

NOTES ON THE SYSTEMATY OF SOLOMON ISLANDS'
PLANTS AND SOME OF THEIR NEW GUINEA RELATIVES. XI

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XI. TAPEINOSPERMA (MYRSINACEAE)

Preliminary to a revision of the Myrsinaceae of the British Solomon Islands, we have found it necessary to name and validate the two large undescribed species of *Tapeinosperma* Hook.f., diagnoses of which are given in this paper, in order that their names may be available for use in connection with studies of the phytogeography of the Solomon Islands. These striking new species both exemplify the pachycaul, megaphyll treelet life-form which seems unusually well-represented by species of diverse genera and families in the Solomons, and is by no means uncommon in the Myrsinaceae (see Fig. 3). Discussion of other matters, such as the problem of relationship — all too close — between *Tapeinosperma* and *Discocalyx* Mez, and the enumeration of the remaining Solomons' Myrsinaceae of the genera *Aegiceras*, *Ardisia*, *Maesa*, *Rapanea*, and *Discocalyx*, is deferred for a later publication.

Most of the materials cited herein were collected under the auspices of the British Solomon Islands Forest Department. The holotype of one species was collected on the 1965 Royal Society Solomon Islands Expedition. An additional collection cited was made by B. C. Stone in 1957 while on a pandanological trip. We are grateful to the curators of the herbaria at Kew, Singapore, Honiara, and the Bishop Museum for their generosity in making specimens available for study.

Tapeinosperma pachycaulum Stone et Whitmore, *sp. nov.* — Figs. 1, 2.

Arbuscula; folia magna petolis elongatis valde alatis amplexicaulibus, laminis ad 105 cm longis et 38 cm latis ellipticis vel oblonge acutis vel obtusis base rotundato-decurrentibus in alam confluens; inflorescentiae e

foliorum normalium axillis provenientes, multiflorae, laxe divaricatae, Foliis breviores, pedunculis ad 36 cm longis, axibus primariis ad 12—20 cm longis, pedicellis ad 5 mm longis; flores vix 4 mm longis; bacca subglobosa sepalis persistentibus, endocarpio rigide crustaceo, 1-sperma.

TYPUS: *Whitmore's collectors BSIP 5U75 (SING).*

An erect, unbranched or at last sparingly branched, small megaphyllous pachycaul tree, the bole to about 5 m tall and 30 cm girth, with fawn-coloured bark, above with prominent leaf-scars, the pith large and central, the xylem narrow, with broad rays. Leafy shoots stout, the leaves rather crowded toward their apices. Leaf blades oblong-obovate to subelliptic, commonly 50—105 cm long, 18—38 cm broad, rounded, obtuse or subacute at apex, rounded at base but the margins merging with the broad petiole-wings; petiole up to 25 cm, usually 10—20 cm, dorsally rounded, broadly winged, wings to 10—15 mm broad, enlarged and clasping stem at their base; young petioles and buds somewhat brown-puberulent with stiff linear crowded subappressed trichomes about 0.3 mm long. Inflorescence axes scabridulous-papillate; blades gland-dotted, also punctate, each areola with central dot; but otherwise glabrous. Inflorescence axillary among leaves, paniculate, 4—5 times branched, branchlets ascending, to 36 cm long overall, main peduncle nearly 1 cm thick, ultimate branchlets about 1 mm thick; pedicels mostly 2—5 mm long; flowers yellowish in bud, pinkish to red or violet when mature. Sepals deltoid-ovate, with a few large oval purplish warts, 1.5 X 1 mm, imbricate dextrorsely (overlap less than 0.5 mm) with purplish warts on exterior, these about 0.2 mm long; inner basal part of corolla with many minute dot-like glands; stamens 2/3 as long as petals, the filaments flat, narrowly deltoid below, straight above, 0.25 mm wide, anthers just over 0.5 mm long, plump and subglobose, incurved in bud, erect at anthesis, opening by 2 short oval slits near apex. Ovary glabrous, ellipsoid, 1 mm long, style and stigma 1.5 mm long, stigma discoid and slightly undulate-lobate. Placenta basal, nearly 0.5 mm high, with 3 or 4 ovules; ovarian chamber about 1 mm high; fruit a red-magenta drupe, smooth, globose, capped by a small acuminate styler remnant, calyx subpersistent at the base, epicarp thin, internally purple-spotted, testa light brown cartilaginous-woody, endosperm white; seed single.

BRITISH SOLOMON ISLANDS. MALAITA. Kwara'ae District, Kwalo, ca 2000 ft alt., small shrubby tree with leaves about 2 ft long, dark dull green above, pale greyish-green beneath, midrib yellowish above, purplish-dotted beneath; fruit magenta-pink; n.v. "tarikunu"; 29 Sept. 1957, *Stone SU5 (BISH, US)*. — NEW GEORGIA ISLANDS. Kolombangara Isl., W. coast, inland from Iri-iri Village, Merusu Cove, valley-bottom forest at 1200 ft alt.; tree, leaves, to 3.5 X 15 in, midrib cream-coloured above, lamina grey beneath with purplish secondary nerves, 29 Sept. 1963, *Whitmore BSIP 2152 (SING)*. — BAGA ISLAND, valley-bottom; tree with straight bole and scented yellow flowers, 2 Oct. 1964, *Whitmore's, collectors BSIP 3021*; same locality, 4 Oct. 1964, *BSIP 5561*. — SANTA YSABEL. Allardyce Harbour, coastal lowland swamp, tree with dark red fruits, 7 June 1963, *Sore, Masu'u and Lipaqeto BSIP*

2608. — SAN CRISTOBAL. Wairaha River 5 mi. from N. coast, nr. river, unbranched treelet 10 ft high, leaves grey beneath, main veins purple-brown, 5 Dec. 1964, *Whitmore BSIP 4305*. — ROB ROY ISLAND. Ridge top at 100 ft alt., tree 16 ft tall, flowers violet, unscented, 3 Sept. 1964, *Whitmore's collectors BSIP 5S18*. — WAGINA ISLAND: ridge top at 30 ft alt., in well-drained soil, primary forest; a tree to 16 ft tall, with straight bole, red scented flowers; 16 March 1964, *Whitmore's collectors BSIP 5i75* (holotype SING; isotypes K, L, LAE, BSIP, US).

This species is sharply distinct from all others known to us in the genus, by the truly enormous size of the leaves. In Mez's key (*Myrsinaceae: Engl. Pflanzenr.*, 1901) it comes near to *T. clethroides* and *T. robustum*, but is much larger in its vegetative parts than these two New Caledonian species. Another possible relative is *T. ligulifolium* A. C. Smith of Fiji, but again that species has smaller and differently shaped leaves, smaller inflorescences, and a placenta with only 2 ovules. The most similar species in its general aspect may be *T. megaphylla* (Hemsley) Mez.

In the Solomons this is not an uncommon plant, mainly of lowland riverine forest, and is easily recognized. The very large leaves, the usually unbranched stems, the striking colouration of the leaves, flowers and fruits, and the rather well-known names in the Kwara'ae language, "sirikunu" (or its variant "tarikunu"), all make easy identification possible.

Tapeinosperma cristobalense Stone et Whitmore, *sp. nov.* — Figs- 3, 4, 5.

Arbuscula; folia magna subsessilia usque ad 80 cm longa et 16 cm lata, oblanceolata acuta; nervis secundariis utrinque circiter 26, angustis arcuatis; inflorescentia ad 16 cm longa et 16 cm lata, composite racemosa, pedicellis 10—13 mm longis filiformibus; bracteis oblongis ad 8 x 3 mm subacutis; indumentum rufo-puberulentum, perminutum; calyx lobis 1.5 mm longis, anguste deltoideis, ciliolulatis; cetera ignotis; drupa subglobosa apiculata ca 11 mm lata, epicarpo 1.2 mm crasso; semina singula ad 7 x 5 mm.

TYPUS: *Whitmore RSS 6105* (K).

Pachycaul, megaphyllous usually unbranched treelet 10—20 ft tall, with leaves clustered near twig ends or apex; blades oblanceolate, acute, decurrent-alate at base on the short flat petiole, thus subsessile, about 70—80 cm long, 11—16 cm wide, widest near apex; petiole 7—10 mm wide. Lamina with broad midrib; secondary nerves about 26 pairs, slender but conspicuous, uparched, connected sinuously, with several intervening reticulations within the margin; texture subcoriaceous; lower surface slightly greyish. Inflorescence 16 cm long, about as wide, a compound open raceme, the base of the main peduncle for 8—9 cm bare thereafter giving off numerous longish (7—8 cm) branches, these **in turn** towards

apex branched into 3—4 cm long racemes; pedicels 10—13 mm long, filiform; bracts oblong, acutish, about 8 x 3 mm; these, together with buds and axes, all densely but minutely rufous-puberulent. Calyx-lobes 1.5 mm long, narrowly deltoid, ciliolate. Flowers otherwise unknown. Fruits pink to purplish-red, globose or subglobose, slightly apiculate; about 11 mm diameter; pericarp 1.2 mm thick; seed about 7 x 5 mm.

BRITISH SOLOMON ISLANDS. SAN CRISTOBAL. Ridge at confluence of the Warahito and Pagato Rivers, 5 mi. inland, on deep clay soil over basaltic pillow-lavas, in (probably disturbed) dense high forest; small unbranched treelet 20 ft tall with fruits, ripening scarlet, in axillary clusters; alt. 200—400 ft; 22 July 1965; Kwara'ae name "sirikunu"; *Whitmore RSS 6105* (holotype K!); Wairaha River, 5 mi. from N. coast, at 500 ft alt., in forest; unbranched treelet 10 ft tall; ants in leaf axils; lvs. in terminal cluster; fruits dull pink; 11 May 1964, *Whitmore BSIP 4250* (SING!); same locality, treelet 6 ft tall, fruits purplish-red, leaves grey beneath, 12 May 1964, *Whitmore BSIP 4306* (SING!). — ULAWA ISLAND. Mt. Hautahula, 200—300 ft alt., ridge-top, secondary forest flowers reddish-white; small tree; 8 Feb. 1965, *Teona BSIP 6252* (K!).

This species, in general similar to the preceding, is easily distinguished by its nearly sessile oblanceolate leaves. Again, the relatives appear to be New Caledonian and Fijian species.

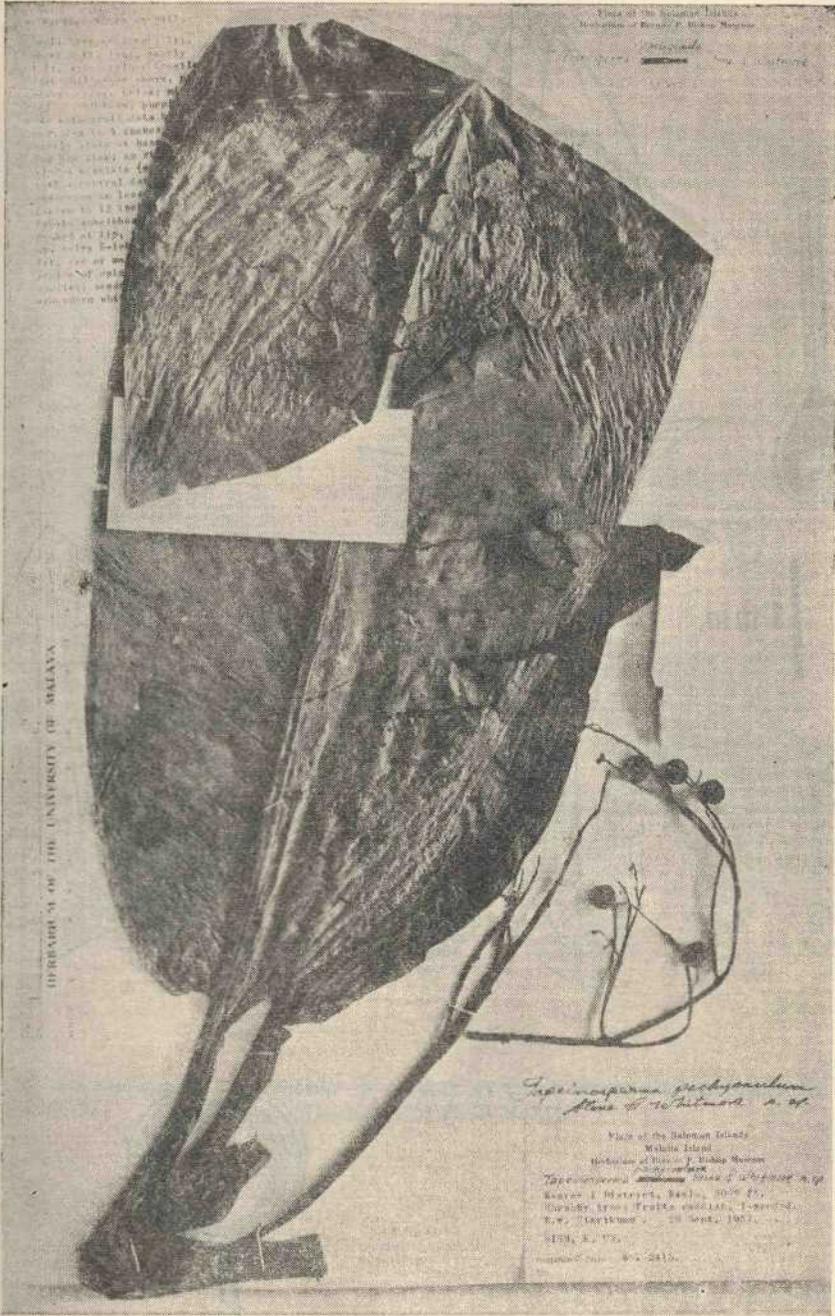


Fig. 1 *Tapeinosperma pachycanlum*. (Stone 2415).

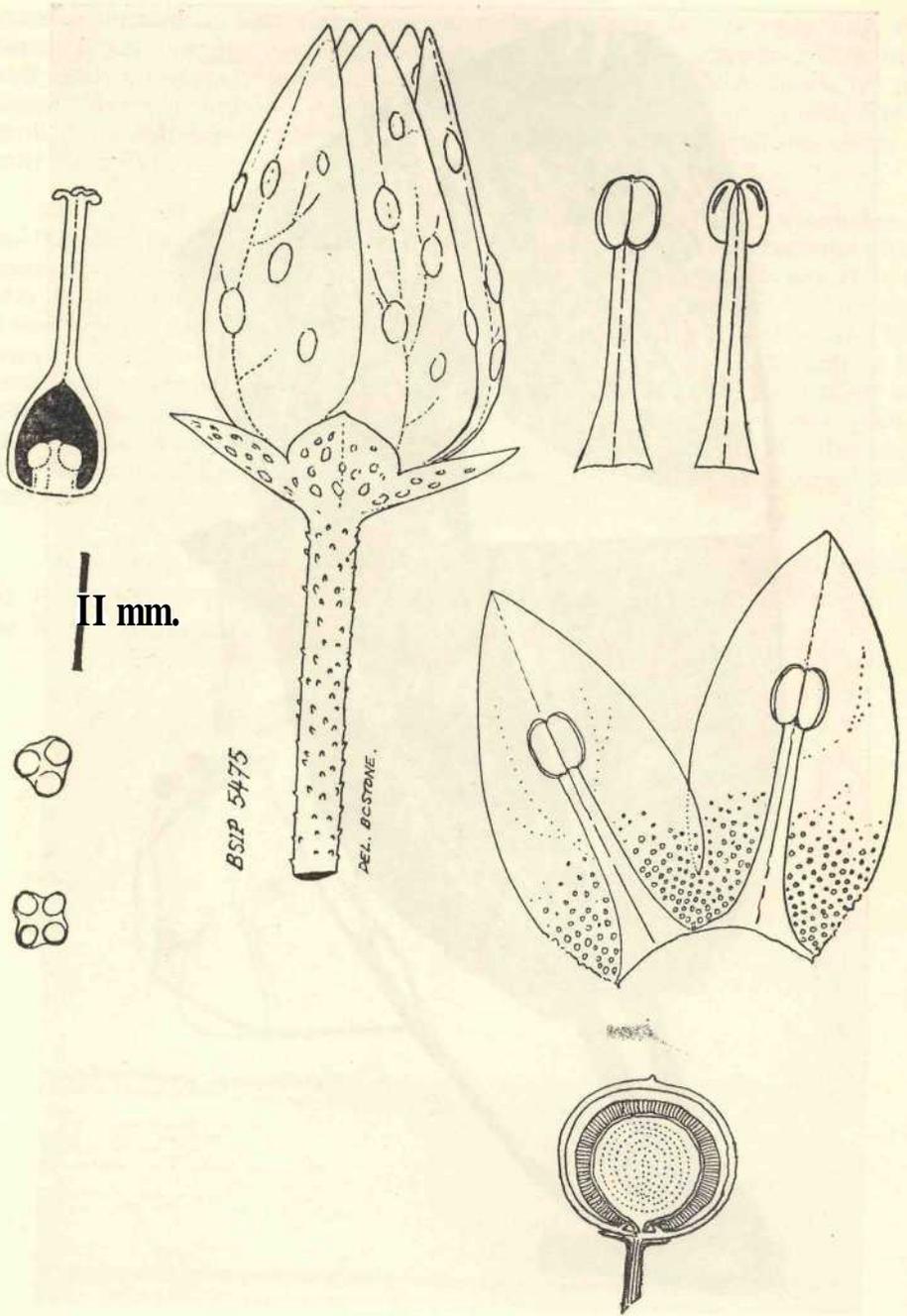


Fig. 2. *Tapeinosperma pachycaulum*. Details of flower and fruit. (BSIP 54.75).



Fig. 3. *Tapeinosperma cristobalense*. Sketch of plant (from a photograph by T.C. Whitmore of RSS 6105).

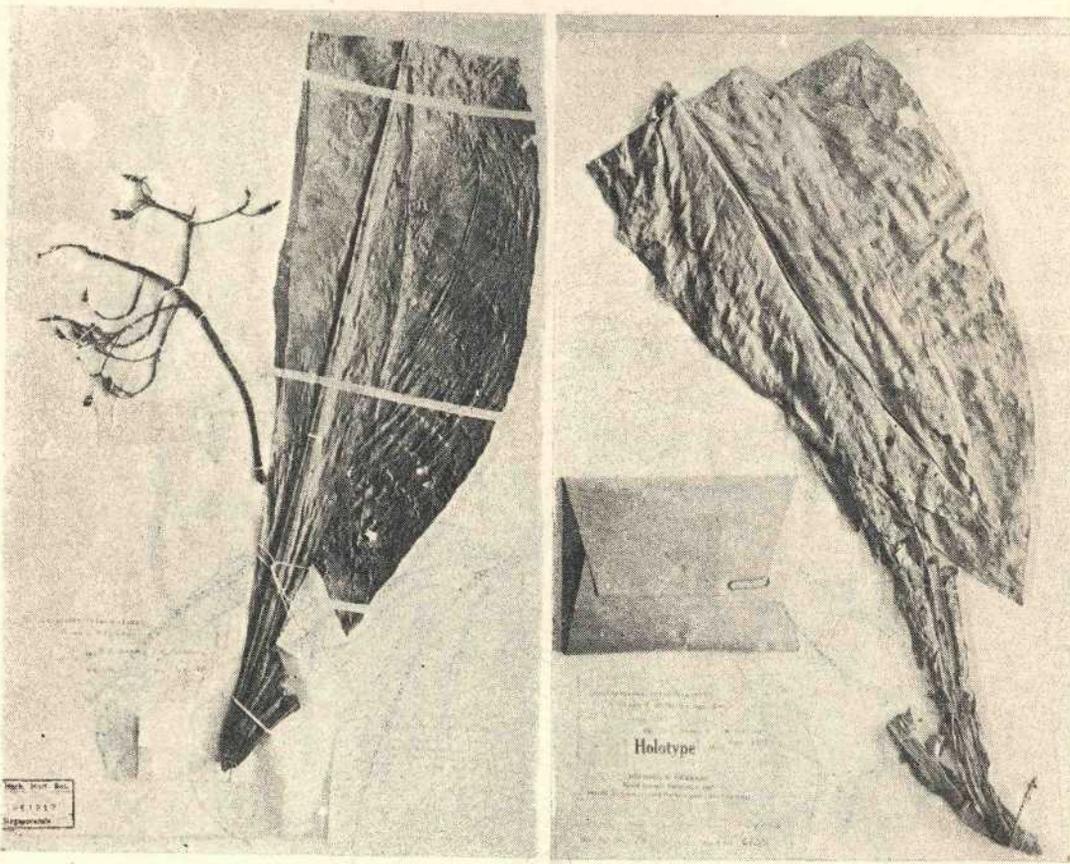


Fig. 4.. *Tapeinosperma crislobalense*. Left: • holotype. Right: BSIP 4306.

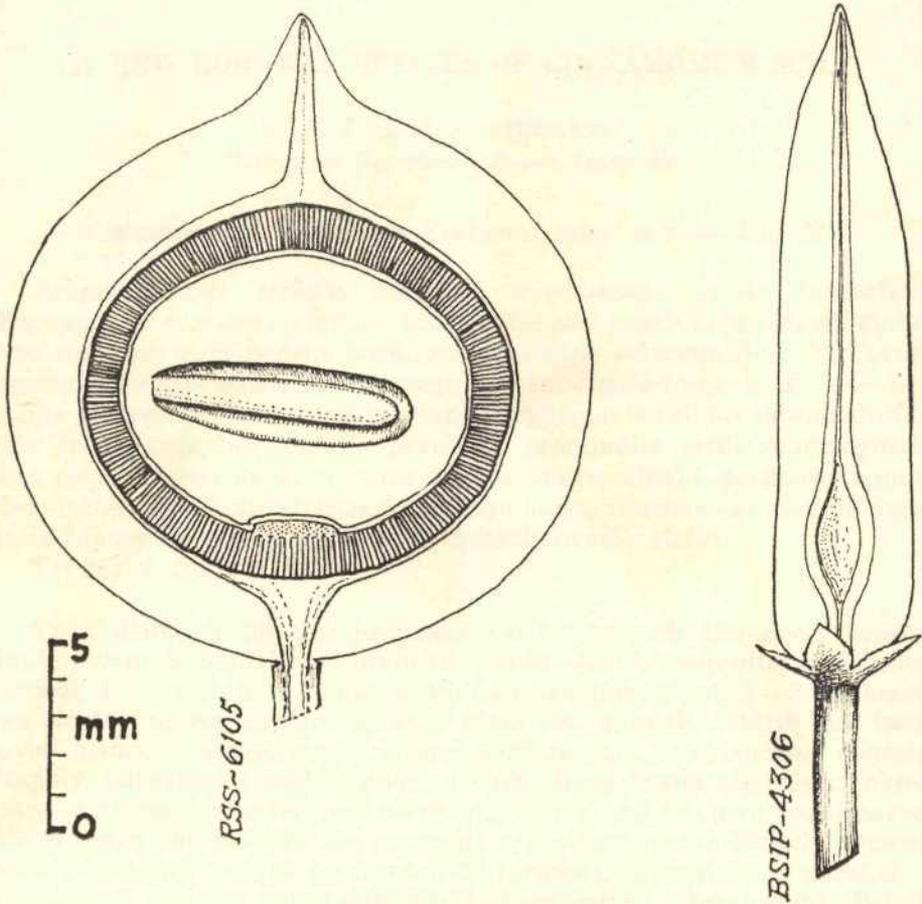


Fig. 5. *Tapeinosperma cristobulen.se*. Detail of fruit. (RSS 6105 and BSIP 4.306).
The latter is probably an abortive fruit.