 239, 278, 279, 286, 301, 305, and 321. A third source of lime is the ashes of the egg-shell prescribed in 495.
- lime-fruit, see limau.
- liquorice, see akar manis China.
- Limulus*, see bělangkas.
- Lindera*, see mēdang pērawas.
- Lindernia*, see kērak-kērak.
- Litsea*, see dada ruwan, kērtau padi, and mēdang pērawas.
- lobak hutan** (wild turnip), *Orchidantha longiflora*, N. E. Brown (*Lowia longiflora*, *Scort.*). The leaves and the heart of the tuber, for external use, 483.
- Loranthus*, see api-api.
- Lowia*, see lobak.
- ludai api**, *Macaranga populifolia*. Muell.-Arg. Internal, 511 (leaves); external 512 and 513 (roots), and 514 (leaves).
- ludanggan**, in 271, stood in the manuscript by metathesis for gēlenggang.
- Luffa*, see pētola.
- luli**, *Garcinia rostrata*, Benth. External, 265 (leaves).
- lumbah**, *Curculigo latifolia*, Dryand., and other species of the genus. Internal, 446 (juice of the leaves), 445 and 459 (root, and in the last stem-bud also); external, 460 (leaves). Magic accompanies the treatment in 446 and 459.
- lunang**, see bonglai kayu.
- lung-lung**, *Aromadendron elegans*, Blume. The fruit which is spicy, in a lotion, 9, for swellings. The vernacular name is Sundanese.
- Lycopodium*, see paku Sērani.
- Lygodium*, see ribu-ribu.
- Lysimachia*, see halba.
- Macaranga*, see balek angin, ludai api, mahang, and mēlokan.
- madu**, see honey.
- Maesa*, see kayu tulang.
- mahang**, *Macaranga* spp., probably any one of them. They contain tannin. Internal, 394 (roots), and dropped into the eye, an infusion of the shoots, 393.
- maize, see jagong.
- maja**, *Aegle Marmelos*, Corr., or sometimes *Feronia Limonia*, Swingle (*F. elephantum*, *Corr.*), and when neither is available apparently *Micromelum* spp. The boiled root to form a draught, 244, to arrest vomiting; the leaves in an embrocation, 266.
- majakani**, galls of a *Cynips* produced on *Quercus lusitanica* Lam., in Asia Minor and neighbouring parts of the East, imported

into Malaya. Their Persian name is mazu. They are rich in tannin. Internal, 67, 70, 114, 138, 170, 205, 207, 295, and 493; within the mouth, 121; external, 282 and 499.

In 282 akar majakani or root of the gall, is prescribed for external use. The word 'akar' is probably an incorrect insertion.

majalawi and **majakeling**, chebulic myrobalans, fruits of *Terminalia Chebula*, Retz. The fruits are dried at different stages: when young they act as an astringent, but when mature they purge. The mature fruits are majalawi, and another name used for them, which is met with in the Medical Book, is **kěděkai**, from the Tamil: half ripe fruits are majakeling. *Terminalia arborea*, Koord. and Valeton, furnishes a substitute in Java. Majalawi enters into an infusion for sores in the mouth, 121, and under the name kěděkai into a bolus, 142.

malapari, *Pongamia glabra*, Vent. The shoots in an embrocation, 149, for sciatica or lumbago. Inland Malays substitute for this sea-shore plant species of *Azelia* and *Millettia*.

Mallotus, see balek angin.

maman hantu, *Gynandropsis gynandra*, Briq. (*G. pentaphylla*, DC.). External, 286 and 301.

maměluk (in arabic, a slave) is *Croton argyratum*, Blume, and therefore a synonym of mělukon (q.v.), and also of hamba raja (in malay, slaves of the chief).

manggis hutan (wild mangosteen), *Garcinia Hombroniana*, Pierre. External, 498 (roots) and 499 (leaves).

Mangifera, see bachang, kuini, and pauh.

mas, $\frac{1}{16}$ of a tahlil (q.v.): used as a weight in 58, 84, 168, and 320. The writer counts it equal to one cent in weight.

mason-wasp's nest, see tanah sarang angkut-angkut.

Massoia, see měswi.

mastaki, mastic resin, produced by *Pistacia lentiscus*, Linn., in the Levant, and imported into Malaya. Internal, 57; dropped into the ear, 77.

mata kuching (cat's eye), the fruit of *Erioglossum edule*, Blume. The boiled seeds in a draught, 484, for whooping cough.

mata pělandok (mouse-deer's eye), species of *Ardisia*, *Labisia*, *Ixora*, and sometimes other plants which possess bright red berries. *Ardisia crenata*, Roxb., is possibly the most frequently used of them. Internal, 208 (the leaf).

mayam, a weight used in 6, 21, 45, and 170, equalling 0.08 oz.

mědang means any laurel or laurel-like tree. Externally, 447 (leaves) and 448 (roots). Perhaps the next is meant.

ědang pěrawas. *Litsea odorifera*, Valeton, furnishes pěrawas or těrawas leaves in Java. *L. penangiana*, Hook. f., *L. petiolata*, Hook. f., and *Lindera malaccensis*, Hook. f., are

recorded as *pěrawas* in Malaya. The fresh roots are prescribed for poulticing, 432.

měđang sila or **batu měđang sila**, gypsum, calcium sulphate, imported from China. Internally for gonorrhoea, 131 and 359.

měkula, the intensely bitter embryo of *Nelumbium Nelumbo*, Druce (*N. speciosum*, Willd.), which is extracted from ripe seeds, and used medicinally. External, 214.

Melaleuca, see *kayu puteh*.

Melanorrhoea, see *rěngas manau*.

Melastoma, see *sěnduduk*.

Melia, see *intaran*.

Melochia, see *pulut-pulut*.

mělokan, *Croton argyratum*, Blume, and *C. Griffithii*, Hook. f., as well as, in the second place, species of *Endospermum* and *Macaranga*. Another name for *Croton argyratum* is *hamba raja* (slave of the chief); and this is converted in the Medical Book into **maměluk** (slave, in Arabic). External, 27 and 490 (leaves), and 491 (root).

mělong, *Crinum spp.* The leaf as a wrapper for a hot application, 106, to the testes.

mělur, *Jasminum Sambac*, Ait., and other species. The flowers to the magic number of 7 in a draught, 137, and in an eye-lotion, 336: the root internally, 304.

Memecylon, see *kayu tulang* and *měntulang*.

měmpělam babi, (pig's mango). This name has been recorded for *Terminalia phellocarpa*, King, *Gluta Renghas*, Linn., and a *Parinarium*. The first of these three is the most suitable. Internal, the roots in a draught, 387, and the leaves in a poultice, 388, upon a boil.

měmpělas, *Delima sarmentosa*, Linn, a common climber, much used medicinally. Externally, the roots for burns, 421 and 468.

měmpělas gajah (elephant or big *měmpělas*), for a plant allied to but larger than the last, such as *Tetracera macrophylla*, Wall. Externally for treating an ulcer, 341 and 360 (roots), and 361 (leaves).

měmpělas sari is written in the Medical Book sometimes for *pělesari* (q.v.).

měmpoyan, *Rhodamnia cinerea*, Jack (*R. trinervia*, Blume). The wood and the root internally, 333, as an *ubat měroyan*.

měmpunei, a name variously applied: it is used for some species of *Antidesma*, *Elaeodendron*, *Swintonia*, and *Xylopi*a, and others. The first-named is the most medicinal of them. Internal, 340, 375, and 376 (root); external 374 (leaves), and 375 (root).

měngkudu, *Morinda citrifolia*, Linn., and **měngkudu hutan**, *M. elliptica*, Ridl. Internally, 110 and 226 (fruit); externally, 289 (leaves).

měntulang, perhaps *Euphorbia Tirucalli*, Linn. In 378 an infusion of the roots is prescribed for pains in the bones and in 379 a poultice of the leaves; in 335 a poultice of the root is prescribed for ulceration of the nose. In Sumatra kayu tulang is applied to *Homalium*, *Kurrimia* and *Memecylon* in reference to their hard wood. In the Malay Peninsula several Rubiaceae are tulang-tulang.

měrajah kayu (counter-spell wood), denotes usually *Canthium didymum*, Gaertn. Internally, the root in a draught, 399, and also applied to the abdomen.

mercury, see raksa.

měrkunchi, see těmu kunchi.

měrpuying, *Carallia integerrima*, DC. The leaves in a draught, 140.

měrunggai, *Moringa oleifera*, Lam. (M. pterygosperma, Gaertn.), the horse-radish tree, called also rěmunggai and kělor. Internally, 179 (bark), 221 (leaves), and 236 (root); externally, 229 (root), 239 (leaves), 357 and 358 (root and leaves).

měswi, the aromatic bark of *Massoia aromatica*, Becc., which is traded westwards through Malaysia from New Guinea. Internally, 2, 32, 138, 142, 210, 242, 367, and 369; externally, 25, 29, 90, 132, 213, 262, 289, 367, 377, and 382.

Metroxylon, see sagu.

Michelia, see chěmpaka.

Micromelum, see chěměmar, maja, and sěnapu.

Mikania, see sělēpat tunggal.

milk of a cow is prescribed, of a goat which must be black, and human milk. Internally, 3 (human or goat's), 5 (cow's), 55 (human and goat's), 88 and 89 (goat's), 160 and 287 (cow's); within the eye, 171 and 313 (human).

millepede, apparently any species that may be available. In 44, placed alive in water and the water drunk.

Millettia, see malapari.

Mimusops, see bunga tanjong.

minyak bijan or **minyak lěnga**, sesamum oil, oil from the seed of *Sesamum orientale*, Linn. (*S. indicum*, Linn.). Internally, 43, 114, 343, and 344; in the ear, 77 and 78; externally, 181, 184, 298, and 299.

minyak sapi, clarified butter or ghi, as an excipient in 2, 60, 87, 157, 162, 163, 164, 225, 235, 249, and 288, all internal medicaments.

minyak sapi kambing, goat's suet. Internal, 168.

minyak sapi lěmbu, ox suet. Internal, 287.

minyak tanah, earth oil, petroleum. Externally, 299 in an embrocation.

minyak tahun, the musky sebaceous secretion which runs

- down the cheek of a male rutting elephant. It is also called minyak gajah mēnta and minyak kēlong. Externally, in 322, for removing blotches from the skin.
- Mirabilis*, see bunga pukul empat.
- Mischocarpus*, see rambutan pachat.
- Mitragyne*, see 'hujung bee-ur murbat'.
- Momordica*, see pēria.
- Morinda*, see mēngkudu.
- Moringa*, see mērunggai.
- Moschus*, see kēsturi.
- mouse, the bite of, referred to in 270, as a clinical symptom.
- mouse-dung, to cause vomiting, chewed, 222.
- muntah pēlandok bētina** probably indicates species of *Ardisia* which are also called mēntua pēlandok. The root in a draught, 494.
- Murraya*, see kēmuning.
- Musa*, see pisang and sērampang.
- musk, see kēsturi; and compare minyak tahun.
- Mussaenda*, see balek adap.
- mustard, see sēsawi.
- Myristica*, see buah pala and bunga pala.
- myrobalans, see majalawi.
- Myxopyrum*, see tinak.
- nangka**, *Artocarpus integra*, Merr. (*A. integrifolia*, Linn.), the jak tree. Externally, 148 (bark).
- nasi**, see rice.
- nasi-nasi**, *Callicarpa longifolia*, Lam., and other species. Internally, 389 (root); in the mouth, 326 (leaves) and 390 (bark).
- Nelumbium*, see mēkula.
- Nephelium*, see abu tarah, arang para, and rambutan.
- Nigella*, see jintan hitam.
- nila**, indigo, dye from *Indigofera suffruticosa*, Mill., *I. arrecta* Hochst., or *I. tinctoria*, Linn. Native indigo is prepared as a paste. In the treatment of a hollow tooth, 325.
- nilam baras** and **nilam menchi**. The leaves enter into the ointment, 289, for small-pox. Nilam is patchouli, the leaves of *Pogostemon Cablin*, Benth., and in a lesser degree of *P. Heyneanus*, Benth., which as being aromatic, is quite likely to have a place in this complex oil; but we are not able to determine nilam baras and nilam menchi.
- Nipa*, see nipah and sugar.
- nipah**, *Nipa fruticans*, Wurmb. Fresh shoots in an application, 275, for herpes. Nipa sugar in the jelly, 58.
- nutmeg, see buah pala.

Ochanostachys, see pětaling.

Ocimum, see sělaseh and kēmangi.

Oldenlandia, see siku-siku.

onion, see bawang merah.

opium, the inspissated latex of *Papaver somniferum*, Linn. Internally, 2, 57, 61, 170, and 207; externally, 11, 51, and 184. The dross internally, 441, and a soot collected after burning opium, 168, internally.

orchid, see anggërek.

Orchidanthera, see lobak hutan.

Oroxylum, see bonglai kayu.

Oryza, see rice.

Ostodes, see dada ruwan.

ounce, as a unit of weight, 99 and 154.

pachul, see inai.

padang bëlulang is used with magic ceremony in preparing a medicine to be spat over the patient, 94. It is not certain what it is; but pokok padang is *Sida rhombifolia*, Linn., and pokok padang bëlulang, which is obviously a herb from the directions about uprooting it, is likely to be the same or a similar plant. *Sida* is a plant of magic.

Paederia, see kësimbukan and sëkëntut.

pağar anak, *Ixonanthes reticulata*, Jack, and less frequently certain other trees. Internally, 484 (root); externally, 485 (ash of the leaves).

paku gajah (elephant or big fern), *Angiopteris evecta*, Hoffm. The fresh fronds in a poultice, 307.

paku jantan (male fern), perhaps *Ceratopteris thalictroides*, Brongn. Applied to a boil, 535 (leaves) and 536 (root).

paku laut (sea fern), *Acrostichum aureum*, Linn. The spore-bearing fronds for stimulating an ulcer, 360.

paku lipan (centipede fern), *Blechnum orientale*, Linn. Young fronds in an application, 372, for dropsy.

paku mërak (peacock fern), *Selaginella* spp. The ashes in a draught, 120.

paku rambut (hair fern) *Adiantum* spp. The fresh fronds in an embrocation and poultice on the navel for colic, 537.

paku Sërani (Portuguese fern), *Lycopodium cernuum*, Linn. The ashes in an embrocation, 538.

pandan, *Pandanus* spp. The ashes in an application used as a charm for fretful children, 495. The root of a pandan which has never flowered enters into the draught, 226.

pandan Sërani (Portuguese pandan), *Cordyline fruticosà*, Backer, see lënjuang.

pandan wangi, *Pandanus odoratus*, Ridl., a fragrant little plant

much liked by Malays, and planted in most of the villages. It never flowers. As it has a few tiny thorns at the ends of its leaves, the writer of the Medical Book defines it as *sĕlara*. External, 175 and 538 (leaves).

Pandanus, see pandan and pudak.

Pangium, see kĕluak.

Papaver, see opium.

papaya, see bĕtek.

Paraplotosus, see sĕmbilang.

Parinarium, see mĕmpĕlam babi.

Parkia, see kĕdaung.

Passer, see sarang burong pipit gantang.

patchouli, see nilam.

pauh, as a measure, used in 323, equal to $\frac{1}{4}$ chupak (q.v.).

pauh, *Mangifera spp.* External, 37 and 289 (leaves), 305 (the sour fruit), and 368 (leaves).

Pavetta, see gading.

pĕchah piring and **pĕchah pĕriok**, *Ixora spp.*, in the first place those with earthenware-coloured flowers, and in the second place by extension those with white flowers. Internal, 332 (root); in the mouth, 466 (root); and 467 (leaves); external, 332 (leaves).

pĕkan, *Jasminum spp.*, those with white starry flowers. Internal, 136 and 227 (flowers).

pĕlaĝa or **kĕpĕlaĝa**, round cardamoms produced by *Amomum Kepulaga*, Sprague & Burkill, or by *A. Krervanh*, Pierre, imported from Java and Siam, respectively. Internal, 134 and 203; external, 174.

pĕlunchot (? pĕlanchok) cannot be identified. Lanchok means a swampy piece of ground, and leads to a speculation that the *Clerodendron*, called timba tasek, may be meant. Internal, 391 (root); external in a bath, 392 (leaves).

pĕlĕsari, *Alyxia spp.* The fragrant bark comes chiefly from *A. stellata*, R. and S., and is much used as a mask for unpleasant substances. Internal, 32, 39, and 65 (bark), 145 (flowers) and 273 (bark); in the eyes, 265 and 315 (bark); external, 33, 39, 40, 214, and 265 (bark). The bark holds coumarin.

pĕnaĝa laut, *Calophyllum Inophyllum*, Linn., a common sea-side tree. Internal, 516 (root); external, 515 (leaves). Bintangor jantan is believed to denote the same tree. Internal, 509 (leaves); external, 510 (root).

pĕnawar bisa possibly covers the materia medica which the Portuguese carried in trade as 'lignum colubrinum' or snake root. *Strychnos ligustrina*, Blume, was the chief of these in Malaysia; but *Eurycoma longifolia*, Jack, is universally substituted in Malaya. In applications, 400 (leaves) and 401 (roots).

pěnarwar pahit (bitter neutralizer, of poison) is *Eurycoma longifolia*, Jack. Internally, in a draught for cough, 348 (stem); externally, in a lotion, 349 (leaves).

pěnarwar sěgala bangsa (neutralizer of all ills) is not determinable, but the name sětawar sakalian bisa of similiar meaning has been obtained for *Barleria lupulina*, Lindl. However it may not be a simple, but a medicament as 323. It is prescribed in a draught, 70, for a sore throat.

pěnggaga or **pěgaga**, *Hydrocotyle asiatica*, Linn., a common addition to food among Malays. Internal, 42 (leaves), 65 (very young shoots), and 194 (leaves); external 27 (leaves).

pěnyarang or **pějarang**, *Cyathula prostrata*, Blume. The leaves in a draught, and the lees as a poultice, 272, for herpes on the stomach accompanied by bad breath.

pepper, see lada.

peppercorn, used as a measure, 2 and 441.

pěria, *Momordica Charantia*, Linn. Internal, 39 and 312; in the mouth, 196; in the ear, 264; external, 39, 178, and 180 (leaves in all cases except 312, where flowers are prescribed).

pětai bělalang (grasshopper's pětai or Parkia), *Pithecellobium microcarpum*, Benth. External, 425 (shoots) and 426 (roots).

pětaling, *Ochanostachys amentacea*, Mast., and sometimes a few other hard-wooded trees. External, 476 (roots), and 477 (leaves).

pětola, *Luffa cylindrica*, Roem., and *L. acutangula*, Roxb. The flowers in a draught, 144, for certain disorders of menstruation. It is regarded as a cure for amenorrhoea in Java.

petroleum, see minyak tanah.

Peucedanum, see ganti.

Phoenix, see dates.

Phaseolus, see kacang hijau.

Phyllanthus, see ambin buah and chěkur manis.

pice, a $\frac{1}{4}$ anna coin used as a weight in 246.

pickles, see sunti.

pijar, borax, which is imported into Malaya. Gypsum and alum are sometimes confused with it. Internal, 290 and 320; in the mouth, 18. As it is much more soluble in hot water than in cold, appropriate instructions are given in 290 and 320. 'Changku tamal,' for external use in 48, may be borax.

Pimpinella, see jintan manis.

pinang, betel nut, *Areca Catechu*, Linn. The roots, the shoots, the trunk, the leaves, the green nut, the ripe nut, its husk, and the abnormal nut which chokes—pinang měngkělan—are all prescribed, all except the ripe nut and once the young nut for external use. Pinang měngkělan is produced by certain trees,

sometimes as a few nuts among normal nuts, sometimes many, or all, of a tree. Internal, 159 (the pulp of a green nut), 273 (pulp of pinang mēngkēlan), and 441 (ripe dried nut); in the eyes, 187 and 315 (green nut); in the ears, 79 (the root and the trunk); external, 25 and 36 (green nut), 40 (the shoot and the green nut), 74 (the green nut), 240 (the root), 405 (the root), and 428 (the husk).

pinang kanchil may possibly denote *Anisophyllea disticha* Baill., for which the name kayu kanchil is recorded. The stem and the leaves are prescribed for use in a steaming, 532.

pinang kotai is dried betel nut; but pokok pinang kotai, is *Agelaea Wallichii*, Hook. f., or some closely allied plant, and this is certainly meant. Internal, 402, 424, and 542 (roots); external 403 (leaves).

pinang mēngkēlan, see pinang.

pinch, as much as can be lifted between the thumb and the forefinger (sa-chēkak bētul), 130; and sa-jēmput, 150 and 440, a frequent measure for seeds, &c., but the latter expression (sa-jēmput) is sometimes used loosely for as much as five fingers can lift, 220, and as much as three fingers can lift, 8, or as much as four fingers can lift, 138.

Piper, see chabai jawa, kēmukus, kērakap rimau, lada, sēram-pang, and sireh.

pisang, banana or plantain, *Musa paradisiaca*, Linn., subsp. *M. sapientum*, Linn. Internal, 497 (young fruits), 541 (the sap of a young fruit); in the mouth, 466 (juice of inflorescence), 467 (a very young fruit); external, 52 and 176 (roots), 291 (fruit), and 300 (roots). In some of the prescriptions the race of banana to be used is specified, e. g. pisang bēnggala in 176 and 300, pisang kēlat in 467, and pisang raja in 497. Some races of the banana are considered more potent in magic than others (see Skeat, *Malay Magic*, 1900, p. 249). For wraps, pisang leaves in 13, 143, 358, 368, 453, and 456.

Pistacia, see mastaki.

Pistia, see kiambang.

pitis-pitis (pennywort), *Sarcolobus globosus*, Wall. Externally in an embrocation, 540, the fresh leaves.

Pithecellobium (Pithecolobium), see jiring and pētai bēlalang.

Pluchea, see bēluntas.

Plumbago, see chēraka merah.

Pogostemon, see nilam.

pokok rēstong urat (plant for ulceration of the muscles) seems identical with pokok rēstong and, therefore, *Ervatamia* spp., see lada-lada.

pomegranate, see dēlima.

Pongamia, see malapari.

porcupine quills, landak duri, enter into an application, 132, over the pubes in gonorrhoea.

Portulaca, see gēlang.

Portunus, see kētam.

Pouzolzia, see urang-arang merah.

Psidium, see jambu biji.

Psychotria, see ěpědu tanah.

Pternandra, see sial mēnaun.

Pterocarpus, see chēndana janggi.

puchok, kut, the fragrant root of *Saussurea Lappa*, C. B. Clarke, imported from India into Malaya. Internal, 91, 142, 165, 205, 367, and 369; external, 289, 367, and 382.

pudak, *Pandanus fascicularis*, Lam. The pith in a draught, 398, as an antidote to poison, and the lees applied to the chest.

puding merah, *Graptophyllum pictum*, Griff. (*G. hortense*, Nees). Internal, 82 (juice); external, 217 and 289 (leaves).

Pueraria, see kacang hijau.

pulai, *Alstonia scholaris*, R. Brown. Internal, 220 (leaves) and 323 (latex).

pulasan hutan, *Anthocephalus indicus*, Rich. (*A. Cadamba Miq.*).

The roots in a draught, 350, for a disease of uncertain origin.

The application of the vernacular name is javanese.

pulut, glutinous rice, see rice.

pulut-pulut, a name for mucilaginous plants which can be substituted in poultices for glutinous rice, but are otherwise quite diverse. *Urena lobata*, Linn., of the Malvaceae, *Melochia corchorifolia*, Linn., and *Commersonia platyphylla*, Andr., of the Sterculiaceae, and *Triumfetta rhomboidea*, Jacq., of the Tiliaceae constitute a group of rather similar plants to which the name is applied. Internally in 126 (leaves) and 127 (roots) for treating gonorrhoea.

Punica, see dēlima.

pupot. The fruit is prescribed in 155, for making out of one half of it, an infusion to be swallowed for a cough. We believe that pěrěpat should have been written, which is *Sonneratia acida*, Linn. f. The fruit of this tree is extremely acid. The word فوفت, if we are right, has been misread فوفت, an easy mistake.

putarwali or **sĕruntun**, *Tinospora crispa*, Miers. Internal, 241 and 384 (roots); external, 135 (roots), and 385 (leaves).

putat, *Barringtonia spp.* The juice of the fruit-wall in a lotion, 21, for ulceration of the nose.

puwar, see sĕlaseh.

python gall, the gall of *Python reticulatus* (Schneid.) and *P. curtus* (Schleg.) in a draught, 67, for a callous ulcer.

Quercus, galls, see majakani.

- raden galoh**, the name of a princess of romance, which appears in the Medical Book for gading galoh (q.v.).
- raksa**, mercury, is in one prescription only, 168, a tonic.
- rambutan**, *Nephelium lappaceum*, Linn. Internal, 144 (bark); external 460 (leaves).
- rambutan pachat** (leech's rambutan) is a name given to several forest trees allied to the last: *Xerospermum* spp. are most entitled to be so called, and, secondly, species of *Mischocarpus*, *Arytera*, and *Aglaia*. Internal, 492 (root) and 493 (leaves).
- rami**, *Boehmeria nivea*, Gaud. The root is prescribed for application to a foul syphilitic ulcer, 360.
- rami hutan** (wild rami), *Alchornea villosa*, Muell.-Arg. External, 464 (root) and 465 (leaves), for an application in scabies.
- Randia*, see antan gading and kayu tulang.
- rěbong**, see buloh.
- rěmbėga**, see lěmbėga.
- rěmunggai** by metathesis for měrunggai (q.v.).
- rěngas manau**, *Melanorrhoea Wallichii*, Hook. f., or an allied species. External, 412 (root) and 413 (leaves).
- Rennellia*, see ěmpědu tanah.
- rěsam**, *Gleichenia linearis*, C. B. Clarke. The leaves in a cooling lotion, 460. Malays commonly so use this plant.
- resin, see dammar.
- rěstong urat**, pokok rěstong urat, see lada-lada.
- Rheum*, see kělěmbak.
- rhinoceros' tooth, 'sahing', for use in a fumigation, 147, for ulceration of the vagina. In Sarawak a kayu sahing is used for fumigation. Perhaps this is worth remembering in any endeavour to ascertain how the word sahing came into the manuscript.
- Rhodamnia*, see měmpoyan
- Rhodomyrtus*, see kěmunting.
- ribu-ribu**, *Lygodium scandens*, Swartz and *L. flexuosum*, Swartz. The leaves in a complex oil, 289, for Small-pox.
- rice finds many uses. The ashes of the straw are prescribed internally in 226. The dust from off the grain produced in pounding it (lěmukut or mělukut), internally, 125, 140, and 215; externally, 21, 51, 66, 81, 94, 149, 192, 215, and 271. Raw unbroken grains in a magic treatment, 446. Raw rice pounded, internally, 138 and 227; in the eye, 183; externally, 23, 214, 267, 281, 406, 416, 425, 432, 438, 449, 486, 490, and 500. Fine rice flour (hujung bėras); in the eyes, 393; externally, 178, 332, 334, 372, 393, and 400. Boiled rice, dried and powdered, for internal use, 99 and 154. The same perhaps dried until burned, for external use, 8 and 135. Gruel made with boiled rice, internal, 31, 32, and 85; external, 277, 399, 495, 529, and 530. The surface of a pan of boiling rice (kěpala

nasi), external, 407 and 535. Water in which rice has been soaked, internal, 27 and 30; in the eye, 182 and 315; external, 28 and 381.

rose water, see *ayer mawar*.

rotan bini, *Flagellaria indica*, Linn. For loss of hair after fever, externally, 531 (shoots and leaves). This treatment seems to be common.

Rourea, see *akar salah nama*, *kachang-kacham*, *kachang-kachang*, and *sěmbělít*.

ru, *Casuarina equisetifolia*, Linn. The bark powdered in a treatment for pimples on the face, 190.

rukam, *Flacourtia Rukam*, Zoll. & Moritz. Internal, 227; external, 289 (leaves in both cases).

ruku-ruku, see *sělaseh*.

rumput angin or **kapur angin**, *Usnea spp.* Internal, 350; external, 52.

Saccharum, see *sugar* and *těbu*.

safflower, see *kěsumba*.

saffron, see *koma-koma*.

saga, *Abrus precatorius*, Linn. External, 108 (leaves) and 278 (root). In 164 the seed of saga is used as a weight; for weighing two seeds of saga *kěchil* (*Abrus precatorius*) = 1 of *saga bėsar* (*Adenanthera*), and it is *saga bėsar* which is used here.

sagu, sago of *Metroxylon spp.*, as an excipient in the poultice, 276.

sail, see *ashes of a fabric*.

Salacia, see *ěmpědal*.

salt, sodium chloride. Four kinds are prescribed: (1) ordinary salt, (2) *garam jantan* or coarse salt, (3) salt from India, and (4) salt from Ormuz, or rock-salt. Internal chiefly as a seasoning, 31, 45, 61, 96, 130, 161, 170, 204, 206, 241, 261, 316, and 509; in the mouth, 17, 18, and 325; in the eye, 353; in the ear, 262; externally, 8, 11, 20, 74, 118, 174, 216, 266, 267, 465, and 537.

salt-bag, see *ashes*.

saltpetre, see *sěndawa*.

sandal-wood, see *chěndana*.

Santaloides, see *akar salah nama*, *kachang-kacham*, *kachang-kachang*, and *sěmbělít*.

Santalum, see *chěndana*.

santan, see *coco-nut palm*.

sappan wood, see *sěpang*.

Saprosma, see *kěsimbukan* and *sěkěntut*.

sarang burong pipit gunting, sparrow's nest, the nest of *Passer montanus malaccensis*. Its ashes in an embrocation, 377, for *paresis*.

Sarcolobus, see pitis-pitis.

Sauropus, see chëkur manis.

Saussurea, see puchok.

Schima, see changkok.

sëbasah, *Aporosa spp.*, and allied plants. An infusion of the stem in a draught, 409, and the lees as an embrocation.

sëbëngkak indicates the species of *Vitis* which are mucilaginous and used for poulticing. It is not quite synonymous with lakum, which covers the whole genus, but with those which irritate the skin more than others, drawing the blood into it, e.g. *V. mollissima*, Wall., *V. cinnamomea*, Wall. Externally, 356 (root).

sëbisa. No plant is commonly called by this name, which is applicable to any used to combat poison, real or hypothetical. It may be synonymous with pënarwar bisa and, if so, any *Lignum colubrinum*, including *Eurycoma longifolia*, Jack and *Strychnos ligustrina*. External, 534.

sëduwayah, *Woodfordia floribunda*, Salisb. The dried leaves are imported into Malaya from India or Java. Internal, 144 and 350; external, 289.

sëgëli, *Lasia spinosa*, Thwaites (*L. aculeata*, Lour.). The young leaves are used as a flavouring in food; and are doubtless what would be used in the bolus, 337, for a cough.

sëkëntut, *Paederia foetida*, Linn., and sometimes species of *Saprosma* and *Lasianthus*, more or less synonymous with kësimbukan (q.v.). In a bolus, 210, for dilatation of the stomach. It is stated by Dutch physicians in Java, that *Paederia* is not without good effects, though its use is suggested by its faecal smell.

sëkoyak, *Bauhinia spp.*, such as *B. bidentata*, Jack, or *B. flammifera*, Ridl. The root in a gargle, 456, and in an application, 457, to the cheek for toothache due to caries.

Sëlaginella, see paku mërak.

sëlaseh or **ruku-ruku** or **puwah**, or in the case of those sëlaseh plants which are mild enough in flavour to be used in food, **këmangi**, *Ocimum basilicum*, Linn., and *O. sanctum*, Linn. The Malay classification of these plants is by taste and consequent use, and runs counter to that of botanists. In a general way sëlaseh may be translated basil: këmangi, kitchen basil; ruku-ruku, scent basil; and puwar, protective basil, for it is used where spirits are to be combated. Three of these names stand side by side in the all-in prescription, 289, for small-pox.

Light-coloured and dark-coloured plants are, as is usual among Malays, held to differ. In 113 and 138 sëlaseh hitam (black basil) is prescribed, and in 533 puwar merah (red protective basil). Internal, 138 (shoots of sëlaseh hitam),

226 (leaves of sělaseh), and 311 (leaves and flowers of ruku-ruku); external, 113 (leaves of sělaseh hitam), 232 (leaves and roots of ruku-ruku), 264 (leaves of sělaseh), 289 (leaves of sělaseh, of ruku-ruku, and of kēmangi), and 525 (leaves of puwar merah).

sělégari or **sělíguri**, *Sida rhombifolia*, Linn., and sometimes other plants. The root is chewed with betel for sexual debility, 101, as a charm.

sělěpat tunggal, which is prescribed in the poultice, 526, cannot be identified with certainty. A member of the family Convolvulaceae, such as *Ipomoea sagittifolia*, Burm., is the most probable (cf. *Malay Village Medicine*, p. 225 of this volume of the *Gardens' Bulletin*); but Alvins recorded the similar name sělěmpok tunggal for an *Elaeocarpus*, and sělěpat tungau has been recorded for *Mikania scandens*, Willd. Sělěpat and sělěmpok carry alike the meaning of poulticing.

sěmbělít. A name for several plants used for congestion of the liver and constipation. Resort is likely to *Cnestis* and other species of the Connaraceae, as *Santaloides* (Rourea). Internal, 440 (roots and leaves).

sěmbilang, the fish, *Paraplotosus albilabris*, Cuv. & Val., well known on account of the extreme pain of its sting. The ashes of its head and dorsal stinging fin in an application, 539, for herpes.

sěmbong, *Blumea balsamifera*, DC., the leaves externally, 289.

sěna makki, Mecca senna, dried leaves of *Cassia angustifolia*, Vahl, which, when grown in southern India, constitute Tinnevely senna. For its praises see 246 to 260. It is interesting that it is prescribed in no other part of the Medical Book.

sěnapu cannot be recognized. It may possibly be for sěnaguh, and if so *Micromelum hirsutum*, Oliv. The root is prescribed in 414 for bathing an infant.

sěndawa, saltpetre. When saltpetre is not handy, the Malays take the gunpowder (ubat bėdil) out of chinese fireworks and so obtain what they want in the mixture, but apparently would not use this internally. Internal, 128; in the mouth, 18 and 325; in the eyes, 314; externally 526 (gunpowder).

sěndudok, *Melastoma malabathricum*, Linn., and other species. Internal, 141 (shoots); external, 11 (juice of leaves).

sěnjuang, see lěnjuang.

sěpang, *Caesalpinia Sappan*, Linn., a widely known dye-wood. Internal, 32 (wood) and 146 (leaves).

sěrampang: daun sěrampang may mean the deformed rather juiceless leaves of the betel-pepper vine, *Piper Betle*, Linn., which are produced by the lowest branches, and are usually

- called *kĕrakap*, or may mean dry leaves of a banana. They are prescribed in 271 for external application.
- sĕrunei laut**, *Wedelia biflora*, DC. Internal, 103 and 367; external, 367 and 527, in all cases the leaves.
- sĕruntun**, see *putarwali*.
- Sesamum*, see *minyak bijan*.
- sĕsawi**, *Brassica juncea*, Linn., and to a lesser extent as being less medicinal, *B. chinensis*, Linn. The first is *sĕsawi hitam*, often called Indian mustard, and its seed makes a good table mustard, suitable for poultices. It is specified in 180. The seed internally, 59, 119, 167, and 210; externally, 181, 229, and 231. The leaves externally, 180.
- Sesbania*, see *turi*.
- sĕtambun**, *Baccaurea sp.* The root boiled and made into a draught, 431, for diarrhoea following child-birth, and the leaves pounded for applying to the body, 432.
- sĕtampin**, *Mallotus Griffithianus*, Hook. f., and other species such as have leaves large enough to serve as wrappers (*tampin*) for rice, &c. Internal, 445 (roots).
- sĕtawar** denotes a plant serving as a protection against spirits, and is chiefly *Costus speciosus*, Smith. The juice of the stem is prescribed in a lotion, 327, for washing the body and dropping into the eye of a patient with Small-pox.
- sĕtĕbal** is a plant possessing thick leaves, and in particular *Hoya* or *Trichosporum*; but also as is evidently the case in the Medical Book it is *Fagraea racemosa*, Jack. Internal, 57 (leaves) and 369 (bark).
- sĕtokak**, the plant for treating the ulcer called *tokak* cannot be identified with precision; but the uses are those of *Ervatamia*. Within the nostrils, 347 (the root); externally, 345 (the root and the leaves), 346 (the root), and 347 (the leaves).
- Shorea*, see *dammar*.
- siak-siak**, *Dianella ensifolia*, Redouté. Ashes of the root and leaves in an ointment, 539, for herpes.
- sial mĕnaun**, *Pternandra caerulescens*, Jack, and *P. echinata*, Jack. For burns, an application of the root, 421, and if that fails, of the leaves, 422 and 423.
- Sida*, see *padang bĕlulang* and *sĕlĕgari*.
- siku-siku**, *Oldenlandia corymbosa*, Linn. This plant, which is called in the Medical Book **siku dĕngan**, is prescribed in 314 in an application to the eye-lids.
- silver (**perak**) is prescribed in 89 for numbness of the feet, and silver water (*ayer perak*) in a bath, 41, for treating lunacy.
- sintok**, *Cinnamomum Sintok*, Blume. The bark of this tree smells of cloves, and is traded in. The barks of *C. javanicum*, Blume, *C. camphoratum*, Blume, and sometimes *C. iners*,

Reinw., are substituted. They are used chiefly for diarrhoea, but in the Medical Book in 90 in an application for numbness of the feet.

sireh, betel pepper, leaves of *Piper Betle*, Linn. In Malay Medicine the betel leaf used for chewing serves as a vehicle; leaves in which the larger side veins arch back into the midrib (sireh bĕrtĕmu urat) are considered the most auspicious for use; the lowest branches of the vine produce juiceless deformed leaves which are kĕrakap, and the top part of the vine gives tunas sireh. The betel-quid as a vehicle, 101, 127, 212, 222, and 505, sireh bĕrtĕmu urat, internally in 131, chewed in 34, and externally in 92 and 131, sireh kĕrakap, internally, 458, 470, and 471; tunas sireh internally, 193. Externally, sireh leaves, 10 (stalks only), 25, 29, 34, 51, 64 (stalks only), 79, 90 (stalks only), 92, 94, 131, 193, 230, 284, 414, 458, 470, and 471.

sireh hantu, a wild pepper, *Piper sp.*, impossible of precise identification. In an application for itch, 524.

Smilax, see gadong china and kĕrating.

Solanum, see tĕrong.

Sonerila, see hati-hati hutan.

songsong harus, *Combretum trifoliatum*, Vent., and *C. acuminatum*, Roxb. The fruit in a draught, 384, for worms.

Sonneratia, see bĕrĕmbang and pupot.

soot, see arang para.

span (sa-jĕngkal), used as a measure, 456.

sparrow's nest, see sarang burong pipit.

spirits, Chinese, from rice, boiled with the milk of a young coco-nut, 308, to make a draught for retention of urine.

Sterculia, see kĕlapong.

Strychnos, see bĕdara laut, chĕndana puteh, pĕnawar bisa, and sĕbisa.

Styrax, see kĕmĕnyan.

sudu-sudu, *Euphorbia nerifolia*, Linn., and allies. Internal, 99 (stem and leaves) and 154 (leaves); in the ear, 78 (juice of mature leaves).

sudu-sudu hutan (wild sudu-sudu) cannot be identified with precision, but *Euphorbia Synadenium*, Ridl., has a claim to the name. It is available only in the north of the Peninsula. External for burns, 417 (leaves), 422 and 423 (roots), and 469 (leaves).

sugar in various forms is prescribed for sweetening medicaments, but it is not clear what determines the choice of the different kinds. Internal, 38 (javanese sugar), 42 (sugar candy), 58 (Nipa sugar, or if not available palm-sugar, sugar candy, or honey), 80 (javanese sugar), 130 and 133 (any sugar), 163 and 247 (moist sugar), 248 (sugar candy), 249 (moist sugar),

290 and 303 (sugar candy), 320 (any sugar), and 439 (sugar candy).

sugar-cane, see *těbu*.

suku, a quarter cent used as a weight in 164.

sulor tēbu, see *těbu*.

sulphur (**bēlerang**), internally, 288 and 498; externally, 464, 497, and 525.

sumbu, see lamp wick.

sunti is a pickle made by salting the fruit of the *bēlimbing*, *Averrhoa Carambola*, Linn., and *A. Bilimbi*, Linn.: *sonth* is a sanskritic word for dried ginger, established in Malaya as *sunt* and *sunti*. *Sunti*, prescribed internally, 58; in the eyes, 46, and externally, 92, may be regarded as the pickle, and so also **sunti merah**, used externally in 35. But it is clear that **sunti halia** for internal use in 111 is dried ginger, and **sunti halia padi** for external use in 113 is the dried rhizome of the medicinal race called *halia padi*.

susun kělapa, see *lada-lada*.

Swintonia, see *měmpunei*.

tabashir, see *kapur bambu*. The word is distorted in the manuscript into *tapak asu*.

Tachardia, see *ěmbalau Siam*.

tahi budak, see *akar tahi budak*.

tahi těngkoh, opium dross, see *opium*.

tahil, a tael equal to $1\frac{1}{3}$ oz., used as a weight in 287.

Talauma, see *lung-lung*.

Tamarindus, see *asam jawa*.

tampal bēsi, *Callicarpa spp.*, much used in poulticing. Internal, 354 (root); within the nostrils, 352 (root); external, 355 (leaves).

tampok kěladi, the spathe of an *Alocasia* or *Colocasia*. The Medical Book has *tampang kěladi*; but the only explanation which can be given is that *tampok* should have been written. See *kěladi*.

tanah liat, clay. That clay is an antidote for poisons is a view held by Malays (see Annandale, *Fasciculi Malayenses*, *Anthrop.*, part 2, p. 62, and Gimlette, *Malay Poisons and Charm Cures*, 3rd ed., p. 200). Water squeezed out of clay is prescribed in 523.

tanah sarang angkut-angkut, the clay lining of the nest of a mason-wasp. In a poultice for ringworm, 280.

tapak leman (Solomon's seal) or **tutup bumi** (bung of the world), *Elephantopus scaber*, Linn., a herb of magic. Internally, 122 and 243 (roots); externally, 372 (leaves).

Tarenna, see *gading*.

tawas, alum, double sulphates of aluminium and potassium,

obtained from the earth in various parts of the world, China for instance, from remote times, and India, more recently. All alums in trade are impure. They act as astringents and toughen mucous membranes, &c. At one period they were much more used in Western medicine than to-day. Internal, 70, 128, and 497; within the mouth, 16; in the eyes, 187, 454; external, 285, 411, 426, and 471.

teak, see jati.

těbing hayu is apparently *Cardiospermum Halicacabum*, Linn., which Gwynne-Vaughan obtained in Patani as tubo ayer; or it may be *Leonurus sibiricus*, Linn., which Alvins obtained in Malacca as těbing aga. The pounded leaves serve in a poultice, 455, for sore eyes.

těbu, sugar-cane, *Saccharum officinarum*, Linn. Two kinds are prescribed, těbu lanjong, which is a long thin-caned race, 484 (the root), in a draught for whooping cough, and sulor těbu, which appears to be a rattan shoot, an infusion of its 'root' (? rhizome), 229, as a lotion.

Tectona, see jati.

těmbėlok, the ship-worm, *Teredo navalis*. Its teeth in a local application, 132, for gonorrhoea.

těmu hitam, *Curcuma aeruginosa*, Roxb., which has a rather bitter and pungent rhizome, used like turmeric when evil spirits have to be dealt with. Possibly it is slightly purgative. Internal, 6, for coughs in a draught; and also, 311, for spasmodic asthma; external, 40 and 174, for mental derangements. The rhizome alone is used.

těmu kunchi or měr-kunchi, *Gastrochilus panduratum*, Ridl. The rhizome is prescribed for internal use, 330; for external use in 92, 174, and 224; the leaves for external use in 331.

těmu kuning, turmeric, *Curcuma domestica*, Valeton. The rhizome is used in ceremonies where spirits are involved and where saffron would be a costly alternative. Internal, 32; external, 40, 174, and 482.

těmu lawas, *Curcuma xanthorrhiza*, Roxb., which has a pungent and bitter rhizome and is employed in treatments where evil spirits are involved: as its name indicates the eating of it gives a feeling of relief in the stomach. Internal, 1 and 2; external 40, 174, and 214.

těmu pauh, *Curcuma mangga*, Valeton, a species of Java, strong-flavoured, but sometimes used as a seasoning for food and more frequently for medicines. Internal, 91; external, 174. The rhizome in each case.

těmu puteh, zeodary, *Curcuma Zeodaria*, Rosc., which has a rhizome flavoured with ginger and camphor. It is used where evil spirits are involved. External, 40, 174, 213, and 214.

- těngar**, *Ceriops Candolleana*, Arn. The astringent bark in a lotion, 148.
- těntawan**, *Conocephalus* spp. In the eyes, 336 (juice of the root); external, 500 (young leaves), 501 (roots), 535 (leaves), and 536 (roots).
- Teredo*, see těmbělok.
- Terminalia*, see majalawi and měmpělami babi.
- těrong asam**, *Solanum ferox*, Linn. Internal, 167 (root); in the mouth, 456 (seeds); external, 81 and 344 (leaves), and 433 (root).
- těrong China**, a race of *Solanum Melongena*, Linn., here, though sometimes it denotes *S. verbascifolium*, Linn. The juice of fresh roots in an application to the face, 22.
- těrong kěmang** (evil spirit Solanum), *Cyclea laxiflora*, Miers, and other species. Within the nostrils, 352, the root, while the juice of the leaves is in a lotion.
- těrong ungu** (purple brinjal), *Solanum Melongena*, Linn. The fruit in a dry poultice, 63, for piles.
- těrong pipit** (sparrow's brinjal), *Solanum verbascifolium*, Linn., and other species. A decoction of the root in a draught, 167.
- těrusi**, may be green vitriol (protosulphate of iron) or blue vitriol (copper sulphate). Where (10 and 283) the Medical Book is explicit, it stands for the former; in the other four references, blue vitriol seems probable. Applied to teeth, 16, 18, and 325; external, 10, 64, and 283.
- Tetracera*, see měmpělasi gajah.
- thumb, used as a measure, 179, 453, and 497.
- tiger, suet. Externally, 298.
- tinak**, prescribed for vertigo in 473 (root and leaves), cannot be identified with precision, but may be *Myxopyrum nervosum*, Blume.
- Tinospora*, see putarwali.
- tongkat Ali**, see kěrating.
- Torenia*, see kěrak-kěrak.
- Trichosporum*, see sětěbal.
- Trigonella*, see halba.
- Trigonochlamys*, see kěmpas rumah.
- Triumfetta*, see pulut-pulut.
- tuba**, *Derris elliptica*, Benth. In an embrocation, 202.
- tuba tikus**, white arsenic, see warangan.
- tulang kambing**, goat's bone, see goat.
- tulang-tulang** probably indicates *Euphorbia Tirucalli*, Linn., a plant suggesting bones, and so fleshy that the direction regarding squeezing out the juice can be carried out. External, 11, 54, and 377. The names of several hard-wooded plants, chiefly of the family Rubiaceae, are similar, but they appear unsuited.

turi, *Sesbania grandiflora*, Pers. Internally for sprue an infusion of the bark, 319.

turmeric, see kunyit and tĕmu kuning.

tutup bumi, see tapak leman.

ubah, *Glochidion spp.* Internal, 488 (leaves) and 489 (roots).

Uncaria, see bĕlalai gajah and gambir Siak.

urang-aring merah. Apparently *Pouzolzia indica*, Gaud., a mucilaginous plant, much more so than *Eclipta alba*, Hassk., which is the best-known urang-aring, and is not red (merah). The leaves in a poultice, 73.

Urceola, see lima.

Urena, see pulut-pulut.

Urophyllum, see chĕmpĕrai.

Usnea, see rumput angin.

Vandellia, see kĕrak-kĕrak.

vinegar. Toddy corked down in a bottle becomes vinegar in a fortnight. In 220 vinegar which has been kept for a year is prescribed; and in 528 English vinegar. Internal, 111 (very sour), 215 (strong), 220 (after keeping for a year), 228 (strong), and 256; in the mouth, 14 (very sour), 15, 17, and 121 (very sour); in the ear, 262; external, 19, 105, (very sour), 231, 277 (after keeping for a year), 281, 283 (strong), 301, 321 (strong), 437, 453, and 496.

Vitex, see lĕnggundi.

vitriol, see tĕrusi.

Vitis, see asam riyang-riyang, chawat udi, grapes, lakum, sĕbĕngkak, and yang-yang.

warangan, crude arsenious acid, also called tuba tikus.

External, 51, 266, and 279.

water is added as required in preparing draughts and no mention made of it unless water of some particular kind is necessary; mystic river water, 41; fresh water, 17; tidal river water, 532; water kept overnight, 81. Dew is often allowed to settle on prepared medicaments.

wax-gourd, see kundur.

Wedelia, see sĕrunai laut.

wheat chaff, or more probably bran, is prescribed to thicken the poultice, 27; wheat flour is in the bolus, 2.

Willughbeia, see chirit murai and jolok hantu.

Woodfordia, see sĕduwayah.

Xanthophyllum, see kayu kĕsturi, and lima.

Xanthosoma, see birah.

Xerospermum, see rambutan pachat.

Xylophia, see mēmpunai.

yang-yang or **iyang-iyang**, *Vitis hastata*, Miq., and other species, and also *Archytaea VahlII*, Choisy. Internal, 145, the part not specified.

Zalacca, see asam paya and kumak.

Zea, see jagong.

Zingiber, see bonglai, halia, kunyit tērus, and lēmpoyang.

Zizyphus, see bēdara.

ADDENDUM

A note on the application of the name *Chasalia curviflora*, by Professor W. G. Craib, M.A.

When recent collections of *Chasalia* from Siam were being identified, it became necessary to establish as nearly as possible the exact identity of *C. curviflora* (Wall.), Thwaites. The specific name was first used by Wallich under *Psychotria* (in Roxb., *Flora Ind.* 2, 1824, p. 267), for a plant collected by Jack in Penang; and specimens which exactly fit his description are found in his herbarium (Wall. Cat., 8360). Thwaites (*Enum. Plant. Zeyl.*, 1859, p. 150) transferred Wallich's species to *Chasalia*; and although Thwaites must be cited as the author for the combination '*Chasalia curviflora*', his references were to plants of species quite distinct from that of Jack from Penang, and his remaining synonyms must be excluded.

Examination at Kew of a large suite of specimens which have from time to time been referred to *C. curviflora* (Wall.) shows that only a very few of them, being collections from Penang and Siam, really belong to the species.

To those acquainted with the plant most commonly misnamed *C. curviflora*, it is only necessary to refer to a few points in Wallich's description of Jack's plant to show how distinct the species is. The midrib and nerves are pubescent beneath, the lamina in 7-10 inches and the petiole 2-3 inches long.

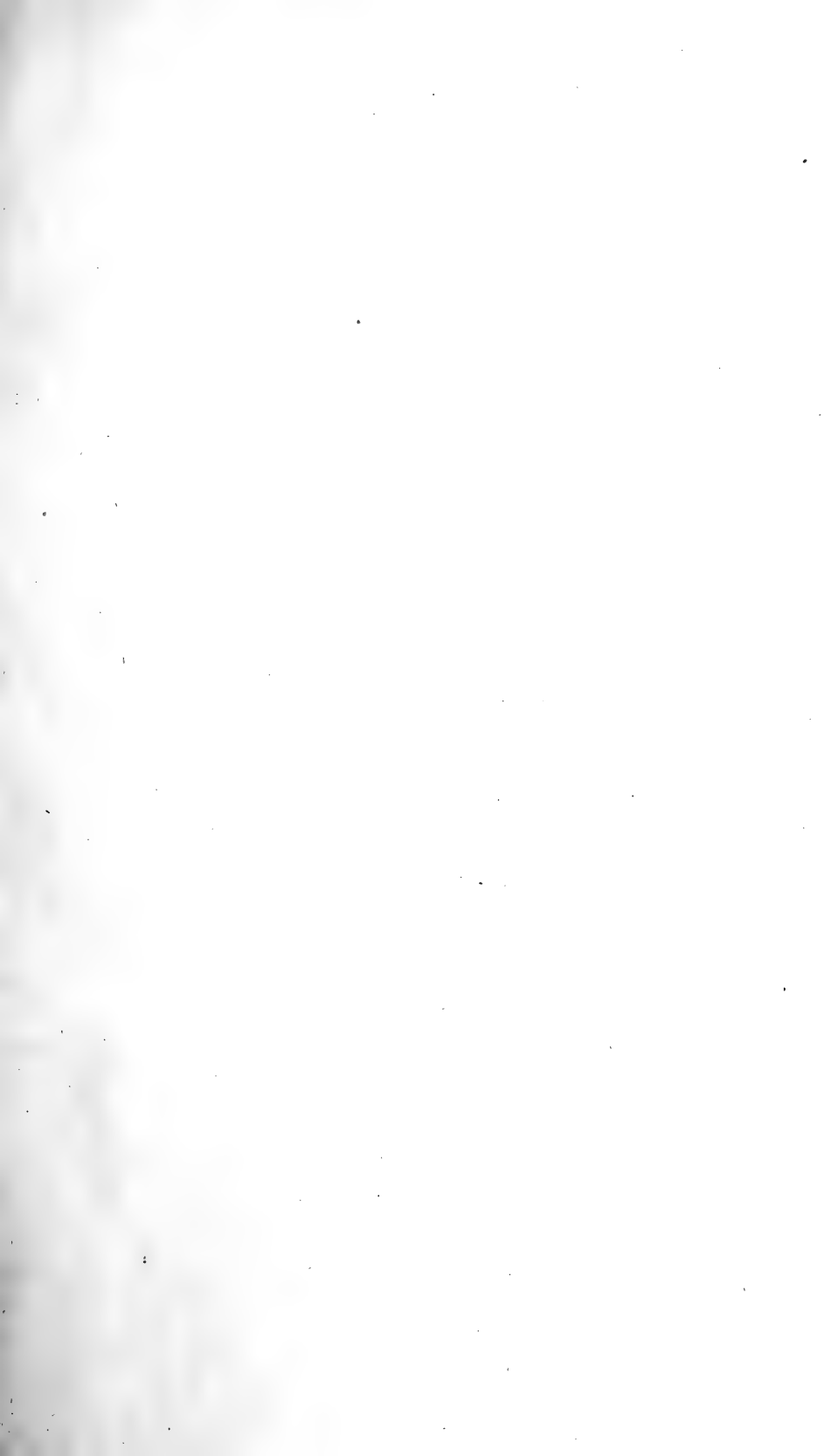
Thus these conclusions are reached. The true *Chasalia curviflora*, if one is to rely on herbarium collections, is not a common plant and is restricted to the Malay Peninsula and the peninsular part of Siam: its nearest ally is *C. pubescens*, Ridl., which differs in the distribution of indumentum, shorter petioles, and much more condensed inflorescence. The common plant of the Malay Peninsula cannot be referred to *C. ophioxylodes* (Wall.), which came originally from Sylhet: and *C. ambigua* of South India is also a different plant. It is possible that a name may be found for it among those given to plants of the Malay Archipelago which have been wrongly reduced to *C. curviflora*; but to settle this point it will be necessary to examine carefully the types, or at least authentic material, of these various species.



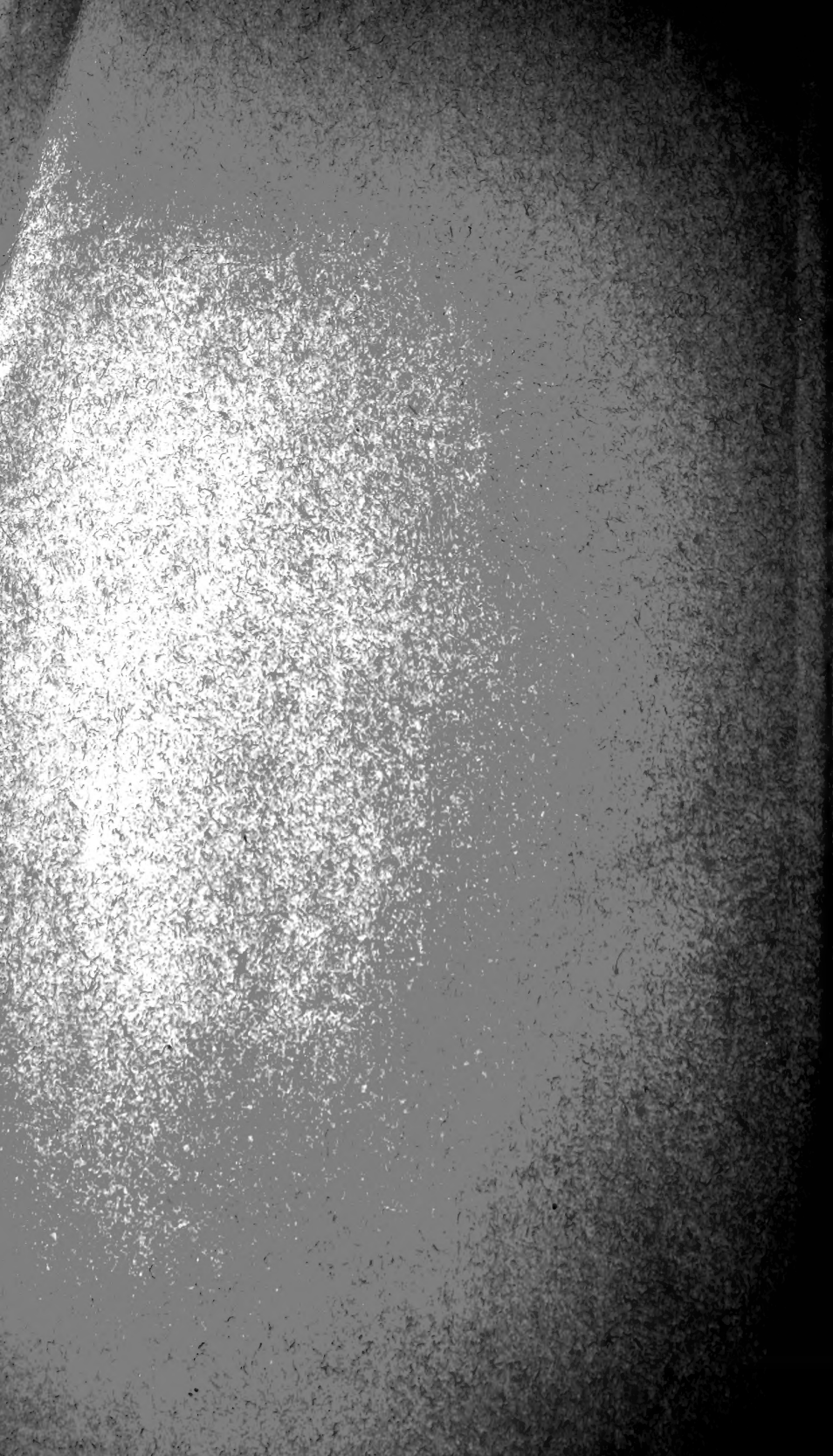
Notice

Volume VI consists of three parts:—Part 1, price \$2.50, entitled “On Chinese Medicine: Drugs of Chinese Pharmacies in Malaya”, by David Hooper; Part 2, price \$2.50, entitled “Malay Village Medicine, prescriptions collected by I. H. Burkill and Mohamed Haniff”; and Part 3, the current part.

Volume V is in course of publication.









U. HOLT

