

## Two New Species Resembling *Bulbophyllum plumatum* Ames and *B. mirum* J.J. Sm. (Orchidaceae)

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### Abstract

Two new species of *Bulbophyllum* (Orchidaceae) are described, both similar to *B. plumatum* Ames and *B. mirum* J.J. Sm. *Bulbophyllum scotinochiton* J.J.Verm. & P. O'Byrne is from Sumatra, Indonesia; *B. thiurum* J.J.Verm. & P. O'Byrne is from Johore, Peninsular Malaysia. Pictures of all four species are given.

### Introduction

*Bulbophyllum scotinochiton*, described below, has been available in trade for several years now, usually under the name *Bulbophyllum mirum* J.J. Sm. Recently, the provenance of *B. scotinochiton* has become known, adding to our knowledge about this species. It can now be formally described. The Sumatran forests that appear to have yielded *B. scotinochiton* are quickly disappearing. Besides illegal logging, the thick peat on the forest floor is collected on a large scale to be used as garden mulch in nearby towns. The collectors take care to hide their activities by leaving untouched a strip of forest bordering the road. Elsewhere, large tracts of forest are slowly dying because the canopy trees have lost their foothold.

The second species, *B. thiurum*, is said to occur in the Endau Rompin State Park in the Johore lowlands, Malaysia. Locally, it has been traded as 'the yellow *B. plumatum*', but very recently plants have also appeared on the European market. Rumours suggest that, regrettably, the population is already depleted.

***Bulbophyllum scotinochiton* J.J. Verm. & P. O'Byrne, sp. nov.** - Plate 1.2  
*Bulbophyllum scotinochiton* J.J. Verm. & P. O'Byrne, a *Bulbophyllo miro*  
inflorescentia uniflora, floribus c. duplo majore (c. 5 cm longis) differt. -



**TYPE:** Indonesia, Sumatra, Lake Toba area, *SBG-O 0921* (SING, holo.).

*Roots* below the pseudobulbs. *Rhizome* creeping, c. 2.5 mm diam., sections between pseudobulbs 2.5–3 cm long, bracts soon rotting away. *Pseudobulbs* distant, ovoid, 1.3–1.5 x 0.7–1.1 cm, distinctly and rather sharply 4-angled. *Petiole* 0.3–0.4 cm long. *Leaf blade* elliptic to ovate, 3.8–4.5 x 2.1–2.4 cm, index (length/width) 1.5–2.2; subacute. *Inflorescence* porrect to patent, c. 10 cm long, 1-flowered. *Peduncle* c. 5 cm, bracts c. 4, the longest c. 10 mm long. *Floral bracts* c. 5 mm long, acute. *Flowers* not fully opening. *Pedicel* and *ovary* c. 10 mm long, basal node  $\pm$  flush with the surface of the rhachis. *Median sepal*  $\pm$  porrect, ovate, c. 19 x 12 mm, index 1.5–1.6; top acute, margins entire, base narrowly attached, rather thin, glabrous. *Lateral sepals* adnate along the upper margins in the top half of the sepal, each oblique, more or less elliptic, c. 50 x 10 mm, index c. 5, top obtuse, base narrowly attached; adaxially glabrous, abaxially finely papillose; otherwise as the median sepal. *Petals* porrect, transversely elliptic, c. 1.3 x 2.7 mm, index 0.4–0.5; rounded, top margin reflexed, entire, with c. 12 appendages, base broadly attached; very thick, surface glabrous; appendages mobile, more or less elliptic, up to 5.5 x 1 mm, subacute, margins slightly erose, base very narrowly attached; thin, glabrous. *Lip* recurved about half way, general outline subtriangular, c. 3.3 x 2.2 mm, index c. 1.5 (all without artificial spreading); obtuse, margins entire; very thick, glabrous; adaxially more or less flat near the base, with 2 more or less parallel, inconspicuous, low, rounded ridges about half-way up the length of the lip, surface convex towards the tip; abaxially with a distinct, retuse ridge over most of the length of the lip. *Column* c. 3.2 mm long, stigma without ridges inside, with 2 distinct, longitudinal, short, rounded teeth at its base, column foot without teeth. *Stelidia* c. 1 mm long, triangular, acute, with a small, triangular, obtuse tooth along the upper margin and a distinct, deltoid, obtuse wing along the lower margin. *Anther* abaxially with a distinct crest near the attachment and a distinct, transverse crest overtopping the front margin, surface somewhat papillose, front margin drawn out, truncate, entire. *Pollinia* 4, the inner  $\pm$  as long as the outer, drop-shaped, the outer ellipsoid-ovoid; no appendages present.

*Colour:* Median sepal white, slightly greenish in centre, with large blackish purple spots and blackish purple margins. Lateral sepals white near the base, but suffused with purple towards the tip, tip itself blackish purple; lateral sepals entirely covered with small purple spots. Petal appendages pinkish purple towards the base, white at the tip. Lip pale greenish, purple near the base. Column pale greenish.

*Habitat:* Understorey epiphyte in mossy montane forest dominated by oaks. Altitude c. 1500 m.





**Plate 1.** Four *Bulbophyllum* species.  
1a, b. *Bulbophyllum mirum* J.J. Sm. (SBG-O 4762); 2. *Bulbophyllum scotinochiton* J.J. Verm. & P.O'Byrne (SBG-O 0921); 3. *Bulbophyllum plumatum* Ames (SBG-O 5395); 4. *Bulbophyllum thiurum* J.J. Verm. & P.O'Byrne (SBG-O 5395). Photos : J.J. Vermeulen



*Distribution:* INDONESIA: Sumatra, Lake Toba area (2 specimens seen).

*Notes:* *Bulbophyllum scotinochiton* is most similar to *B. mirum* J.J.Sm. It differs in always having 1-flowered inflorescences and distinctly larger flowers: median sepal c. 19 mm long (6–8 mm in *B. mirum*); lateral sepals c. 50 mm long (20–26 mm in *B. mirum*). The petals and the lip, however, are about the same size in both species. The information on *B. mirum* was compiled from specimens from Indonesia (Java), and Malaysia (Peninsula and Sabah); *B. scotinochiton* clearly falls outside the size range of *B. mirum*. Additional differences between the two may be found in the more distinct, deltoid wing along the lower margin of the stelidia, as well as the somewhat wider appendages on the petals in *B. scotinochiton* (c. 1 mm wide; c. 0.5 mm wide in *B. mirum*).

***Bulbophyllum thiurum*** J.J. Verm. & P. O'Byrne, *sp. nov.* — Plate 1.4

*Bulbophyllum thiurum* J.J. Verm. & P. O'Byrne, a *Bulbophyllo plumato* sepalis lateralibus basi ovatis apicibus longe attenuates differt. — TYPE: Malaysia, Johore, SBG-O 5395 (SING, holo.).

*Roots* below the pseudobulbs. *Rhizome* creeping, c. 1.5 mm diam., sections between pseudobulbs 1.2–2.3 cm long, bracts little persistent. *Pseudobulbs* distant, ovoid, 1.6–2.3 x 0.7–0.9 cm, obtusely 3–4-angled. *Petiole* 0.3–0.7 cm long. *Leaf blade* elliptic to ovate, 5.2–8.5 x 2.1–2.6 cm, index (length/width) 2.5–3.4; obtuse. *Inflorescence* a subumbellate raceme, c. 20 cm long, 3–4-flowered. *Peduncle* c. 10 cm, bracts c. 5, the longest c. 9.5 mm long. *Rhachis* nodding, somewhat thickened, c. 1.2 mm long. *Floral bracts* c. 7–8 mm long, acute. *Flowers* not fully opening. *Pedicel* and *ovary* c. 5.5 mm long, basal node on a c. 0.5 mm-long thickened stump. *Median sepal* ± porrect, more or less orbicular, c. 6 x 6 mm, index c. 1; top shortly acuminate, margins entire, base narrowly attached, rather thick, glabrous. *Lateral sepals* proximally adnate along the upper (for 1 cm starting 0.5 cm from its base) and lower (for 1 cm, starting at the base) margin, each oblique, ovate at the base, with a long drawn-out top part, c. 94 x 6.5 mm, index 14–15, tip acute, base narrowly clawed; thin, glabrous; otherwise as the median sepal. *Petals* porrect, more or less elliptic, c. 1.7 x 1.3 mm, index 1.3–1.4; rounded, entire, with c. 36 appendages, base rather broadly attached; thick, surface glabrous; appendages somewhat mobile, ellipsoid-obovoid, up to c. 1 x 0.2–0.3 mm, tip obtuse, base tapering into a stalk of 1–1.5 mm, surface consisting of large vesicles which become more elongate, almost hair-like, towards the tip of the appendage. *Lip* recurved about half way, general outline subtriangular, c. 1.7 x 1.2 mm, index c. 1.4 (all without artificial spreading); obtuse, margins entire; thick; adaxially about flat near the base,



with 2 about parallel, inconspicuous, low, rounded ridges about half-way up the length of the lip, surface convex towards the tip, adaxial surface finely and shortly pubescent; abaxially with a rather distinct, retuse ridge over most of the length of the lip, surface glabrous. *Column* c. 1.7 mm long, stigma without ridges inside, with 2 starting along its sides, converging towards its base and continuing on to the column foot, column foot without teeth. *Stelidia* c. 0.5 mm long, triangular, acute, upper margin erose, lower margin with a distinct, deltoid, obtuse wing. *Anther* abaxially with an inconspicuous crest, surface somewhat papillose, front margin drawn out, truncate, entire. *Pollinia* 4, the inner slightly shorter than the outer, all drop-shaped; no appendages present.

*Colour*: Flowers lemon yellow; median sepal with reddish spots, lateral sepals with a patch of fine specks near the base, petals with pinkish appendages. No scent.

*Habitat*: Epiphyte in lowland swamp forest.

*Distribution*: MALAYSIA: Johore (1 specimen seen); according to local nurserymen a population occurs in the Endau Rompin State Park area.

*Notes*: *Bulbophyllum plumatum* Ames is most similar. *B. thiurum* differs in having the lateral sepals fused close to their base only, and along the upper as well as the lower margins. In *B. plumatum*, these are fused over a considerable part of their length, but along the upper margin only. The shape of the lateral sepals is also different: wide and ovate in *B. thiurum*, tapering into a caudate top part; but strap-shaped and barely widened near their base in *B. plumatum*. Besides the appendages on the petals, *B. thiurum* has almost hair-like vesicles near the top; in *B. plumatum* all vesicles, up to the tip of the appendage, are rounded.