

TAPEINOSPERMA ALATUM (MYRSINACEAE): A REMARKABLE NEW SPECIES FROM CERAM

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SUMMARY

A new pachycaul species *Tapeinosperma alatum* D.E. Holland & P.F. Stevens (Myrsinaceae) is described from South Central Ceram. It is characterized by its huge leaves, over 1 m long, and congested, almost *Gunnera*-like inflorescence. The distinctive distribution of the Papuanian pachycaul species of *Tapeinosperma* is briefly compared with that of a number of other unrelated taxa.

INTRODUCTION

A remarkable, unbranched, pachycaul collection of *Tapeinosperma*, *Burley 4331*, made in South Central Ceram, does not match any of the species described from regions of Fiji (Smith, 1981) and New Guinea (Sleumer, 1988). *Tapeinosperma reinianum* Jacobs, described earlier (Jacobs, 1976) from Papua New Guinea has a similar habit, but belongs to *Loheria* (Sleumer, 1988). Subsequently, two other collections of the same taxon from Ceram, *Heunaka Sonawe-ainnakahata et al. 941* and *943* have been made. Considering these collections in the context of the New Guinea species of *Tapeinosperma*, they most closely resemble *T. cristobalanese* Stone & Whitmore, and also show similarity to *T. grande* (Seem.) Mez, from Fiji. However, they clearly differ by the features described in Table 1, and are described below as a new species, *Tapeinosperma alatum*.

	<i>T. cristobalanese</i>	<i>T. grande</i>	<i>T. alatum</i>
Lamina size	(35–)60–80 × (9–)10–16 cm	30–45 × 4–12 cm	102–130 × 15.7–22.8 cm
Branch number per inflorescence	7–16	8–10	40–65
Petiole length	to 1 cm	2.5–6 cm	sessile
Pediceal length	(8–)10–13 mm	2.0–5.0 mm	1.5–2.0 mm
Fruit shape	subglobose	ellipsoid, fusiform	globose
Fruit size (diam.)	10–11 mm	10 mm	c. 7.0–8.0 mm
Endocarp surface	smooth, subangled	irregular	smooth

Tapeinosperma alatum, other pachycaul Papuanian species of *Tapeinosperma*, and *Loheria reiniana* (Jacobs) Sleumer can be readily keyed out as follows by modifying Sleumer's (1988) key:

- 3a. Leaves decidedly petiolate, petiole 10–25 cm long, sometimes seemingly shorter when very broadly winged *T. pachycaulum* Stone & Whitmore
 b. Leaves sessile to subsessile or seemingly so, the unwinged part of the petiole to 1 cm long 4
- 4a. Leaves (35–)60–80 × (9–)10–16 cm [inflorescence with 7–16 branches, pedicel (8–)10–13 mm long] *T. cristobalanese* Stone & Whitmore
 b. Leaves at least 90–130 × 15.7–22.8 cm 5
- 5a. Inflorescence with relatively stout, naked axis, branches 40–65, not clustered, pedicels 1.5–2.0 mm long *T. alatum* D.E. Holland & P.F. Stevens
 b. Inflorescence with slender, foliate main axis, branches to 10, clustered, pedicels 3–6 mm long *L. reiniana* (Jacobs) Sleumer

***Tapeinosperma alatum* D.E. Holland & P.F. Stevens, *spec. nov.*;**

Tapeinosperma cristobalanese lamini maioribus 102–130 cm longis (haud 35–80 cm longis) et sessilibus, inflorescentiae ramulis 40–65 (haud 7–16), pedicellis brevioribus circa 1.5 mm (haud 2.0 mm) longis et endocarpio laevi, differt. — Typus: *J. S. Burley, Tukirin & Ismail 4331* (holotype in A, isotypes in BO, CANB, F, K, L), South Central Ceram, 40 km E of Masohi in Wae Ruatan/Wae Ruwata (Ruwa) catchment areas, 3 December 1990.

Unbranched understory pachycaul treelet, 8 m tall, 10 cm dbh. Outer bark reddish brown, flaking, inner bark orangey-red. *Leaves* sessile, glabrous, lamina ovate, 102–130 × 15.7–22.8 cm, thick chartaceous to subcoriaceous, apex subacute, base long-attenuate, gland dots dense above and below, also on midvein and lateral nerves, dots above dark, less distinct than those below, margin entire, midvein above impressed-flat at base, 1–1.5 cm wide, more or less raised towards the apex, below obscurely triangular, secondary vein pairs 36–72, diverging at an angle of 19–46° to midvein, angle increasing towards the apex, alternating with intersecondary veins, anastomosing 0.6–1.25 cm from the margin, tertiary venation net-like to (more towards margin) scalariform, obscure above, raised below, intramarginal vein prominent at the apex of the leaf. *Inflorescence* subtended by triangular-ligulate leaves 5.7–6.0 cm long; axis 17.5–38.8 cm long, flattened, peduncle 7.4–8.7 cm long, branches 40–65, racemose, spirally arranged, c. 8.5 cm long at base of inflorescence, progressively shorter towards the apex, all inflorescence and floral parts with short, stout, glandular hairs, bracts persistent, 0.4–0.6 mm long, pedicel 1.5–2.0 mm long, articulated at base. *Flowers* 5-merous. *Sepals* triangular, c. 1 × 1.8 mm wide, margin with glands, ciliate. *Corolla tube* 0.7 mm long, corolla lobes 2.5–3 × 1–1.4 mm, linear, orangey, darkly gland-dotted, glands more linear towards base, rounder towards apex. *Stamens* attached near base of tube, filaments 0.4–0.6 mm long, anthers oblong-deltoid, 1.2–1.4 mm, basifixed, introrse, gland-dotted. *Ovary* c. 0.7 mm long, style c. 2.5 mm long, with glandular hairs, stigma ± punctate. *Fruits* gland-dotted, globose, c. 7.0 × 8.0 mm, orangey-brown, smooth to longitudinally striate, calyx persistent and sharply reflexed; endocarp woody, 0.25 mm thick, surface smooth. Submature *seed* ovoid, c. 5.5 × 5.0 mm, impressed at base, testa with conspicuous resin glands, endosperm c. 4 × 4 mm, surface irregular, ruminant, embryo transverse, curved.

Distribution — South Central Ceram.

Habitat — Forest, 500 m altitude.

Additional specimens studied. SOUTH CENTRAL CERAM: Tanaa valley, Wae Pia (the Tanaa is a tributary of the Pia which flows S to Elpaputih Bay), subdistrict Teun, Nila and Serua, map reference approximately 126° 55' E, 3° 10' S, *Heunaka Sonawe-ainnakahata*, *Waenisa Sonawe-ainnakahata*, *Ketane Sonawe-ainnakahata* 941 (K), 943 (K).

DISCUSSION

Tapeinosperma alatum is a very distinctive species readily distinguished from *T. cristobalanese*, the pachycaul species most similar to it, by the features given in the diagnosis and in Table 1. The general appearance of the inflorescence is like that of *Gunnera*.

The three specimens noted above are all rather similar. Note that although the latitude and longitude provided on the labels of the specimens collected by *Heunaka Sonawe-ainnakahata et al.* places them on Pulau Buru, the specimens were collected in the Tanaa valley on Ceram.

Although *T. alatum* is clearly to be assigned to *Tapeinosperma*, having apparently hermaphroditic flowers, as Sleumer (1988) notes, the limits of this genus are unclear. The irregular endocarp of *T. grande* suggests that of *Fittingia*, the punctate stigma of the Papuasian pachycaul taxa that of *Loheria*. Both *Loheria* and some species of *Discocalyx* have ruminant endospermum like that of *T. alatum*. Furthermore, Sleumer (1988) cited many specimens unassigned to species at the end of his treatment of *Tapeinosperma*; these represent at least six more Papuasian species, although it should be noted that none is pachycaul.

The pachycaul species of *Tapeinosperma* (excluding the immediately unrelated *T. reinianum*) have a very distinctive distribution, being common in Oceania and the Solomon Islands, occurring as far east as New Britain in Papua New Guinea, and then absent for some 1700 km before reappearing in Ceram (see in part 5, Van Balgooy, 1993, map 361). Not dissimilar distributions at the species or species group level are found in *Saranga* (Pandaceae: Van Steenis, 1966, maps 28 and 29), *Morierina* (Rubiaceae: Van Balgooy, 1984, map 300), *Alpinia* section *Myriocrater* (Burt, 1972, fig. 3), and *Terminalia* (*T. archipelagi* Coode, *T. rerei* Coode: Coode, 1978) while other examples are given by Baker et al. (1998). The flora of Ceram is particularly interesting in that *Zygogynum*, *Drimys* (Winteraceae) and *Trimenia* (Trimeniaceae) all are at their southwestern limits of their ranges in Malesia.

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