New Solomon Islands Plants.

BY

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THE Solomon Islands are situated in the tropics, between the Admiralty Islands and the New Hebrides, and extend over an area of 600 miles in length, trending from north-west to south-east. Several of the larger islands are from 50 to 100 miles in length, and 15 to 30 miles in breadth; and, speaking generally, are of volcanic origin and mountainous in character, the mountains rising to an altitude of 8000 feet in Guadalcanar, in the south, and to an altitude of 10,000 feet in Bougainville, in the north. On the other hand many of the small islands are entirely of coral limestone.

Many expeditions have visited the Solomon Islands, including D'Urville in 1838, and Denham (H.M.S. Herald) in 1853, and there are many allusions to the vegetation in the writings of various travellers; but even now the botany is very imperfectly known. William Milne, who was attached to the 'Herald' in the capacity of botanical collector for Kew, collected about 200 plants on the islands of San Christoval and Guadalcanar, but they were mostly common things from the coast region. A more representative collection of dried plants made in the north-western part of the group by Dr. H. B. Guppy was presented to Kew in 1885, and a rough list of them appeared in his narrative of his investigations in the islands. Unfortunately, however, Dr. Guppy had had no

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previous experience in selecting specimens of plants, and many unmistakable novelties were insufficient for description. This collection came chiefly from Shortland, Treasury, and Faro, small islands in Bougainville Straits. Last year the Rev. R. B. Comins brought home a small though interesting collection from San Christoval, which is situated in the extreme south-east of the group. Here again the specimens are often inadequate for satisfactory description, consequently we must await further material. Happily there is a chance of obtaining this, as Mr. Comins has returned to the islands with a better idea of what is required for botanical purposes.

Notwithstanding the incompleteness of the collections of plants hitherto made in the islands they are sufficient to enable us to judge of the general character of the flora, and to understand its affinities. Of the aspects and striking features of the flora much may be learnt from Dr. Guppy's book referred to above, and from the writings of Mr. C. M. Woodford¹.

There are two specially noteworthy features in the composition of the flora, namely, the presence of distinct endemic generic types, associated with rare Malayan and Polynesian types, as distinguished from the shore plants of very wide or general distribution in the tropics. The almost total absence of Australian types in the collections is more remarkable, though we must not assume that they are actually so rare as would appear. Even the widely dispersed and conspicuous *Metrosideros polymorpha* is not among the plants collected. Indeed, with the exception of an undetermined species of *Grevillea*, and *Dendrobium hispidum*, there is nothing to indicate any connection. On the other hand the presence of *Riedelia curviflora* and *Lepinia taiensis*, point to a flora of considerable age and wider area. The former has hitherto only been collected in the island of Buru, some 35 degrees west of the Solomon Islands, and the latter only in Tahiti, about 50 degrees to the east. *Lepinia* is a most singular member of the Apocynaceae, described and figured by Decaisne² in 1849.

¹ See Proceedings of the Royal Geographical Society, 1890, f. 393.

² Annales des Sciences Naturelles, 3^{me} série, xii. p. 160. t. 9.

The peculiarity is in the fruit. In the flowering stage the four-celled ovary appears undivided, but soon after the fall of the corolla the carpels separate, except at the tips, and develop slender, almost filiform stalks, about six inches long, curving outwards and forming a kind of depressed pyriform framework. The seed-bearing portions of the carpels are terete, almost horizontal, and joined together by their tips, forming a cross, the arms of which are about an inch and a half long and a quarter of an inch in diameter. Each carpel contains one fluted seed.

This highly curious tree was collected by Mr. Comins in San Christoval. He describes it as about fifteen feet high, and growing by a river-side. In Tahiti it is said to grow on the mountains, and attain a height of eight to ten metres. It must be very rare, one would imagine, in Tahiti, or some of the many English travellers who have botanized there would have collected such a very remarkable thing.

Noteworthy among the novelties of which the specimens are insufficient for description, are a species of *Drimys*, a *Sterculia*, an apparently new genus of Rutaceae-Todalieae, several species of *Canarium* besides the one described below, several Olacineae, Sapindaceae, Myrtaceae and Melastomaceae, a species of the New Caledonia araliaceous genus *Delarabrea*, several Sapotaceae one having very large seeds, a *Cyrtandra* or allied new genus, about half a dozen species of *Ficus*, as many Pandani, Palmae, Aroideae, Orchideae, and Scitamineae. A new genus of Pandanaceae, discovered by Dr. Guppy in Faro Island, is specially interesting. It is a tree fifty feet high, having long narrow leaves and branching female spadices three or four feet long. The male inflorescence is unknown, and the specimen consists of a leaf and detached female flowers. Dr. Guppy also collected one new species of *Myrmecodia* and two of *Hydnophytum*, whose thick, short, tuberous, galleried stems are inhabited by ants.

The discovery of *Pueraria Thunbergiana* in San Christoval by Mr. Comins is an interesting geographical fact. This plant is very common in China and Japan, where it is also culti-

vated, and the fibre it yields is made into a kind of cloth. There is a specimen of it from Buru in the Kew Herbarium, but with this exception I have seen neither specimens nor record of specimens between South China and the Solomon Islands.

Taken as a whole, at least as represented by the small collections, the flora of the Solomon Islands is decidedly Fijian in character.

The following are some of the more interesting plants of which the material is sufficient for description.

Canarium sapidum, Hemsl. n. sp.

Arbor 80-100 pedalis, novellis omnino glabris, ramulis floriferis crassis. *Folia* imparipinnata, nunc parva, 5-foliolata (ramulorum floriferorum), nunc ampla, multifoliolata (ramulorum sterilium), distincte petiolata, petiolo tereti leviter sulcato vel striato; foliola longe petiolulata, petiolulis tenuiter striatis apice incrassatis, vix coriacea, oblonga vel oblongo-lanceolata, rarius ovata, 4-15 poll. longa, abrupte acuminata, interdum caudato-acuminata, basi plus minusve obliqua, undique glaberrima, venis primariis lateralibus numerosis conspicuis prope marginem inter se anastomosantibus et cum venis secundariis subparallelis conjunctis, venulis ultimis sat conspicue reticulatis. *Flores* trimeri, coriacei, circiter 3 lineas longi, racemosi, pedicellis flores æquantibus, racemis axillaribus vel extra-axillaribus glabris vix bipollicaribus. Calyx puberulus, crassus, cupularis, glaber, lobis brevibus deltoideis obtusis; petala 3, crassa, oblongo-ovata, obtusa, basi lata, apice truncata, extus supra medium dense tomentosa; stamina 6, libera, summo disci inserta; ovarium glabrum, 3-loculare, stigmata trilobulato-capitato fere sessili: fructus oblongo-ovoideus circiter bipollicaris, glaber, nitidus, exocarpio carnosio, endocarpio lignoso durissimo.

Treasury Island and Oima-atoll, Dr. Guppy; San Christoval, Rev. R. B. Comins.

Fruit much eaten by pigeons, and the seed eaten and much prized by the natives.

Linociera sessiliflora, Hemsl. n. sp.

Arbor grandis, ramulis floriferis glabris fulvis, internodiis quam folia multo brevioribus. *Folia* brevissime petiolata, subcoriacea, undique glabra, ovato-oblonga, circiter semipedalia, obtuse caudato-acu-

minata, basi cuneata, venis primariis lateralibus utrinque 8-10 sat conspicuis, venis secundariis immersis obsoletis. *Flores* lutei, sessiles, densissime fasciculati, fasciculis circiter 6-floris axillaribus sessilibus, bracteis latis crassis imbricatis persistentibus suffultis; calycis hirsuti lati lobi fere rotundati; petala fere libera, 4-6 lineas longa, angusta, basi dilatata, longitudinaliter involuta; antheræ sessiles; ovarium glabrum.

San Christoval, Rev. R. B. Comins.

Very distinct in the dense axillary sessile fascicles of sessile flowers.

Anodendron oblongifolium, Hemsl. n. sp.

Frutex supra arbores alte scandens, ramulis floriferis glabris graciliusculis ut videtur subcompressis. *Folia* distincte petiolata, tenuia sed vix membranacea, glabra, oblonga, 5-7 poll. longa, abrupte obtuseque acuminata, basi rotundata, subtus pallidiora, venis primariis lateralibus utrinque circiter 10 eleganter arcuatim divergentibus sed vix inter se anastomosantibus. *Flores* pallide lutei (ex Comins) breves, vix semipoll. diametro, cymoso-paniculati, paniculis pedunculatis angustis densiusculis quam folia brevioribus, pedicellis brevissimis; calycis segmenta vix ultra lineam longa, erecta, ovato-oblonga, obtusa, versus margines tenuissima albida, ciliolata; corollæ hypocraterimorphi tubus calycem non excedens, lobis longioribus oblique oblongis obtusis æstivatio dextrorsim obtegentibus sinistrorsim tortis; stamina inclusa, antheris subsessilibus brevissime caudatis: folliculi virides (ex Guppy), divaricati, clavati, semipedales, obtusi, glabri, nudi, demum subcrustacei; semina ovalia, compressa, fere plana, rostrata, longe comosa, cum coma ultra tripollicaria, coma ampla fulva sericea.

Faro Island, Dr. Guppy, in fruit; San Christoval, Rev. R. B. Comins in flower and fruit.

Furnishes an excellent fibre, used by the natives for making fishing lines, nets, etc., in both localities from which we have specimens.

Hoya (§ *Euhoya*) *Cominsii*, Hemsl. n. sp.

Species ex affinitate *H. parasiticæ* et *H. samoensis*, sed petalis, saltem in siccis, multo tenuioribus patentibus, etc.

Folia carnosae, glabra, late ovata, cum petiolo crasso usque 5 poll. longa, obtusa vel subacuta, palmatim 5-7 nervia. *Pedunculi* crassi, diu perennantes, demum usque ad bipollicares (forsan interdum

longiores), floribus numerosis quotannis ad apicem pedunculi confertissimis, pedicellis gracilibus (an vivis?), 6-12 lin. longis. *Flores* cremei (fide Comins) circiter semipoll. diametro; calycis minuti segmenta ovato-oblonga, obtusissima; corollæ rotatæ lobi obscure puberuli vel pulverulenti, late ovati, vix acuti; coronæ squamæ amplæ, ovoideæ, compressæ, subinflatæ, apice emarginatæ. *Folliculi* ignoti.

San Christoval, Rev. R. B. Comins.

The substance of the flowers may have been much reduced by immersion in boiling water before drying; but the corolla appears much less fleshy and the coronal scales much less crustaceous than in the allied species.

Dischidia Milnei, Hemsl. n. sp.

Folia carnosula, sessilia, reniformi-rotundata, 1-1½ poll. diametro, glaberrima, venis immersis inconspicuis. *Pedunculi* crassi, folia vix æquantes, 2-cymosi, pedicellis confertissimis quam flores brevioribus. *Flores* cremei (fide Comins) 1½-2 lineas longi; calycis lobi breves rotundati tenues glabri, corollæ carnosæ subcampanulatæ, lobi erecti, obtusissimi, intus barbati. *Fructus* ignotus.

Solomon Islands, without locality, Milne; San Christoval, Rev. R. B. Comins.

Myristica faroensis, Hemsl. n. sp.

Arbor 15-pedalis (fide Guppy), ramulis fructiferis, crassiusculis, rigidis, rectis, glabris, cinereis. *Folia* petiolata, coriacea, utrinque glabra, oblonga vel ovato-oblonga, 6-9 poll. longa, 2½-4 poll. lata, obtusissima, basi obscure cordata, subtus pallidiora, subglaucula, venis primariis lateralibus utrinque 12-15 subtus sat conspicuis, petiolo circiter semipollicari. *Flores* ignoti. *Capsulæ* cymosæ 3-6 aggregatæ, distincte pedicellatæ, oblongæ, 1-1½ poll. longæ, breviter stipitatæ, acuminatæ, fulvæ, demum bivalvæ, pedunculo circiter pollicari; semen oblongum, circiter 9 lineas longum, arillo coccineo tenuiter lacerato omnino involutum, testa crustacea, albumine concolori luteo.

Faro, Solomon Islands, Dr. H. B. Guppy.

There are two other apparently undescribed species of *Myristica* in the collections, but the material is hardly sufficient for description.

Grammatophyllum Cominsii, Rolfe, n. sp.

Folia linearia, acuta, 22 poll. longa, ¾ poll. lata. *Pedicelli* 3½ poll. longi. *Sepala* obovato-elliptica, obtusa, undulata, 1½ poll. longa. *Petala* subor-

biculari-obovata, $1\frac{1}{2}$ poll. longa, 13-14 lin. lata: *labellum* recurvum, trilobum, $\frac{3}{4}$ poll. longum; lobi laterales triangulari-oblongi, obtusi, basi semi-cordati, lobus medius oblongus, obtusus, 4 lin. longus, $2\frac{1}{2}$ lin. latus; discus pubescens venis incrassatis, lamellis ternis brevibus erectis subadpressis in medio. *Columna* incurva, 5 poll. longa.

San Christoval, Rev. R. B. Comins, 57. Flowers with 'dark brown spots on light yellow ground.'

Allied to *G. speciosum*, Blume, but readily distinguished by its smaller flowers, with more slender, shorter pedicels, and other differences. The spots on the segments are very numerous, and range from half a line to nearly a line in diameter.

Dendrobium tigrinum, Rolfe, n. sp.

Folia oblanceolato-oblonga, obtusa, basi attenuata, 8 poll. longa, $1\frac{1}{2}$ poll. lata. *Flores* magni, insignes. *Pedicelli* $2\frac{1}{2}$ poll. longi. *Sepala* petalaeque infra medio undulatissima, supra attenuato-acuminata: sepalum posticum $1\frac{1}{4}$ poll. longum, basi ovatum, 6 lin. latum; lateralia paullo longiora, basi 8-9 lin. lata. *Petala* 2 lin. longa, basi 4 lin. lata: *labellum* trilobum, $1\frac{3}{4}$ poll. longum; lobi laterales obliqui, late semiovato-rotundati, 6 lin. longi; lobus medius ovato-lanceolatus, acuminatus, apice recurvus, $1\frac{1}{2}$ poll. longus; callus erectus, lamellatus, carnosus, crenulatus. *Columna* brevissima; mentum 5-6 lin. longum, rotundatum.

San Christoval, Rev. R. B. Comins, 187. 'Flowers white and purple.'

A remarkable and very distinct species, belonging to the section *Stachyobium Speciosæ*, allied to *D. atrovioleaceum*, Rolfe, but with all the segments considerably elongated, and the sepals and petals very undulate in their basal half, where they are also spotted and somewhat veined with dark purple. All the nerves of the lip are dark purple, the ground colour, as of the rest of the flower, being white.

COMINSIA, Hemsl. Marantearum novum genus, proxime *Phrynium*. *Sepala* 3, angusta, obtusa. *Corollæ* tubus quam sepala fere dimidio longior, angustissimus, lobi 3, angusti, oblongi, obtusissimi, æquales, patentes vel recurvi. *Androecii* tubus breviter exsertus, limbus 5-merus; staminodiis 2 exterioribus lanceolatis acutis cæteros excedentibus, et quorum 1 cum labello et stamino fertili alternanti altero cum stamino fertili et staminodio interiore lato 1-auriculato alternanti; labello lato brevi laminato-cristato. *Ovarium* 3-loculare, 3-ovulatum, extus basi barbatum; stylus incurvus, stigmatibus bilamellatis.

Fructus triangulato-oblongus, loculicide trivalvis, pericarpio cartilagineo. *Semina* 3, oblique-oblonga, subquadrata, testa crustaceo-suberosa, grosse rugosa, hilo discoideo, arillo annulato angustissimo; embryone magno leviter curvato, excentrico, cum vacuo verticali subparallelo.

Cominsia Guppyi, Hemsl. n. sp.

Herba perennis, erecta, undique glabra, caudicibus petiolo vaginanti cum axi inflorescentiæ, floriferis monophyllis absque folii lamina 6–8 pedilibus inflorescentia simplici sesquipedali recurva supra medium vaginæ pendula. *Folia* absque petiolo 2–5 pedalia et circiter 9 poll. lata, membranacea, oblonga, breviter acuminata, venis primariis lateralibus majus conspicuis cum venis circiter 8 unius conspicuis alternantibus. *Flores* albi vel straminei, fasciculati, subsessiles, circiter 6, intra bracteas angustas complicatas spathiformes 2–2½ poll. longas distichas aggregati, singulatim evoluti, perianthii limbo cum genitalibus tantum ex apice bracteæ exserto.

Faro, Dr. H. B. Guppy; San Christoval, Rev. R. B. Comins.

The nearest affinity of this remarkable plant is with the section *Spicata* of the genus *Phrynium*, differing in the elongated, pendulous, distichous inflorescence; the very much elongated corolla-tube; the remarkably rugose seed; and the decidedly dehiscent fruit.

DESCRIPTION OF THE FIGURES IN PLATE XXVII.

Illustrating Mr. Hemsley's paper on New Solomon Islands Plants.

Portion of leaf and portion of inflorescence of *Cominsia Guppyi*, Hemsl., natural size.

Fig. 1. Terminal cluster of flowers, with the bract set back to show the flowers and bracteoles.

Fig. 2. Ovary and base of perianth.

Fig. 3. Upper part of the tube and the limb of the androecial series, consisting of lip and four dissimilar unsymmetrically arranged lobes, two of which have been removed nearly to the base. Of the other two, the one on the right is antheriferous, and the one numbered 4 is auricled on the other side.

Fig. 4. Part of auricled lobe of androecium, seen from the outside.

Fig. 5. Antheriferous lobe, seen from the inside.

Fig. 6. Portion of style, with recurved stigma.

Fig. 7. Capsule from which one valve has been removed.

Fig. 8. Section of seed, showing embryo and cavity in albumen.

All more or less enlarged.

M. Smith del.

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