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聚叶钗子股—中国兰科新记录种及形态特征增补

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摘要: 报道了产自滇东南的中国兰科植物一新记录种——聚叶钗子股 (*Luisia appressifolia* Averyanov)。研究发现, 已往文献报道该种时, 对其花部特征(如花颜色、萼片及花瓣形状、大小等)的描述仅依据腊叶标本, 因标本严重失水导致描述信息不准或缺失。本文根据新鲜植株和花部材料对该种相关形态特征给予了补充。

关键词: 聚叶钗子股; 兰科; 新记录; 增补; 中国

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New record and additional notes on *Luisia appressifolia* (Orchidaceae) in China

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Abstract: *Luisia appressifolia* Averyanov, a newly recorded species characterized by erect and branched stem, clasped leaves, golden yellow petals and labellum, and labellum adaxially with fleshy longitudinal ridge on epichile is reported from China.

Key words: *Luisia appressifolia*; Orchidaceae; Newly recorded; Additional note; China

Luisia was established in 1829 by Charles Gaudichaud-Beaupré^[1]. The genus was named in honor of Don Luis de Torres, a Portuguese botanist from the nineteenth century^[2]. Although it is a small genus, its generic and interspecific relationships are still not well understood^[3-5]. There are approximately 41 species, distributed in Bhutan, China, India, Indochina, Indonesia, Japan, Malaysia, New Guinea, Pacific islands, Philippines, Sri Lanka, and Thailand^[6-8]. In China, there are 11 species (five endemic), which are

mainly found in the Guangxi, Guizhou, Yunnan, and Hainan provinces^[6]. *L. appressifolia* was first described from Vietnam^[9] and postulated that it also occurred in South China^[6]. In 2016, we carried out a botanical survey of southeastern Yunnan and discovered the existence of *L. appressifolia*.

However, the flower color and shape of *L. appressifolia* from illustrations^[9] based on shrunk herbarium specimens were inconsistent with the freshly collected flowers. Here, we report

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on this newly recorded species from China and present an updated description based on fresh material, along with color plates to facilitate its recognition.

聚叶钗子股(新拟, Fig. 1)

Luisia appressifolia Averyanov, Lindleyana. 15(2): 79. 2000.

Type: Northern Vietnam. Ha Giang Province: Dong Van District, Ho Quang Phin Municipality, vicinities of Ta Xa village, 14 – 16 km to Dong Van town (23°16'N, 105°22'E), 1550 – 1600 m, limestone forest, 28 Apr. 1999, *P. K. Loc, P. H. Hoang & L. Averyanov, CBL 1802* (holotype: LE)

Epiphytic herb, stem erect, usually branched, ca. 16 cm long, ca. 2.8 mm diameter, internodes ca. 1.0 cm. Leave terete, clasped, 5.6 – 7.7 cm × 2.1 – 2.4 mm, acute. Inflorescences borne from basal part of stem, green yellow with dense spots, ca. 5 mm length, 1-flowered; floral bracts broadly ovate, green yellow on adaxial surface and red on abaxial surface, ca. 3 mm length. Flowers fleshy, sepals greenish yellow with purple stripes, especially on abaxial surface; petals golden yellow, tinged with purple stripe on middle of abaxial surface, lip golden yellow, with densely brown spots on adaxial surface, anther cap pale yellow; pedicle and ovary 8 – 10 mm. Dorsal sepal ovate-oblong, 8.5 – 9.0 mm × 5.0 – 5.5 mm, obtuse; lateral sepals similar to dorsal sepal, but slightly longer and wider than dorsal sepal, acute, dorsally carinate-winged, becoming winged at apex. Petals ellipse, 11.5 – 12.2 mm × 6.0 – 6.5 mm, obtuse; lip 10 – 15 mm, thickly fleshy, without distinct boundary between epichile and hypochile; hypochile slightly concave, base with sub-rectangular lateral lobes ca. 1.5 mm; epichile oblong, 7.5 – 8.0 mm × 6.5 – 7.0 mm, adaxially with fleshy longitudinal ridge, emarginated at apex. Column ca. 3.0 mm, rostellum large,

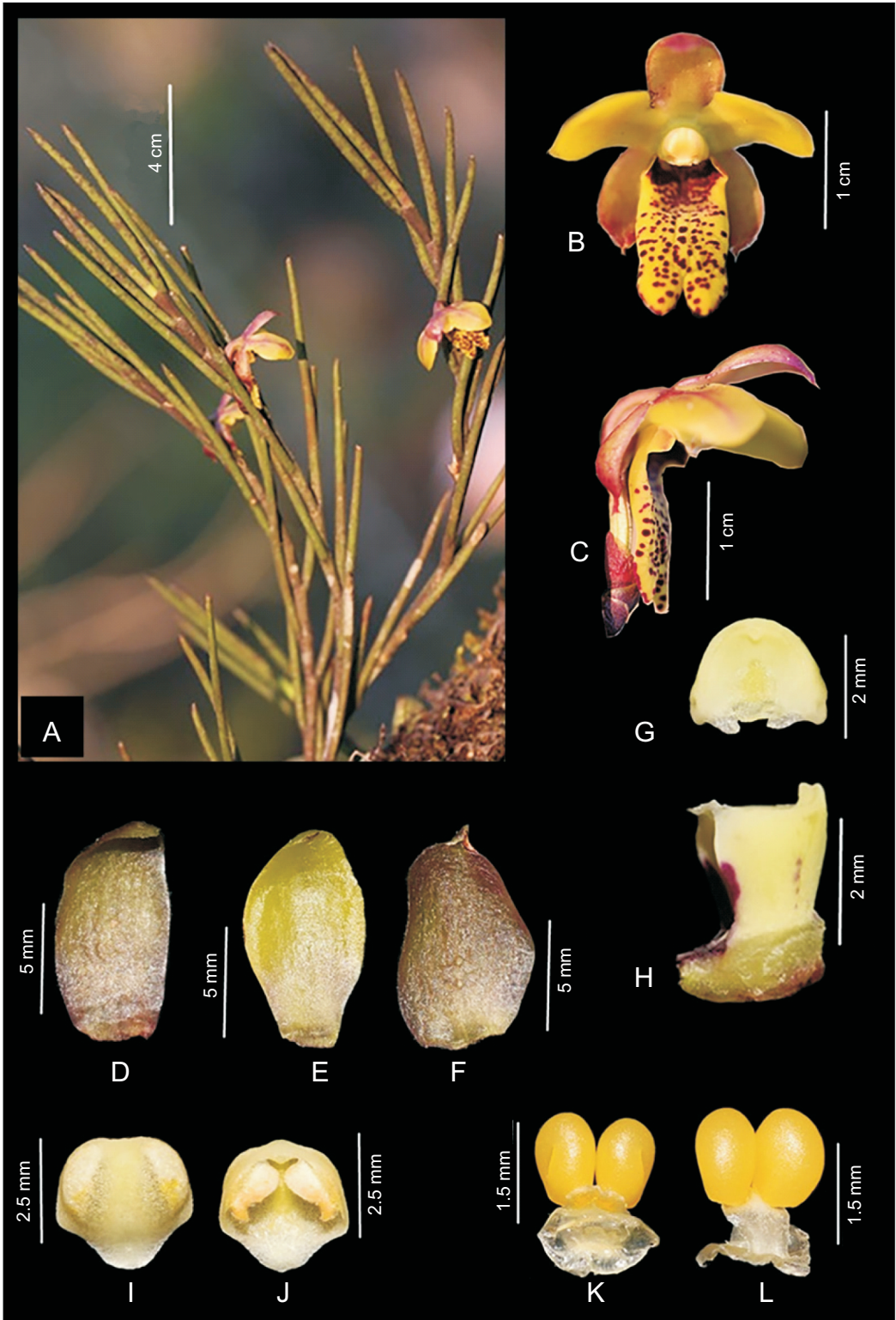
bilobed; pollinia globose, porate, ca. (2.0 × 1.0) mm; stripe ovate, ca. (1.8 × 1.2) mm; viscidium transversely oblong, large, ca. 2.0 mm wide; anther cap subglobose, ca. (2.5 × 2.7) mm, apex narrowed into beak. Flowering from April-May.

Distribution: Northern Vietnam, Cao Bang and Ha Giang Provinces. China, Yunnan Province (Malipo).

Habitat: Epiphytic on trunks at altitudes from 1450 to 1600 m in limestone forests in southeast Yunnan, China, which are mainly composed of *Quercus marlipoensis* (Fagaceae), *Q. utilis* (Fagaceae), *Platycarya strobilacea* (Juglandaceae), *Manglie tiagrandis* (Magnoliaceae), *Eriobotrya japonica* (Rosaceae), *Podocarpus macrophyllus* (Podocarpaceae), *Bulbophyllum insulsum* (Orchidaceae), *Paphiopedilum malipoense* (Orchidaceae), and *Habenaria fordii* (Orchidaceae).

Additional specimens examined: —China. Yunnan: Malipo County, Xiajinchang Village, limestone forest, 1600 m, *Liu 436* (HITBC!); Malipo County, Babu Village, limestone forest, 1450 m, 10 Apr. 2016, *Liu 409* (HITBC!).

Morphologically, the newly recorded species is similar to *L. teres*, *L. megasepala*, *L. hancockii*, and *L. tenuifolia* by having few flowers on each inflorescence, relatively large flowers, and bilobed epichile (Table 1). However, it differs from *L. teres* (distributed in China, Japan, and Korea) by having short stem, acute apex of leaves, 1-flowered/inflorescence, and epichile emarginated at apex (vs long stem (ca. 55 cm), obtuse apex of leaves, 1–7-flowered/inflorescence, and bilobed epichile in *L. teres*)^[6]; from *L. megasepala* (distributed in China) by smaller sepals (9.0 × 5.5 mm), ellipse petals, sub-rectangular lateral lobes of hypochile, and adaxially with fleshy longitudinal ridge on epichile (vs bigger sepals (15 × 6.5 mm), obovate to spatulate petals, ovate-triangular lateral lobes



A: Plant; B: Front view of flower; C: Lateral view of flower; D: Dorsal sepal; E: Petal; F: Lateral sepal; G: Rostellum; H: Lateral view of column; I: Front view of anther cap; J: Lateral view of anther cap; K & L: Pollinarium (Photographed by Q. Liu)

Fig. 1 *Luisia appressifolia*

of hypochile, and adaxially with reticulate-sulcate on epichile in *L. megasepala*)^[6]; from

L. hancockii (distributed in China) by rigid leaves, relatively large petals (12 × 6.5 mm),

lateral lobes of hypochile, and adaxially with fleshy longitudinal ridge on epichile (vs slender leaves, small petals (6.0 × 3.0 mm), no lateral lobes of hypochile, and adaxially with three or four papillate longitudinal ridges on epichile in *L. hancockii*)^[6]; from *L. tenuifolia* (distributed in India and Sri Lanka) by ellipse sepals and sub-rectangular lateral lobes of hypochile (vs lanceolate petals and ovate-triangular lateral lobes of hypochile in *L. tenuifolia*)^[3, 6].

Table 1 Morphological characters of <i>Luisia appressifolia</i> and related species					
Character	<i>L. appressifolia</i>	<i>L. teres</i>	<i>L. megasepala</i>	<i>L. hancockii</i>	<i>L. tenuifolia</i>
Stem	Erect, branched, ca. 16 cm	Ascending or pendulous, unbranched, ca. 55 cm	Pendulous, unbranched, ca. 50 cm	Ascending, unbranched, ca. 20 cm	Ascending, unbranched, ca. 10 cm
Leaf	Rigid, clasped, ca. 6 cm, acute	Rigid, facing all directions, ca. 15 cm, obtuse	Rigid, facing all directions ca. 10 cm, obtuse	Slender, facing all directions ca. 9 cm, obtuse	Slender, facing all directions ca. 15 cm, obtuse
Inflorescence	1-flowered	1–7-flowered	1–3-flowered	2–3-flowered	1–2-flowered
Dorsal sepal	Greenish yellow with purple stripes, ovate-oblong, 9.0 × 5.5 mm	Greenish yellow with purple stripes, ovate-oblong, 9.0 × 4.0 mm	Greenish yellow with purple spots, elliptic, 15 × 6.5 mm	Yellowish green, obovate-oblong, 6.0 × 3.0 mm	Greenish with red dots, ovate-oblong 7.0 × 4.0 mm
Petal	Golden yellow, ellipse, obtuse 12 × 6. 5 mm	Greenish-yellow with purple stripes, falcate-elliptic, 10 × 3.0 mm	Greenish yellow with purple spots, obovate to spatulate, 19 × 8.0 mm	Yellowish green, oblong, 6.0 × 3.0 mm	Greenish with red dots, lanceolate, 14 × 3.0 mm
Hypochile	Golden yellow with densely brown spots, concave, lateral lobes sub-rectangular	Purple or purplish brown, concave, lateral lobes sub-quadrate	Green with purple spots, lateral lobes ovate-triangular	Purple-red, concave, no lateral lobes	Blackish, concave, lateral lobes ovate-triangular
Epichile	Golden yellow with sparsely brown spots, oblong, adaxially with a fleshy longitudinal ridge, emarginated at apex	Greenish yellow with purplish brown stripes, sub-ovate, adaxially with a fleshy longitudinal ridge near apex, bilobed	Green with dark purple spots, broadly oblong, adaxially with reticulate-sulcate, bilobed	Yellowish green, oblong, adaxially with 3 or 4 papillate longitudinal ridges, emarginated at apex	Dark purple, oblong, adaxially with a fleshy longitudinal ridge, emarginated at apex

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