

Research Article

ADDITION OF *BULLEYIA YUNNANENSIS* SCHLTR., *PHALAEENOPSIS YINGJIANGENSIS* (Z.H.TSI) KOCYAN & SCHUIT. AND *PHOLIDOTA PYGMAEA* H.J. CHOWDHERY & G.D. PAL IN THE ORCHID FLORA OF NAGALAND, INDIA

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ABSTRACT

Bulleyia yunnanensis Schltr., *Phalaenopsis yingjiangensis* (Z.H.Tsi) Kocyan & Schuit. and *Pholidota pygmaea* H.J. Chowdhery & G.D. Pal are reported here as new distributional record for the orchid flora of Nagaland. A detailed description along with colour photograph is provided for easy identification in the field.

Keywords: *Bulleyia Yunnanensis*, *Phalaenopsis Yingjiangensis*, *Pholidota Pygmaea*, New Record, Nagaland

INTRODUCTION

The family Orchidaceae is one of the largest families of flowering plants with about 26567 species distributed worldwide (WCSP, 2016).

In India, there are 1378 species (Verma & Lavania, 2014) out of which about 890 species occur in North-East India (Rao, 2007).

As a part of ongoing orchid survey in Nagaland, the first (TBL) and second author (SD) collected some interesting epiphytic orchids growing on moss covered tree trunk. After perusal of literature (Pearce & Cribb 2002; Kumar *et al.*, 2014; Chowdhery & Pal, 1995), the plants were identified as *Bulleyia yunnanensis*, *Phalaenopsis yingjiangensis* and *Pholidota pygmaea* which were not recorded earlier from Nagaland (Hynniewta *et al.*, 2000; Deb *et al.*, 2003; Deb & Imchen, 2008).

So, the present finding is a new distributional record for the orchid flora of Nagaland. A detailed description along with photographs is provided for easy identification in the field (Figure 1). The voucher specimens are deposited in the herbarium of the Department of Botany, Nagaland University, Lumami, Nagaland, India.

Taxonomic Description

Bulleyia yunnanensis Schltr. in Notes Roy. Bot. Gard. Edinburgh. 5: 108. 1912 [Figure 1 a, b].

Plants epiphytic, 27–34 cm tall; rhizome with crowded pseudobulbs, golden yellow colour, narrowly ovoid-ellipsoid, 3.4–6.0 × 1.0–2.0 cm, grooved with filiform, elongate roots. Leaves 2, erect, papery, oblong-lanceolate, acuminate, 18.0–24.0 × 1.3–2.1 cm; petiole grooved, 5–10 cm long. Inflorescence laxly 10–14-flowered; peduncle slender, glabrous, 22–35 cm long; rachis glabrous, zigzag, 7–15 cm long; floral bracts pale reddish green, papery, subacute, ovate 1.5–2.0 × 1.2–1.5 cm. Flower brown with pale brown lip; pedicellate ovary 6–8 mm long, glabrous. Sepals sub similar, ovate-oblong, glabrous, apiculate, oblique, 15–18 × 5–7 mm.

Petals elliptic–oblong, oblique, 14–18 × 2–3 mm, 3-veined, acute to apiculate; Lip simple, 12–15 × 5–6 mm, deeply constricted in the middle, spurred, entire; hypochile ovate-elliptic; epichile reniform, margin undulated with 3 thickened, keeled veins on mesochile; spur cylindrical, curved. Column glabrous, 8–11 mm. Fruits not seen.

Flowering: July–August.

Specimen Examined: INDIA, Nagaland, Tuensang district, Helipong village area, 26°12.134'N & 94°44.849'E, 01.07.2016, TN01 (NUH!).

General Distribution: NE India [Sikkim, N. Bengal, Arunachal Pradesh, Nagaland (Present report)], Bhutan and China.

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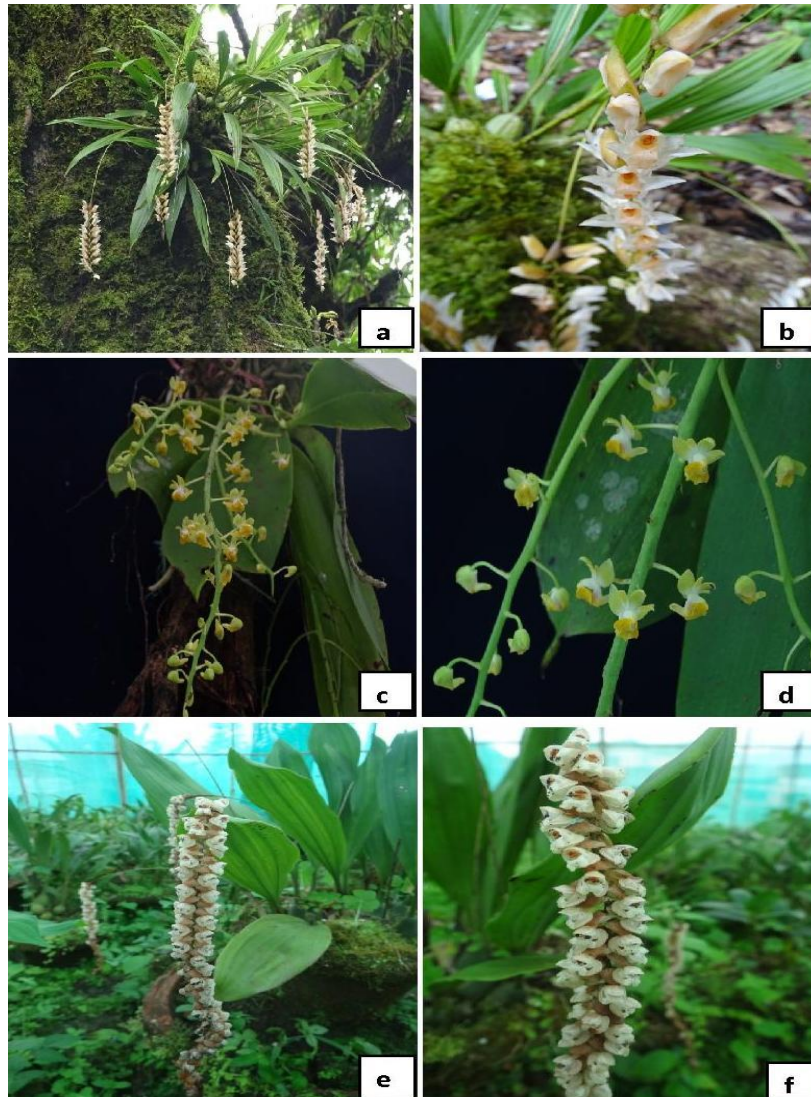


Figure 1: Three New Recorded Orchids from Nagaland, India
a-b: *Bulleyia Yunnanensis* Schltr.: a. Habit; b. Close-up of Inflorescence;
c-d: *Phalaenopsis Yingjiangensis* (Z.H. Tsi) Kocyan & Schuit.: c. Habit; d. Close-up of inflorescence;
e-f: *Pholidota Pygmaea* H.J. Chowdhery & G.D. Pal: e. Habit; f. Close-up of Inflorescence.

Taxonomic Description

Phalaenopsis yingjiangensis (Z.H.Tsi) Kocyan & Schuit. in Phytotaxa 161(1): 67. 2014. *Ormithochilus yingjiangensis* Z.H. Tsi in Acta Phytotax. Sin. 22: 479. 1984 [Figure 1 c, d].

Plants epiphytic with 2–4 leaves; roots long fleshy, cylindrical, 8–32 cm long; stem short, 2.0–5.0 × 0.4–1.2cm, concealed by leaf base. Leaves 2– 4, obliquely elliptic-oblong, 8.0–19.0 × 2.4 – 4.6 cm, apex acute and curved, glabrous, upper surface green, lower pale green. Inflorescences 10–23 cm long, 1–2 axillary racemes, pendulous; loosely 10–38 flowered; peduncle and rachis slender, rachis 9–14 cm long; floral bracts triangulate, 2.2–2.5 × 1.6–2.0 mm, apex acute, persistent. Flowers resupinate, 1.3–1.6 cm across; pedicellate ovary 0.7–1.0 cm long, slender, straight. Sepals and petals obtuse, spreading. Dorsalsepal ovate, 6.0–7.0 × 3.0–3.5 mm, apex obtuse and incurved, 3-veined. Lateral sepals obliquely ovate, 6.0–8.0 × 4.0–4.4 mm, apex obtuse, greenish, 4-veined. Petals oblong, 4.5–6.0 × 1.4 –2.0 mm, apex obtuse, 1-veined. Lip 3-lobed; side lobes auriculate, margin irregular, suberect; midlobe reniform-cordate, 5.0–6.2

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× 6.0–6.4 mm, apex broadly emarginate, margin crenate-undulate, incurved; spur subcylindric. Column whitish, 4.3–5.0 × 2.4–3.0 mm, glabrous. Fruits not seen.

Flowering: June–July.

Specimen Examined: India, Nagaland, Tuensang district, Helipong village area, 26°13.507'N & 94°44.617'E, 1848 m, 01.07.2016, TN02 (NUH!).

Distribution: NE India [Mizoram, Nagaland (Present report)], China and Thailand.

Taxonomic Description:

Pholidota pygmaea H.J. Chowdhery & G.D. Pal in Nordic J. Bot. 15: 411 1995; Chowlu et al. J. Orchid Soc. India 27 (1–2): 89–92.2013. [Figure 1 e, f].

Plants epiphytic; pseudobulbs 3.0–3.4 × 2.5–2.7 cm, clustered, smooth, sheathed at base, green in colour. Leaves solitary, 17.0–23.0 × 4.3–5.4 cm, broadly elliptic, lanceolate, acute at apex, coriaceous, petiole 5–8 mm long. Inflorescence 30–36 cm long, curved, peduncle 11–15 cm long, terete, rachis 16–22 cm long, densely many-flowered; floral bracts 6.0–8.0 × 4.5–5.5 mm, ovate–round; pedicel ovary c.5 mm long, pale green; flower 4–6 mm across, creamy; sepals unequal, creamy, the dorsal 4.0–6.0 × 3.4–5.0 mm, ovate, acute, the lateral ones 6.5–8.0 × 3.0–3.4 mm, oblong, acute with winged keel; petals 3.5–4.0 × 1.4–2.0 mm, linear, obtuse, creamy; lip 5.0–7.0 × 4.0–4.5 mm, trilobed, orbicular; apical lobe strongly decurved; column 3.0–3.4 × 2.5–3.0 mm, creamy.

Flowering: August–September.

Specimen Examined: India, Nagaland, Mokokchung district, Longkhum village area, 26°14.860'N & 94°28.242'E, 856 m, 18.05.2016, TN03(NUH!).

Distribution: Endemic to NE India [Arunachal Pradesh, Manipur, Nagaland (Present report)].

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