

***Bulbophyllum albociliatum* (Liu & Su) Nakejima var. *weiminianum* and *Flickingeria shihfuana*, Two New Native Orchids from Taiwan**

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(Manuscript received 13 July 2005; accepted 15 September, 2005)

ABSTRACT: In this report, two newly discovered native orchids, *Bulbophyllum albociliatum* (Liu & Su) Nakejima var. *weiminianum* and *Flickingeria shihfuana*, are presented.

KEY WORDS: *Bulbophyllum albociliatum* var. *weiminianum*, *Flickingeria shihfuana*, native orchid, Taiwan.

Since the publication of the Orchidaceae in the second edition of the *Flora of Taiwan* (Su, 2000), unpublished native orchids are continuously emerging from different orchid collectors. A lot of variations have been found in several species complexes, especially in the genus *Bulbophyllum*, indicating that active speciation might be occurring. Technical criteria to delimit species require at least two independent characters, and species are separated by morphological discontinuities from similar species.

***Bulbophyllum albociliatum* (Liu & Su) Nakejima var. *weiminianum* Lin & Huang, var. nov.**
Figs. 1 & 4A-C

Bulbophyllum albociliatum var. *weiminianum* a columnae axialiter bicarinato infigniter proprium. –
Typus: Weimin Lin s. n. (holo TFRI 224766).

Rhizomes long creeping, slender, often less than 1 mm in diameter. Pseudobulbs arranged ca. 2-3.5 cm apart, elongate-ovoid, often oblique, 1-1.1 cm long, 5-6 mm wide. Leaves sessile, oblong or oblanceolate, 3-4.5 cm long, 10 mm wide, apex obtuse or indistinctly retuse, base often cuneate. Scapes from base of pseudobulb, slender, 4-6 cm long; bracts elongate triangular, 3 mm long; pedicels ca. 7 mm long. Flowers 4-7 in very short raceme; upper sepal rubescent, strongly concave, elliptical, 3-4 mm long, 2 mm wide, with long white cilia on margin; lateral sepals reddish yellow, often connate and curved in side view, lanceolate, 1.1 mm long, 2 mm wide, acute at apex, incurved and papillate along margins; petals rubescent, curved, open widely, 2.5 mm long, 1 mm wide, rounded at apex, truncate at base, with long white cilia; lip rubescent, horn-like, 4 mm long, recurved; column yellow, semiterete, 2 mm tall, column-foot without accessories. Stylids (stelidia) with a downwardly directed tooth; anther operculate, cordate; pollinia 4, ovoid, in 2 collateral pairs.

Ecology: Flowering observed mainly in May and June. Epiphytic in a broadleaf forest near the Taitung Chestnut Garden, at 1800 m extending to Shiahng-Yang, 2300 m on the Southern Cross-Island Highway in southern Taiwan.

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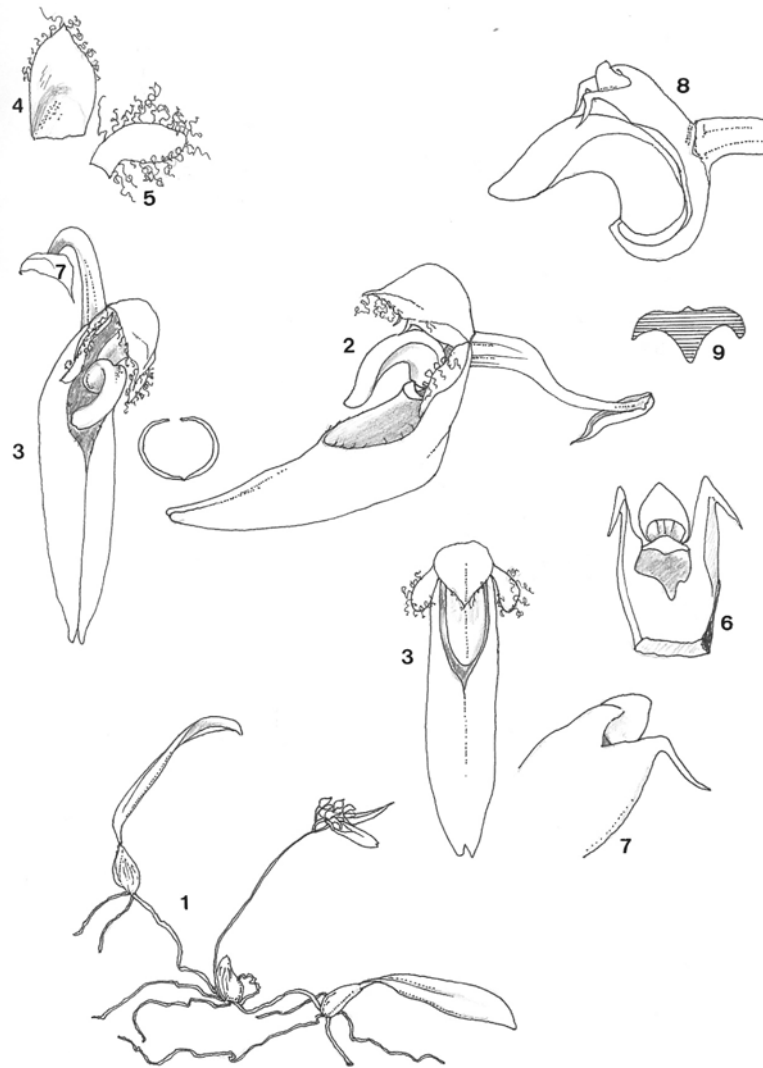


Fig. 1. *Bulbophyllum albociliatum* (Liu & Su) Nakejima var. *weiminianum* Lin & Huang. 1: Plant body and inflorescence. 2: Side view of flower. 3: Front view of flower. 4: Upper sepal. 5: Petal. 6: Ventral view of column. 7: Side view of column. 8: Side view of column and lip. 9: Cross section of lip.

Distribution: Endemic.

Notes: Well characterized by the 2 longitudinal, parallel-curved ridges on the lower side of the column. The name has been derived from the collector, Mr. Weimin Lin.

There are several points which can be used to differentiate *B. albociliatum* (Liu & Su) Nakejima, var. *weiminianum* from *B. albociliatum* (Liu & Su) Nakejima var. *albociliatum* (Nakejima, 1973; Lin, 1987) (Table 1 & Fig. 2). Among them, the protuberances of the column which form a perpendicular angle as well as the oblong leaves are special.

Table 1. Characters which can be used to separate *Bulbophyllum albociliatum* (Liu & Su) Nakejima, var. *weiminianum* from *B. albociliatum* (Liu & Su) Nakejima var. *albociliatum*.

Name	var. <i>albociliatum</i>	var. <i>weiminianum</i>
Leaf	elliptic and thick	oblong
Lip	2 mm long	4 mm long
Column stylids	appendage pointing forwards	appendage curving down
Lateral sepal	flat	curved at about 1/3 length from base

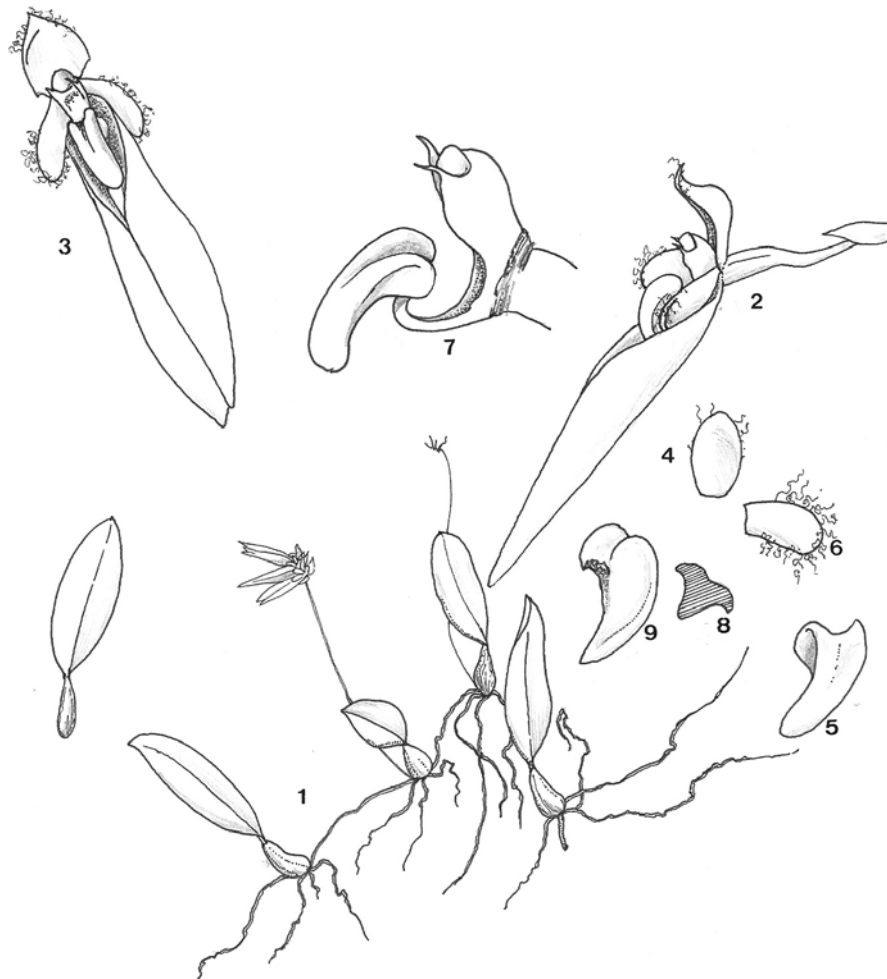


Fig. 2. *Bulbophyllum albociliatum* (Liu & Su) Nakejima var. *albociliatum*. 1: Plant body and inflorescence. 2: Side view of flower. 3: Front view of flower. 4: Upper sepal. 5: Top view of lip. 6: Petal. 7: Side view of column and lip. 8: Cross section of lip. 9: Underside view of lip.

***Flickingeria shihfuana* Lin & Huang, sp. nov.**

Fig. 3

Flickingeria shihfuana a *F. tairukuonia* (Ying) Lin pseudobulbis latoribus minoribus different. –
Typus: S. F. Huang s. n. (TAIF 224764).

Plants suberect or pendulous, up to 30 cm long. Stems slender, tufted, frequently branching, internodes terete, clavate or cylindrical, 2-3 cm long, 2-3 mm in diam., terminal internode enlarged forming pseudobulb. Pseudobulbs greenish, lustrous, flattened, elongate fusiform, 2.8 cm long, 3-3.5 mm wide, initially covered by membranous[?] sheaths. Leaves articulate, oblong or ovate-oblong, 4 cm long, 1.1-1.6 cm wide, acute at apex, obtuse at base, coriaceous, rigid. Inflorescence terminal on pseudobulb, near abaxial side of leaf, with 1 or 2 flower subtended by a series of bracts; bracts scarious, 3 mm long, acute; pedicel and ovary 6 mm long. Flowers widely opening, white with pink markings, 1 cm in diameter, ephemeral, last for 1 day; sepals oblong, 5 mm long, 2.5 mm wide, acute, reflexed on margins, greenish at base; petals slender, 5.5 mm long, 1 mm wide, acute, reflexed on margins; lip white, rhombic-ovate, reflexed, 5 mm long, 5 mm wide, disc with a fleshy appendage 2.3 mm long and wide, spur round, greenish; column short, 2 mm long, consisting of triangular acute lobes surrounding anther; anther operculate, ovoid, 2-celled; pollinia, ellipsoid.



Fig. 3. *Flickingeria shihfuana* Lin & Huang. 1: Plant body and inflorescence. 2 & 3: Front view of flower. 4: Upper sepal. 5: Lateral sepal. 6: Side view of column. 7: Ventral view of pollinia. 8: Dorsal view of column. 9: Side view of column and lip. 10: Side view of pollinia. 11: Top view of lip.

Ecology: This species was found in the forest between Wutai, Pingtung County and the Hungyi mining area at an elevation of about 1200 m. Sporadic flowering observed from June to October.

Distribution: Endemic.

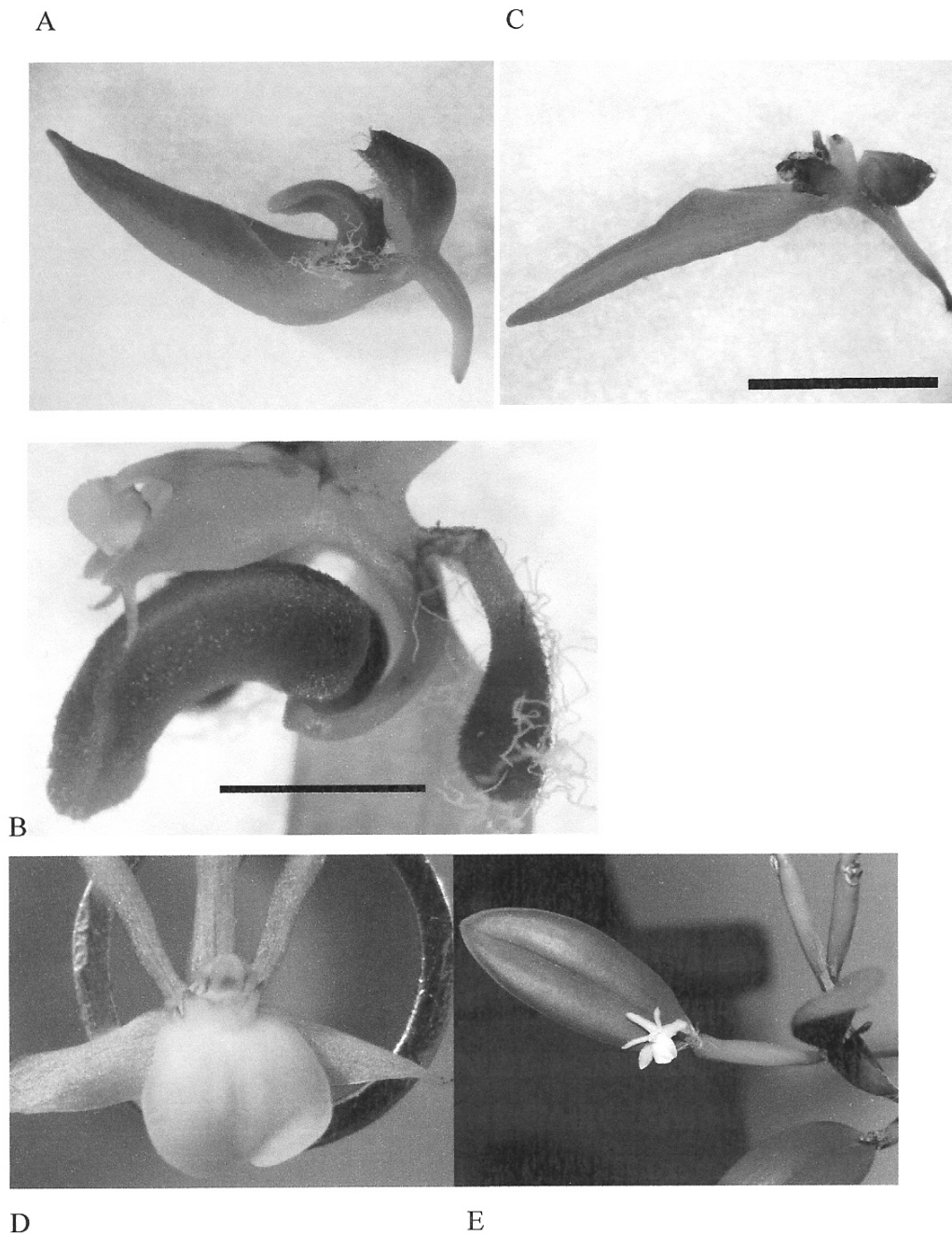


Fig. 4. A: Side view of flower of *Bulbophyllum albociliatum* (Liu & Su) Nakejima var. *weiminianum* Lin & Huang; scale same as C. Plants growing near the Taitung Chestnut Garden, Southern Cross-Island Highway at 1800 m. B: Enlarged view of column and lip of A, the petal with long curved cilia. C: Side view of flower of *B. albociliatum* (Liu & Su) Nakejima var. *albociliatum* (TAIF 224765); plants growing in a broadleaf forest in Shanlingchi, Nantou County at 1600 m elevation. scale indicates 1 cm. D & E: Enlarged flower and plant of *Flickingeria shihfuana* Lin & Huang.

Notes: *Flickingeria shihfuana* has a smaller pseudobulb and larger flowers than *F. tairukuonia* (Ying) Lin (Lin, 1987). *Flickingeria shihfuana* has a thinner plant size and widely spreading flower that are the main characteristics. The name has been derived from the collector, Mr. Shih-Fu Huang.

LITERATURE CITED

- Nackejima, C. 1973. Preliminary notes on the noteworthy Orchidaceae from Formosa, Ryukyus, Bonin Islands and southern Japan 3. Bot. Mag. Okinawa **10**: 26-36.
- Lin, T.-P. 1987. Native orchids of Taiwan. Southern Materials Center, Taipei, Taiwan. 300 pp.
- Su, H.-J. 2000. Orchidaceae. In: Huang, T.-C. *et al.* (eds.), Flora of Taiwan, 2nd ed. 5: 729-654. Editorial Committee, Dept. Bot., NTU, Taipei, Taiwan.

台灣二種新的野生蘭—維明豆蘭與士富暫花蘭

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(收稿日期：2005 年 7 月 13 日；接受日期：2005 年 9 月 15 日)

摘 要

本報告介紹二種新發現的野生蘭：維明豆蘭與士富暫花蘭。

關鍵詞：維明豆蘭、士富暫花蘭、野生蘭、台灣。

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