XIII. *The Ternstroemiaceous Plants of Hong Kong.* By CAPTAIN CHAMPION, 95th Reg.
Communicated by the PRESIDENT.

Read November 5, 1850.

CONSIDERING the great success of the *Camellia Japonica* as an ornamental greenhouse plant, it appears remarkable that but little attention should have been paid to the introduction into England of other plants of that order from India and China. Both the Camellias and Gordonias are trees or shrubs of very great beauty, and of rather hardy growth; in tropical climates restricted to elevations, where the climate bears affinities to more northern temperatures; and in China they flower alongside of the Azaleas so successfully introduced into England. Polypetalous, they hold out to the horticulturist the probabilities of increased beauty through judicious and successful cultivation.

The species of *Camellia* at present best known in England has been principally introduced from Chinese gardens. Without detracting from the good taste of that nation, in having selected elegant species, and brought their flowers to a degree of improvement which alone might have been expected from English industry, it is to be presumed that many species (some of which have been described by Loureiro) remain, in the wilds of Southern China, uncultivated.

The Chinese are in some respects *bizarres* in their admiration of plants; they have their favourites, and they are permanent favourites; not the fashion of the day, but of centuries; and these alone they cultivate, although we are acquainted, through Mr. Reeves and through Mr. Fortune, with other plants of great beauty, which are less admired by that nation. Should at any period English taste extend itself to others of the *Camellia* tribe, we must principally look for them from the Celestial Empire. The plants about to be described are indigenous to one small island.

Genus CAMELLIA, L.

1. CAMELLIA SPECTABILIS; arborea, foliis lanceolatis acuminatis glabris crenatis subtus reticulatis, floribus solitariis magnis albis axillaribus et subterminalibus, sepalis coriaceis fructibusque pomi magnitudinis sericeis.

Hab. in insulâ Hong Kong, Sinarum, in sylvis.

A small tree; flowering also as a shrub. Branchlets light ferruginous. Leaves alternate, short-petioled, elongate-lanceolate, with a long acumination, crenated and pellucid on the margin, coriaceous, smooth and shining; pale beneath and reticulately veined. In dried specimens the leaves turn yellow like those of a *Symplocos*; they are under 5 inches long by 14 lines broad. Flowers about $2\frac{1}{2}$ inches across; sepals 9-11, imbricated, obtuse, yellowish green and very sericeous, coriaceous. Petals about 7, white, roundish-obovate, emarginate. Stamens very numerous, gamboge-yellow. Style

sericeous, splitting a quarter of its length into 3–4 styles. Ovary 3-celled, each cell 2-ovuled. Fruit the size of a small apple, retaining at base the persistent sepals, and like them very sericeous. Seeds several, pretty large; the outer coating chestnut-coloured. Flowers in May, and fruits in November. It is a very handsome species, quite distinct from *C. oleifera* (Abel), of which I have seen specimens, through the kindness of Mr. Bennett. The petals of dried specimens turn dark yellow. I have endeavoured to introduce this species.

2. *Camellia Japonica*, Linn.

Of this but two trees are at present known in Hong Kong, growing wild, and discovered by Lieut.-Colonel Eyre, of the Royal Artillery. It is a moderate-sized smooth tree, loaded in October with single pink flowers. The fruit is smooth and much smaller than in the last species, rather above an inch in diameter. The petals, about 7, adhere at base into a ring, and are soon detached and fall off. The sepals are slightly sericeous, and the leaves more elongate than in most of the cultivated plants.

3. *CAMELLIA SALICIFOLIA*; arbuscula, ramulis pubescentibus flexuosis, foliis subsessilibus elongato-ovatis acuminatis serratis pubescentibus, floribus parvulis albis, sepalis acuminatis pubescentibus, capsulis glabris parvis rostratis 1—3- sæpiùs monospermis.

Hab. in insulâ Hong Kong, Sinarum, in sylvis.

Sepals 5–7, subulate, hairy exteriorly, imbricated and subtended by imbricated, hairy bracteoles. Petals 5; white, oblong-ovate to obovate, gamopetalous at base, sericeous exteriorly. Stamina very numerous, in four rows; outer rows united into a tube; two inner with nearly free filaments. Style hairy, simple, elongate. Stigmas 1–3, filiform. Ovary hairy, 2–3-celled, each with a double row of 3 anatropous ovules. Capsule roundish-rostrate, usually by abortion 1-seeded; rarely 3-celled, 3-seeded. Leaves nearly sessile, softly hairy. Flowers nearly sessile, about an inch in diameter. Fruit from 5–7 lines in diameter. Flowers pendulous, scentless, white. It is a rather pretty undertree with long, weeping, rather brittle branches; the young leaves are reddish. Seed usually subglobose, with large, almost conferruminate, plano-convex cotyledons and a minute radicle. As species, it and the next are near to *C. caudata*, Wall. Mr. Braine has lately introduced a plant of it into the Kew Gardens. It flowers throughout autumn (October to January), and the fruit succeeds the flowers very rapidly. *Tricondyle pulchripes*, White, frequents this tree.

4. *CAMELLIA ASSIMILIS*; frutex, ramulis glabris, foliis subsessilibus lanceolatis acuminatis serratis glabris, floribus parvulis pendulis albis, sepalis sericeis obtusis, capsulis glabris parvis rostratis.

Hab. in insulâ Hong Kong, Sinarum, in Monte Victoria et Monte Gough.

I have seen this species growing almost alongside of the last, and the general resemblance is very striking. Its smooth habit, shorter and wider leaves, and more especially the difference of shape in the sepals, form the distinction. Its form is more stunted, and

it grows amongst rocks and ravines. Its pretty pendulous flowers come out about January.

Thea Bohea, Linn., is cultivated in Hong Kong, but is not indigenous to it. It frequently forms borders to garden beds, just as we employ the Box. As a genus there seems to be no good distinction from *Camellia*.

Genus EURYA, Thunb.

1. EURYA MACARTNEYI; dioica frutescens glabra, foliis majusculis coriaceis subellipticis margine revolutis serrulatis, floribus majusculis; ♂ staminibus 19–22; ♀ stylis distinctis revolutis, fructibus purpureis, circiter 14-spermis.

Hab. in insulâ Hong Kong, Sinarum, in sylvis rupibusque. Floret et fructus fert ab Augusto usque ad Novembrem.

It is easily distinguished from *E. Japonica*, Thunb., by its larger (4 in. 2 lin. by 1 in. 7 lin.), more slightly serrated and revolutely margined leaves, their venation (grossly reticulated), and the size of its flowers; also by the styles of the female flowers being free to near their base. There are frequently black glands on the under part of the leaf. The male flowers are $3\frac{1}{2}$ –4 lines in diameter, 2–5 on each peduncle, and slightly fragrant. Sepals orbicular, purplish, fimbriated, emarginate. Petals oblong-obovate, obtuse, white; patent in the male and revolute in the female flowers; the latter only $1\frac{1}{2}$ to $1\frac{3}{4}$ line in diameter. Male flowers without remains of an ovary. Anthers oblong, shortly apiculate. The petals are united at base into a tube, like those of *Symplocos*. The ovary of the female is 3-celled, each cell 5–10-ovuled; the ovules in place of being suspended are attached horizontally to the central axis.

It is a shrub 6 to 8 feet high, and as a species comes near to *E. elliptica* of Gardner.

This species has also been brought from China by Lord Macartney, and exists without name in the Herbarium of the British Museum.

2. *Eurya Japonica*, Thunb.

Eurya Chinensis, R. Br.

These two species I find mixed up indiscriminately in my collection, and believe them to be identical. It is a species subject to considerable variety, flowering profusely about October.

The fruit is dark purple, and the size of a pea, 9–10, or, in poor specimens, fewer-seeded, and crowned by the styles, which remain, even then, combined two-thirds of their length; their revolute free portions eventually falling off.

The male flowers are first greenish, then white, and have a nauseous smell; 2–3 together on each peduncle, and $2\frac{3}{4}$ – $3\frac{3}{4}$ lines in diameter. Stamina 13–15 in one series. Ovary of the male flowers abortive with remains of one style. Specimens grown on barren hills are fewer-flowered than those growing in damp woods, and often smaller-leaved, and then constitute Mr. Brown's *E. Chinensis*, collected by Abel. The fruit is pea-shaped, 3-celled with about 3 seeds in each cell, attached at first to a placenta suspended from the apex of the axis. The berry is then succulent and nearly dry; finally, it becomes filled with

purple mucilage, which nearly obliterates the cells. Seeds small, triquetrous, wrinkled. Flowers and fruit, October, November and December. The female flowers are one-third less than the male flowers in size, and scentless. The pubescence or smoothness of the ultimate branches I believe to be entirely local.

I obtained excellent specimens of male and female flowers and ripe fruit, all within a few yards of each other, on December 6th, 1848.

Genus PENTAPHYLAX, Gardn. & Champ.

1. *P. EURYOIDES*, Gardn. & Champ. (TAB. XII.)

This new genus is described by Dr. Gardner in Hooker's 'Journal of Botany,' No. 8. p. 244-246. The species grows to an undertree of great beauty when in flower, and is exceedingly common in the Hong Kong woods. The flowers are small and white, and owing to those lowest on the branch expanding first, the pseudo-racemes when coming into flower present a pyramidal form with the leaves at their extremity, and have a very peculiar effect. The tree blossoms most profusely. The seed is dry, and its coating membranaceous; the embryo conduplicate; its radicle terete and cotyledons plano-elongate-cylindric. Flowers in summer and fruits in autumn. The definite 5 stamina, anthers opening by terminal pores, and the fruit resembling that of a *Gordonia* on a small scale (but with the embryo conduplicate), render it a very interesting genus.

Genus IXIONANTHES, Jack.

1. *IXIONANTHES CHINENSIS*; subarborea, foliis petiolatis alternis glabris integris elongato-ellipticis apice emarginatis reticulatis, corymbis longè pedicellatis axillaribus plurifloris dichotomis, staminibus 10 longissimis, capsulis supra-uncialibus. (TAB. XIII.)

Hab. in insulâ Hong Kong, Sinarum, in sylvis.

A small tree with reddish brown bark; the leaves nearly 5 inches long by $1\frac{1}{2}$ inch broad, much reticulated and chartaceous. The 5 cells of the ovary are 2-ovuled (pendulously arranged by pairs), and in the fruit the seeds are naked, winged, and like those of a *Gordonia*, to which genus its capsule approaches. The tree was originally referred to *Cedrelaceæ*, but is now very properly classed with *Ternstræmiaceæ*. Its sticky flowers and long filiform stamina are very peculiar. Several of the seeds which I sent to Kew have vegetated.

Upon referring to Dr. Jack's description of the Sumatran species, *Ixionanthes reticulata*, Jack, I feel some doubts as to the Hong Kong plant proving a new species. It differs in the increased size of the leaves (5 in place of 3 inches long), and probably on comparison will do so in some other particulars.

Genus GORDONIA, Ellis.

1. *G. ANOMALA*.

Polyspora axillaris, Sweet.

This highly ornamental tree is very common wild on the hills and in the woods of Hong Kong, and is much cultivated in that colony. Its large, white, sleepy, *Cistus*-like

flowers are sweet-scented, and nearly 3 inches in diameter. Its capsule large and woody. Flowers in autumn, in cold weather.

Genus SCHIMA, Reinw.

1. *S. SUPERBA*, Gardn. & Champ.

Already described in Hooker's 'Journal of Botany,' No. 8. p. 246. Flowers in May, and fruits in October to December. Its bunches of large white flowers resemble *Mesua* at a distance. The fruit is nearly 10 lines in diameter, subglobose and splits into 5 valves, each containing 3 compressed reniform seeds. The embryo is curved, radicle terete, cotyledons large, and conforming to the shape of the seed.

A very rare tree in Hong Kong, except in the woods near the top of the slopes over Little Hong Kong, where it grows abundantly.

Genus CLEYERA, Thunb.

1. *CLEYERA FRAGRANS*; arborea, tota glabra, ramulis di-tri-chotomis, foliis lanceolatis margine integriusculis leviter revolutis coriaceis, ramulis floribundioribus, floribus axillaribus pallidis fragrantibus fugacibus solitariis bibracteolatis, sepalis fimbriatis petalisque glabris parvis, staminibus brevibus glabris; connectivo acuto, stylis 2 profundè divis; stigmatibus reniformibus, fructibus globosis diametro subsemi-uncialibus.

Hab. in insulâ Hong Kong, Sinarum, in sylvis. Fl. Maio et Octobri. Fruct. Octobri et Novembri.

A small tree, with numerous sweet-smelling pale yellow flowers, which blow in the morning and fall off before evening; the petals are combined into a ring, and are $2\frac{1}{4}$ – $2\frac{1}{2}$ lines in length. The leaves (about 3 inches long by 13 lines broad) are bright green above, pale or rust-coloured beneath. Peduncles longish, reflexed, 1-flowered. Sepals 5, oblong, fimbriately crenated. Bracteoles 2, ovate, fimbriated on the margin. Petals gamopetalous, oblong-emarginate, smooth, margin uneven. Stamina very numerous, filaments about a line long. Anthers bursting longitudinally; connective small, acuminate. Ovary conical, 2-celled; each cell with 2–3 collateral pendulous ovules. Style profoundly cleft; stigmas reniform.

Fruit usually 5 lines in diameter, dry and finally hard, orange-brown with reddish spots, globose, 2-celled, each cell 1–2-seeded. Seeds thickish, small ($2\frac{1}{4}$ lines long), and covered with a thin coating of oily scarlet mucilage, dying as in *Bixa*. Testa hard and bony, with a conduplicate embryo; radicle terete; cotyledons plano-cylindric.

This may prove to be an *Anneslea*, Dr. Wallich's genus; his species is described with a 3-celled ovary. This tree constitutes much of the woods of Hong Kong.

2. *CLEYERA DUBIA*; frutescens, tota glabra, foliis lanceolatis margine integriusculis læviter revolutis coriaceis, floribus majoribus ($8\frac{1}{4}$ lin. diametro) axillaribus pallidis bibracteolatis, sepalis fimbriatis petalisque glabris, staminibus brevibus; connectivo acuto, stylo sæpiùs trifido, fructibus globosis diametro supra-uncialibus.

Hab. in insulâ Hong Kong, Sinarum, in Monte Victoria. Floret Febuario et Martio. Fruct. Junio.

I have doubts as to this being really different from the last. Their general resemblance is very striking, and the only specific differences I can perceive are, that here the branchlets are more swollen, ash-coloured, and less compact, the flowers larger, nearly scentless, and the petals less fugacious. The fruit and seeds are much larger; differences which might also be effected by situation. The fruit is usually 3-celled, and the seeds $4\frac{1}{2}$ lines long. The species of *Cleyera* are of very difficult discrimination. This species occasionally flowers when the young leaves are coming out.

EXPLANATION OF THE PLATES.

TAB. XII.

- Fig. 1. Flowering branch of *Pentaphylax euryoides* :—natural size.
- Fig. 2. Fruit :—natural size.
- Fig. 3. Front view of a flower :—magnified.
- Fig. 4. Stamen and two petals :—magnified.
- Fig. 5. Bracteoles, sepals and style :—magnified.
- Fig. 6. Ovary, cross section :—magnified.
- Fig. 7. Fruit :—magnified.
- Fig. 8. Fruit, vertical section :—magnified.
- Fig. 9. Seed :—magnified.
- Fig. 10. Seed, section showing the embryo :—magnified.

TAB. XIII.

- Fig. 1. Flowering branch of *Ixionanthes Chinensis* :—natural size.
- Fig. 2. Flower :—magnified.
- Fig. 3. Young fruit :—slightly magnified.
- Fig. 4. Cross section of ovary :—magnified.
- Fig. 5. Vertical section of ovary, showing the torus.
- Fig. 6. Fruit burst :—nearly natural size.
- Fig. 7. Seed :—magnified.
- Fig. 8. Embryo :—magnified.

Ashhurst Lodge, Sunning Hill,
November 1st, 1850.

Capt. Champion del.

G. Jarmari sc.