

**The Genus *Horsfieldia* (Myristicaceae)
in and outside Malesia I:
H. sabulosa and *H. whitmorei* J. Sinclair spp. nov.**

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The present paper comes from a manuscript which at the time of the author's demise was at Kew Herbarium, sent there in advance for his proposed completion of the work on the genus *Horsfieldia*. The Botanic Gardens in Singapore gratefully acknowledge the co-operation from individuals and herbaria who have loaned their specimens for the study by the late Mr. J. Sinclair and are grateful to Mr. J. P. M. Brennan, Keeper of the Kew Herbarium and Library for promptly taken steps in returning the script. The manuscript contains complete descriptions of 33 species and many varieties, and citations only of specimens under *H. macrocoma* and *H. irya*. Regretfully, the classification system, many keys, distribution maps, illustrations and the collector's index had not been written up. This article describes the two new species named by the author and is the first in the series. Ed.

***Horsfieldia sabulosa* J. Sinclair, sp. nov.**

Species affinis *H. wallichii* a qua ramulis crassioribus, teretibus (nec apice leviter compressis), foliis multo angustioribus, apices ramulorum versus dense confertis, polystichis nec distichis, petiolis longioribus et nervis plerumque minus distinctis differt.

Arbor excelsa 10–37 m alta. *Cortex* ferrugineus longitudinaliter sulcatus; latex ruber, copiosus. *Ramuli* in innovationibus ferrugineo- vel griseo-ferrugineo-tomentelli, 0.7–1 cm crassi, in partibus inferis glabri, nigro-grisei et cum multis cicatricibus foliorum delapsorum spiraliter tecti, distaliter longo intervallo simplices ut videtur, forsitan multo inferne ramos primarios versus furcati, cortice interdum excidente. *Folia* polysticha, apices ramulorum versus dense conferta, coriacea, angustissime oblonga, marginibus fere parallelis minute revolutis, supra nitida, modice viridia, subtus glauca, siccitate supra griseo-viridia, hic illic nigricantia, subtus moribundo-brunnea, utrinque acuta, basi in petiolum paullo decurrentia, 15–18 cm longa, saepissime 16 cm longa, 4–6 cm lata, vulgo 4.5 cm lata; costa supra in sulcam depressa, subtus convexo-elevata ibique primo minute puberula deinde glabra; nervi 15–18-jugati, fere paralleli, supra depressi, tenues, similes incisuris apertis cultro tonsorio inflictis, subtus minus distincti et in partibus subevanidi; reticulationes invisibiles; petioli (pro laminis comparati longi) 3.5–5 cm longi, 3 mm crassi, minute tomentelli, glabrescentes. *Inflorescentia mascula* et *flores masculi* ignoti. *Inflorescentia feminea* immatura, nondum evoluta, 2 cm longa, bracteis pluribus bene munita; bractee 1 cm longae, 2–4 mm latae, pilis dendroideis 1–1.5 mm longis dense indutae, dactyloideae, supra flores inflexae et eos celantes; flores minutissimi, enimvero multo immaturi, glabri, breviter pedicellati; ovarium

glabrum. *Fructus* flavus, glaber, ovoideus, in sicco 4–4.5 cm longus, 3.5–4 cm latus, ei *H. wallichii* similis sed probabiler paullo minor; pericarpium in vivo carnosum, in sicco lignosum, 5 mm crassum, non nitidum (opacum); stipes (pedicellus) 0.5–1 cm longus, 5 mm crassus. *Arillus* aurantiacus. *Semen* 3 cm longum, 2.7 cm latum.

Tall tree 10–37 m high (30–120 ft). *Bark* reddish brown, longitudinally furrowed; sap red, copious. *Twigs* in the innovations rusty- or rusty-greyish-tomentulose, 7 mm –1 cm thick, lower down glabrous, blackish grey and spirally covered with many scars of fallen leaves, apparently simple distally for some distance, probably branched far down near their junction with the main branches, the bark sometimes peeling off. *Leaves* in several rows, bunched towards the ends of the twigs, coriaceous, very narrowly oblong with the sides nearly parallel and minutely revolute, medium green and glossy above, glaucous beneath, drying greyish green above with some blackish patches and a faded brown beneath, acute at both ends with the base slightly decurrent on to the petiole, 15–18 cm long, many of them constantly 16 cm long, 4–6 cm broad, average 4.5 cm broad; the midrib sunk in a groove above, raised and convex beneath and there at first minutely puberulous, later glabrous; nerves 15–18 pairs, nearly parallel, sunk above, very slender and like open slashes with a razor blade, less distinct and vanishing in parts beneath; reticulations invisible; the petioles 3.5–5 cm long (long in proportion to their blades) 3 mm thick, minutely tomentulose becoming glabrous. *Male inflorescence* and *male flowers* unknown. *Female inflorescence* immature, not yet open, 2 cm long and well protected by bracts; the bracts 1 cm long and 2–4 mm broad, densely covered with 1–1.5 mm long dendroid hairs, finger-shaped, curving over the flowers and concealing them; flowers very small and indeed very immature, glabrous and shortly stalked; ovary glabrous. (The flowers are so small that there is no point in giving measurements and further details.) *Fruit* yellow, glabrous, ovoid, 4–4.5 cm long and 3.5–4 cm broad (measurements from dried material), similar to that of *H. wallichii* but probably a little smaller, the pericarp fleshy when fresh, woody and brown when dry, 5 mm thick, dull having the usual mat or parchment-like surface of dried *Horsfieldia* fruits; stalk (the pedicel portion) 0.5–1 cm long and 5 mm thick. *Aril* orange. *Seed* 3 cm long and 2.7 cm broad.

BORNEO

SARAWAK:

1st Division:—Gunong Gaharu, Serian, *Sinclair* 10248 (A, E, K, L, SAR, SING): Sungei Sabal Tapang, Serian, *SAR* Nos 12671 (SAR) and 12691 (SAR).*

3rd Division:—Aup, Sibuan, *J. Wright* 632 as *FA* 412 (SAR, SING).

4th Division:—Niah-Jelalong Protected Forest, Sungei Meluang, Bintulu, *Brüning* *SAR* 956 (K, L, SAN, SAR, SING).

BRUNEI:

Andulau Forest Reserve, Belait District, *Ashton & Whitmore* *BRUN* 579 (BO, K, KEP, L, SING); *Smythies* *BRUN* 828 (BO, K, L, KEP, L, SAR, SING); cpt 6, *Ashton, Smythies & Wood* *SAN* 17560 (KEP, L) and ditto (north part) *Sinclair & Kadim bin Tassim* 10437 (A, BM, E, FI, K, L, SAR, SING); Bukit Labi at the 5½ milestone; *Sinclair & Kadim* 10491 (A, B, E, K, L, NY, SAR, SING).

* Author intended to check the identity of 12671 & 12691.

SABAH:

Interior Residency:—Mengalong Forest Reserve, Sibubu River, 3½ miles south-south-west of Sipitang, *Wood SAN 15146* (L, SAN, SING).

DISTRIBUTION: Borneo (as above).

TYPE MATERIAL: *Sinclair & Kadim 10491* (A, B, E, K holotype, L, NY, SAR, SING) Bukit Labi F.R., Brunei.

A tree of sandy soil or sand with a little peat; in Brunei sometimes growing with *Agathis alba* ssp. *borneensis*. It is closely allied to *H. wallichii* from which it should be distinguished vegetatively by the growth habit of its twigs and the narrower leaves with longer petioles. It is a pachycaul whereas *wallichii* is a leptocaul. Thus in *sabulosa* the leaves are all closely bunched towards the ends of the twigs in a spiral, non-distichous fashion. The twigs are much stouter than those of *wallichii* and are not flattened or compressed at their extremities. Below the innovations they bear numerous scars of fallen leaves also in several ranks. Such portions of twigs as conveniently fit a herbarium sheet are not branched; some of them probably branch far down near where they join on to the main branches. In contrast similar portions of the same length in *wallichii* are usually branched once on a herbarium sheet if not two or three times. The narrower leaves of *sabulosa* have their sides nearly parallel and do not broaden out just above the base. The 3.5–5 cm long petioles at once catch the eye as being long in proportion to the blade. They are 2 cm long on the average in *wallichii* with an overall range of 1–3 cm. The veins on the undersurface of the leaves are much fainter than those of *wallichii* and sometimes fade out altogether, but, as is the general rule in *Myristicaceae* thin-leaved specimens with more prominent veins not yet collected will probably turn up. A greyish brown indumentum on the young petioles, lower midrib and innovations may also help in identifying this species. Of the two, *sabulosa* seems to be the taller for the examples I collected in Brunei were from trees 100 and 120 feet high. Ashton also collected from trees 100 feet in height. Along with *H. ridleyana* all three have the same reddish brown, longitudinally furrowed bark and a rather similar firm fleshy fruit which has a minutely rough parchment-like surface when dry. The fruit of *sabulosa* is probably slightly smaller than that of *wallichii*, *ridleyana* having the smallest but this information requires confirmation.

It seems strange that with so different a vegetative habit the fruit of both species should be the same. It may be that *sabulosa* is after all only a variety or subspecies of *wallichii*, yet this seems rather unlikely. I have been waiting patiently since 1955 for male flowers to turn up, hoping that they may finally settle this problem. The female flowers from *Wood SAN 15146* collected near Sipitang, Sabah in 1955 are so very young as to be of no value in deciding. Even their inflorescences have not yet unfolded from the bud stage.

***Horsfieldia whitmorei* J. Sinclair, sp. nov.**

H. novoguineensis (non Warb.) A. C. Smith in J. Arn. Arb. 22, 1 (1941) 62 *pro parte quoad* Kajewski 2022 (*altera pars* = *H. irya* et *H. spicata*); *H. palewensis* (non Kanehira) Whitmore, Guide to the Forests of the British Solomon Islands (1966) 131 & 186 in check list, correct original spelling is *palauensis*).

Species endemica affinis *H. iryae* et *H. spicatae* et cum eis in Insulis Salomonis crescens. A priore dimidia parte floribus masculis longioribus et laxius dispositis in inflorescentia brevior et minus evoluta, fructibus oblongis, reticulationibus foliorum subtus scalariformibus nec retiformibus differt; ab altera floribus masculis minoribus globosis nec lateraliter elongatis, foliis pro rata angustioribus, costa in canaliculo petioli elevata, reticulationibus subtus saepius visibilibus, lenticellis minoribus recedit; ab ambabus floribus pallidioribus (cremeis), ramulis rubro-brunneis (non nigro-griseis ut in *iryae* nec stramineis ut in *spicata*), subtilius striatis cum lineis duabus ex petiolo ad petiolum carentibus vel subnullis, nervis foliorum pro rata magnitudini laminae plus numerosis, inter se magis approximatis obliquis, in arcibus singulis, raro duplo-anastomosantibus cum arcibus marginalibus ipsis prominentioribus distinguitur.

Arbor 7–22 m alta, vulgo 12 m, sine radicibus adventitiis. *Cortex* fibrosus extus fuscus, intus rubro-brunneus vel subroseus, verticaliter fissuratus demum papyraceo-squamulosus; latex ruber copiosus. *Ramuli* 3–4 mm crassi rubro-brunnei (lateritii) teretes, in innovationibus cum pilis brevissimis stellato-dendroideis tomentelli, in partibus inferis glabri, striolati, nonnunquam lenticellati, hic illic in quibusdam internodiis excavati. *Folia* chartacea, infrequenter coriacea, supra in sicco griseo-brunnea vel virido-brunnea, subtus pallidiora, nervis exceptis leviter rubro-brunneis, glabra, anguste oblonga cum lateribus fere parallelis, basi acuta, apice acuminata; costa supra sulcata, plana vel convexa, et itidem in sulco petioli conspicue elevata; nervi (16)–22–26–(30)–jugati, vulgo 23 paria, in foliis parvis 16 paria, inter se proximi, 7 mm–1.5 cm distantes, vulgo 8 mm, recti, paralleli vel saepe curvati, angulo 45–70° orti, supra impressi, subtus prominentes, prope marginem in arcibus singulis perspicue anastomosantes (tantum in foliis latissimis duplo conjuncti); reticulationes supra invisibiles, subtus subtiliter scalariformes; lamina 12–30–(42) cm, vulgo 21 cm longa, 3–6.5–(9) cm, vulgo 4.5 cm lata, petiolus 0.7–1–1.5 cm, vulgo 1 cm latus, 2 mm crassus. *Inflorescentia mascula* cum pilis minutis dendroideis ferrugineis vel pallido-brunneis vel griseis pubescens vel breviter tomentosa, gracilis, 2–8 cm longa, 1 cm in diam.; ramuli secundarii ac tertiarum 0.5–3 cm longi, primo adscendentes, deinde patentes vel reflexi, ultimi in cymas subracemosas terminantes. *Flores masculi* fragrant, cremei vel flavidi semper coloris pallidi nunquam aurantii vel intense flavi, in textura variabiles, tenues vel coriacei, glabri vel saepe in partibus inferioribus tenuiter pilosi, globosi, in sicco 1.5 mm in diam., in vivo 2 mm, primum in lobos duos rotundos $\frac{1}{2}$ -fissi, denique fissura perianthii deorsum suturam secus fere ad basin floris attingens, sutura ea plerumque prominens elevata, non-nunquam in sulcam circumferentialem depressa. *Columna staminalis* compresso-globosa, 1 mm in diam., brevissime stipitata vel fere sessilis, eius depressio apicalis stomatibus similis, primum angusta et fere clausa cum lateribus arcte compressis, postea ad plenum anthesin in latitudine augens, cavitas nunc profundior, $\frac{1}{4}$ partem totae columnae aequalta; antherae 10 in cupulam staminalis inflexae, apicibus interdum subliberae; pedicelli 1.5–1.8 mm longi, aliquando 2–(2.5) mm longi, 0.2 mm crassi, pilis ut in inflorescentia pubescentes. *Inflorescentia feminea* 1.5–5 cm longa, ramuli eius quam ei inflorescentiae masculae breviores pauciores, 0.5–1 cm longi; inflor. fructifera 10 cm longam attingens. *Flores feminei* ovoideo-globosi, 2 mm in diam. (in sicco), aliter ut in masculi; pedicelli 1 mm longi, 0.5 mm crassi; ovarium tomentosum, 1.5 mm longum, 1–1.2 mm latum. *Fructus* pallido-flavus (probabiliter in maturitate rubescens) in sicco rubro-brunneus, glabrus, oblongus, utrinque rotundatus, 2–2.3 cm longus, 1.5 cm latus cum linea suturali prominenti; stipes 1 cm longus, 2–3 mm crassus. *Arillus* aurantiacus.

Tree 7–22 m high, average 12 m, stilt-roots absent. *Bark* fibrous, dark brown on the surface, reddish brown to pink inside, vertically fissured and finally flaking in small papery scales; sap red, abundant, free flowing. *Twigs* 3–4 mm thick, reddish brown (brick-red) terete, tomentulose in the innovations with very short stellate-dendroid hairs, lower down glabrous, finely striate and sometimes lenticellate, hollow here and there in certain internodes. *Leaves* chartaceous, infrequently coriaceous, drying greyish brown or greenish brown above, paler beneath except the reddish brown nerves, glabrous, narrowly oblong with the sides nearly parallel, the base acute, the apex acuminate; the midrib sulcate above, flat or convex and moreover in the same way conspicuously raised in the channel of the petiole; the nerves (16)–22–26–(30) pairs, mostly 23 pairs, 16 pairs in small leaves, close to each other, 0.7–1.5 cm apart, usually 8 mm, straight, parallel or often curved, arising at an angle of 45–70°, impressed above, prominent beneath, very clearly inter-arching near the margin in single loops (only in double loops in very large leaves); reticulations invisible above, very finely scalariform beneath; blade 12–30–(42) cm long, usually 21 cm long, 3–6.5–(9) cm broad, average 4.5 cm broad; petiole 0.7–1–1.5 cm long, average 1 cm long, 2 mm thick. *Male inflorescence* pubescent or shortly tomentose with minute rusty or pale brown or greyish dendroid hairs, slender, 2–8 cm long and 1 mm in diam.; the secondary and tertiary branches 0.5–3 cm long, at first ascending, later spreading and reflexed, the ultimate ones ending in subracemose cymes. *Male flowers* sweet scented, cream-coloured or pale yellow, always of a pale colour, never orange or a deep yellow, variable in texture, thin or coriaceous, glabrous or often thinly pilose, globose, 1.5 mm in diam. in dried specimens, 2 mm in diam. in fresh ones, at first split down $\frac{1}{2}$ -way into the two rounded lobes, finally the split of the perianth reaching downwards along a suture almost to the base of the flower, the suture usually prominent and raised, sometimes sunk in a groove girdling the circumference. *Staminal column* globose but slightly flattened laterally, 1 mm in diam., very shortly stalked or almost sessile, its apical depression like that of stomata, at first narrow and almost closed with the sides tightly drawn together, later increasing in width at the peak of flowering, the cavity now deeper, $\frac{1}{4}$ as deep as the whole column; anthers 10, bent over into this staminal cup, sometimes slightly free at their apices; pedicels 1.5–1.8 mm long, occasionally 2–(2.5) mm long, 0.2 mm thick, pubescent with hairs as in the inflorescence. *Female inflorescence* 1.5–5 cm long, its branches shorter and fewer than those of the male inflorescence, 0.5–1 cm long; fruiting inflorescence reaching 10 cm long. *Female flowers* ovoid-globose, 2 mm in diam. (when dry), otherwise as in the male; pedicels 1 mm long and 0.5 mm thick; ovary tomentose, 1.5 mm long and 1–1.2 mm broad. *Fruit* pale yellow (probably reddening at maturity), reddish brown when dry, glabrous, oblong, rounded at both ends, 2–2.3 cm long, 1.5 cm broad with the line of suture prominent; stalk 1 cm long, 2–3 mm thick. *Aril* orange.

SOLOMONS

BOUGAINVILLE:

Koniguru, Buin, *Kajewski* 2022 (A, BM, BO, BRI, G, L, NSW, S).

SHORTLAND ISLAND:

North-east end, *T. C. Whitmore's* collectors BSIP 5905 (L, SING).

East end opposite Bembalama Island, *T. C. Whitmore* BSIP Nos 4045 (L, SING) and 4046 (L, SING).

WAGINA ISLAND:

Whitmore's collectors BSIP 5529 (L, SING).

NEW GEORGIA GROUP:

Baga Island:—*Whitmore's collectors BSIP Nos 2811 (L, SING); 3052 (L, SING) and 5569 (L, SING).*

Gizo Island:—*Whitmore's collectors BSIP Nos 3035 (L, SING) and 5617 (L, SING).*

Kolombangara Island:—North coast, Rei Cove, *Whitmore 1537 (L, LAE, SING)*; east coast in swampy forest area, *Whitmore BSIP 4096 (L, SING)*; west coast, Merusu Cove, *Whitmore BSIP 1405 (L, LAE)*; Kape Harbour, flat land behind camp along Lever's enumeration Line, *Womersley & Whitmore BSIP 803 (L, LAE, SING).*

New Georgia Island:—All from north-west part, Vaimbu River, *A. W. Cowmeadow BSIP 3679 (SING)*; near Jela, *Whitmore's collectors BSIP 3745 (L, SING)*; Kimbukimbu River, *Cowmeadow's collectors BSIP 3218 (SING)*; Lae River, *Cowmeadow's collectors BSIP 4834 (SING).*

Vangunu Island:—Ridge in forest, near Merusu Island, *Whitmore BSIP 970 (L, LAE, SING)*; Sosole River, *J. W. P. Chapman 427 (K, SING).*

Rendova Island:—Zaimane River, west coast, *Whitmore BSIP 1848 (LAE, SING).*

SANTA ISABEL (YSABEL):

Maringe Lagoon, near Tiratona Village in dense forest over limestone, *Whitmore BSIP 2273 (L, LAE, SING)*; ultrabasic ridge half a mile due west of Tatamba, *Whitmore BSIP 2582 (L, SING).*

MALAITA:

Are Are District, Kiu west coast, *Z. Lipaqeto BSIP 3406 (L, SING)*; 3 miles inland from Kiu, tributary of Wairaha River, *Lipaqeto & Whitmore BSIP 3481 (L, SING).*

ULAWA ISLAND:

Between Haraina und Mwadoa R. *Teona BSIP 6230 (SING).*

GUADALCANAL:

Rere River, 3 miles inland, *Lipaqeto BSIP 3318 (SING)*; forest adjacent to Tina River, 12 miles from the coast, *Whitmore & Womersley BSIP 1124 (L).*

SAN CRISTOBAL:

Wairaha River, 5 miles from north coast, *Whitmore BSIP 4230 (L, SING).*

DISTRIBUTION. Widely distributed throughout the Solomons, endemic.

TYPE MATERIAL. *T. C. Whitmore BSIP 1848 (K, LAE, SING lectotype)* Rendova Island, New Georgia Group.

The author has indicated in the M.S. that were he to find the KEW holding unsuitable as a holotype, the SING would be preferential. Since selection is not indicated, the latter is designated here as lectotype.

Ed.

ECOLOGY. On a variety of habitats, but not in mangrove. Mostly in primary forest on flat land, ridge tops, and river banks, dry and swampy, also in secondary forest in well sheltered valley bottoms. Apart from alluvial, the kind of soil is not

often stated but limestone, ultrabasic, igneous rock and red soil have been recorded. Therefore it may be concluded that this species is tolerant of a wide range of habitats and is not very "choosy". Flowers during all months from September to May with peak periods in December and April. Fruiting is from October to May with peak periods in January and May.

VERNACULAR NAMES. *Aininiu* (Kwara'ae language) the usual spelling. Other variations are *aininu*, *ainunu* and *ainynu*; *kisu-kisu* (Buin, Bougainville). The name *aininiu* is also the one in common use for *H. irya*.

It seems that *H. whitmorei* arose in the isolation of the Solomons from a gene pool supplied by only two species, namely *H. irya* and *spicata* for certain morphological features of both these ancestors reappear in this endemic. The resemblances are too close for it to have been in the Solomons before the arrival of *iryia* and *spicata* or conversely also too close if we suppose that there was no connection. These two are the oldest members of the flora and must have been there first. They are more numerous in individuals than our present species and also seem to have a greater geographical range occurring in nearly all the islands of the Solomons. In fact *iryia* has a very wide distribution throughout Malesia and not only there but it extends from Indo-China, Siam, Burma, the Andamans and Ceylon to Palau in the Carolines. It is the most widely collected species and the type of the genus. It has more synonyms and references in the literature than any other *Horsfieldia*. *H. spicata* begins in the Moluccas and also ends in Palau. It has been recorded from numerous islands in the Bismarck group as well as in New Guinea and it will have a wider range still if one unites it with *parviflora*.

One may argue that the genetical complex of *whitmorei* is drawn from more species than two and that it could have come from species now extinct in the Solomons. This is not very likely as the flora of the Solomons is poor in species in comparison with New Guinea and Malesia. Island floras are always poorer than those of adjacent mainlands. Whitmore on the very first page of his book, "Guide to the Forests of the British Solomon Islands" deals with this subject and also remarks about the poverty of the flora of Melanesia.

Our present species is much more than a hybrid between *iryia* and *spicata*. It is a distinct species with quite a number of differences. It probably first arose with fertilization in the female tree of *spicata* by the pollen from *iryia*. It has retained the oblong fruits of *spicata*; these are identical. The male flowers are like those of *iryia* because of their globose shape, but being slightly larger, they take after *spicata* in size; yet none are as large as those of *spicata*. *Whitmorei* differs from them both in having no raised lines on the twigs but a faint indication of the two lines on more than one occasion has been seen.

Sterile or atypical specimens are often troublesome to identify so it is better to be thoroughly acquainted with details of the differences between the three. Besides the points mentioned above the following may be helpful.

Our present species has very finely striate brick-red twigs and the lenticels (not always present) are rather small. *H. irya* has blackish twigs with larger, more numerous lenticels and the two lines from petiole base to petiole base are raised and very distinct. *H. spicata* has pale straw-coloured twigs but it can have other colours as well such as medium to dark brown and greyish shades. The striations are generally coarser, the two lines present or absent and not usually so distinct as those of *iryia*. The leaves are narrow with nearly parallel sides and thus look more like those of *iryia*. There are some narrow-leaved specimens of *spicata* which

at times are very close also to those of our present plant but they may be distinguished by their slightly different venation and the lack of a raised midrib in the groove of the petiole. *Whitmorei* has the nerves more strictly parallel and closer spaced than those of the other two. The nerves interarch at the margins with greater regularity and distinctness, forming single loops. Only in very large leaves are there double loops. They are much impressed on the upper surface of the leaf. The other two often have double loops while the primary loops may be faint, broken or indistinct in parts. The nerves of *irya* tend to leave the midrib at a much greater angle, sometimes almost at right angles. In such cases they curve more, ascending more gradually. Those of *spicata* are often more oblique and parallel but not quite so strictly parallel and equidistant as those of our present species. The reticulations, present on the lower surface, are scalariform. Those of the other two form a lax network. In *spicata* they are not so distinct and are often absent or seen only with a hand-lens. The lamina of all three may, at times, show whitish marks, patches or streaks when dry, but this feature is much commoner in *irya* than in the others. The inflorescence especially the male is much branched and well developed in *irya*. That of the other two is simpler, perhaps *spicata* would come next in order and then *whitmorei*, but in many cases there is not much difference in complexity or simplicity between these two and it would be hardly correct to put the one before the other. The globose male flowers are half as big again as those of *irya* but as already pointed out not so big as the turbinate or obtriangular ones of *spicata*. They are fewer in the inflorescence when compared with an inflorescence of *irya* but this is only natural: being larger they take up more room. They are cream coloured and therefore much paler than those of *irya* and *spicata*. Finally the fruit is oblong like that of *spicata*, *irya* having a perfectly spherical fruit. Such oblong fruits will match ones in *spicata* having the same size but the fruit is of various sizes in *spicata* and sometimes flattened, so it should be possible in some cases to identify the larger ones with *spicata*.

I must confess that without Dr. Whitmore's valuable Solomon Islands collections I should never have properly understood this species or been aware of its existence. Before the advent of his specimens I had only seen *Kajewski 2022* to which I had given various preliminary names including *novoguineensis*, *irya* and *spicata* and *Chapman 427* which I had wrongly dismissed at the time as something different. Incidentally the *Chapman* specimen is a very good example of *whitmorei* with very fine male flowers but it has coriaceous leaves that have dried a pale brown. Just because of the thickness of the leaves and their unusual colour it looks at first quite puzzling. The student will recall several instances of this sort of thing in *Horsfieldia* where chartaceous leaves are replaced by coriaceous ones of a darker or lighter colour, thus altering considerably the normal appearance of the species e.g. *glabra*, *polyspherula*, *reticulata*, *spicata*, *subglobosa* and others.

A. C. Smith also named *Kajewski 2022* *H. novoguineensis*. In fact he referred the *Brass* and *Kajewski Horsfieldia* numbers from the Solomon Islands to this species; but actually his *novoguineensis* included all three of the Solomons species, namely, *irya spicata* and *whitmorei*.

I had therefore come to the conclusion that the *Brass* and *Kajewski* specimens were *irya* and *spicata* but there was some doubt about the latter as I thought some of those with narrow leaves might be *palauensis*. I should probably have finally concluded that *Kajewski 2022* was a narrow-leaved form of *spicata* but, as pointed out, I should not from a single gathering have recognized it as a new species. The next stage was the arrival of Whitmore's collection and his information that there

were three species of *Horsfieldia* in the Solomons. At first we both thought that the third species might be *palauensis* because of its oblong fruit but I had not then examined flowering material of the latter nor had I any available in Singapore with which to make a comparison. In the meantime Whitmore's book was published. I did not pursue the matter any further at that time since I had then only just started to write up *Horsfieldia*. In the final stages when I did eventually come to examine *whitmorei* and *palauensis* I saw that they were not identical. The latter is not different from the wide-spread *spicata*. I am grateful to the herbaria of BISH, TI and TNS for the loan of material of *palauensis*.



Sinclair, J . 1974. "The genus *Horsfieldia* (Myristicaceae) in and outside Malesia I : *H. sabulosa* and *H. whitmorei* J. Siricclair spp. nov." *The Gardens' bulletin, Singapore* 27, 133–141.

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