

A Note on the Occurrence of *Luisia unguiculata* (Orchidaceae) in Andaman and Nicobar Islands, India.

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भारत के अंडमान एवं निकोबार द्वीप समूह में ल्यूसिया अंगूईकुलाटा (आर्किडेसी) की उपस्थिति पर टिप्पणी

संजय मिश्रा, जीवन सिंह जलाल, विवेक सी. पी., गौतम अनुज एक्का, दिनेश कुमार अग्रवाल एवं लाल जी. सिंह

सारांश

प्रस्तुत शोध पत्र में भारत के अंडमान एवं निकोबार द्वीप समूह में ल्यूसिया अंगूईकुलाटा (आर्किडेसी) की उपस्थिति की पुष्टि करता है। इस जाति को सचित्र फोटोप्लेट के साथ वर्णित करते हुये पारिस्थितिकीय टिप्पणी की गई है।

ABSTRACT

The present paper confirms the occurrence of *Luisia unguiculata* J.J.Sm. (Orchidaceae) in Andaman and Nicobar Islands, India. Detailed description, photographic plate and ecological notes have been provided for the species.

KEY WORDS: Andaman and Nicobar Islands, India, *Luisia*, Orchidaceae.

INTRODUCTION

The genus *Luisia* (Orchidaceae: Epidendroideae: Vandeae) was established by Charles Gaudichaud-Beaupre in Louis de Freycinet's Voyage sur l'Uranie et La Physicienne in 1826. The genus comprises about 40 species distributed in Sri Lanka, India, Bhutan, China, Thailand, Indo-China, Japan, Malaysia, Indonesia, New Guinea and the Pacific Islands (Pridgeon & al., 2014). In India, 18 species of *Luisia* have been reported (Singh & al., 2019); mainly distributed in North-eastern states, North-west Himalaya, Peninsular India and Andaman and Nicobar Islands (Abraham & Vatsala, 1981; Deva & Naithani, 1986; Chowdhery, 1998; Karthigeyan & al., 2014).

The species has a very limited distribution and reported from Timor of the Lesser Sunda Islands, Indonesia. Scrutiny of the relevant literature revealed that other than Timor, the occurrence of this species in India from

Andaman & Nicobar Islands was mentioned in the checklist by Pandey & Diwakar, 2008. Later, Karthigeyan & al., 2014 reviewed orchid diversity in Andaman and Nicobar Islands and reported occurrence of five species of genus *Luisia* (*L. balakrishnanii* S. Misra, *L. brachystachys* (Lindl.) Blume, *L. recurva* Seidenf., *L. tristis* (G.Forst.) Hook.f. (= *L. teretifolia* Gaud.; *L. zeylanica* Lindl), *L. zollingeri* Rchb.f.) in Andaman and Nicobar Islands. While the occurrence of other three species namely *L. amesiana* Rolfe, *L. tenuifolia* Blume and *L. unguiculata* J.J. Sm. were considered as doubtful due to lack of the details of any locality, herbarium specimen and description. However, during the field expedition for the project Flora of Kyd, Pitman and James Islands wildlife Sanctuary (allotted to Sanjay Mishra, Vivek C.P. and Gautam Anuj Ekka), few plants of *Luisia* were collected in vegetative condition from a littoral forest of Kyd and Pitman Islands. They were introduced in the orchidarium of Dhanikhari experimental garden cum



Fig. 1. *Luisia unguiculata* J.J. Sm. a. habit; b & c. Inflorescence.

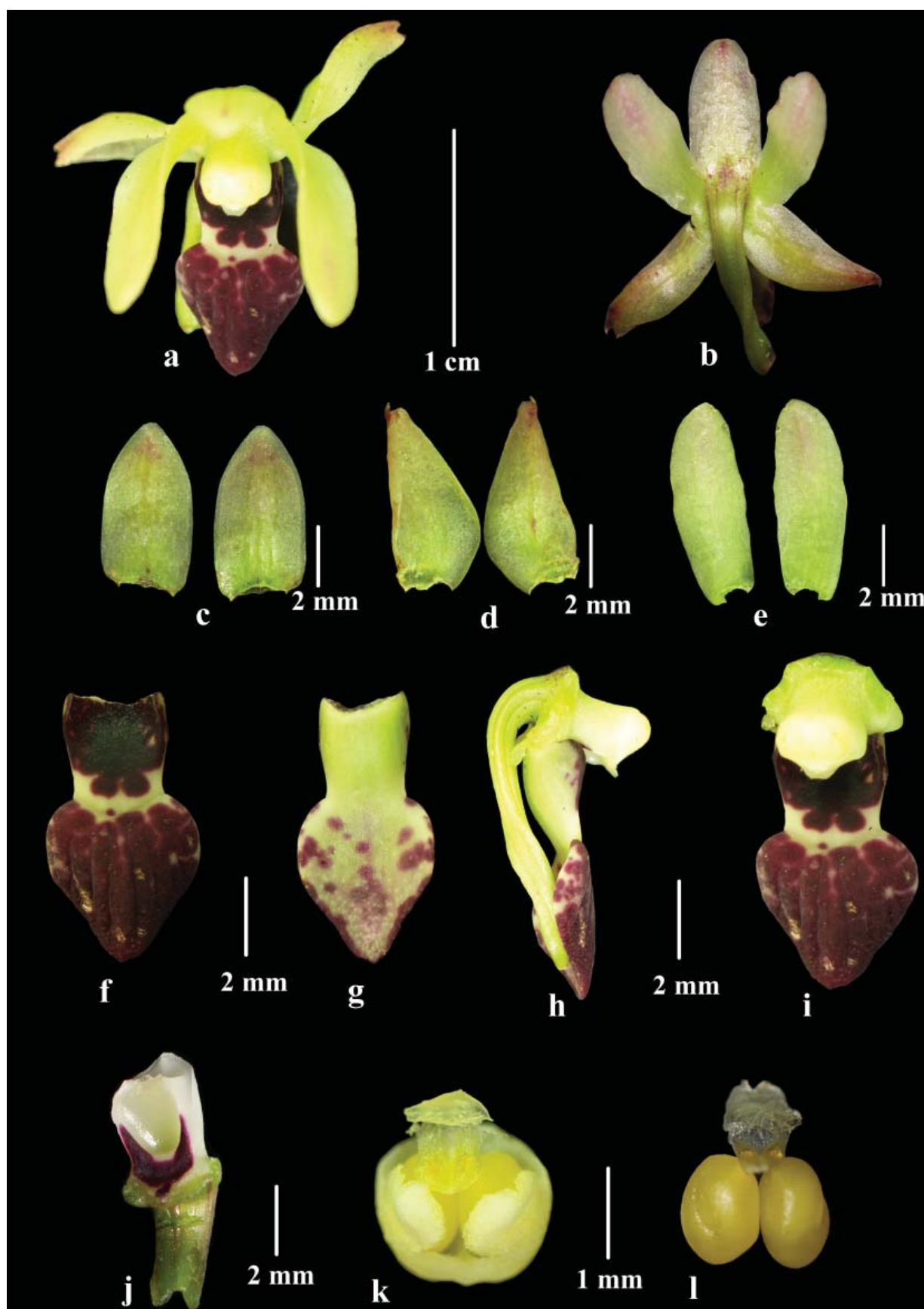


Fig. 2. *Luisia unguiculata* J.J.Sm. **a.** Flower front view; **b.** Flower back view; **c.** Dorsal sepal; **d.** Lateral sepals; **e.** Petals; **f.** Lip front view; **g.** Lip back view; **h.** Side view of lip, column & ovary; **i.** Front view of lip & column; **j.** Column; **k.** Anther cap; **l.** Pollinarium.

arboretum of Botanical Survey of India at Nayasahar. After one year, the plants bloomed in the garden. Based on the morphological characters, floral characters, field observation, on perusal of literature (Seidenfaden, 1971) and earlier collections, the identity of the plant was confirmed as *L. unguiculata* J.J. Sm. Therefore, the present paper confirms and re-establishes the occurrence of *L. unguiculata* J.J. Sm. in Andaman and Nicobar Islands, India. A Detailed description along with a photographic plate and ecological notes have been provided herewith.

TAXONOMIC TREATMENT

Luisia unguiculata J.J. Sm., Bull. Jard. Bot. Buitz. 3 Ser., 8: 65. 1926; Seidenf. Dansk Bot. Ark. 27 (4): 46, fig. 23. 1971. (Fig. 1 & 2).

Monopodial, epiphytic herbs. Roots 1–3 mm thick, vermiform. Stem erect, robust, terete, 25–40 cm long, 4–5 mm diameter, covered by tubular sheathing leaf base, internodes 1.6–2.5 cm long. Leaves terete, 15–28 cm long, 0.4 cm diameter, apex apiculate. Inflorescence extra axillary, erect, 0.6–0.7 cm long; peduncle short; rachis densely 4–6 flowered, successively opening. Floral bracts 4 × 2 mm, persistent, amplexicaul, broadly triangular. Ovary and pedicel 10–12 mm long. Flowers 1–1.5 cm across, sepals greenish-yellow, petals light green, lip dark maroon in greenish-yellow background. Sepals and petals spreading, unequal, dorsal sepal 5–5.8 × 3–3.7 mm long, oblong-elliptic, apical margin incurved, acute; lateral sepals 6.5 × 2.7 mm, concave, boat shaped, strongly keeled dorsally. Petals 7.5–8.5 × 2.8–3.4 mm long, oblong, obtuse, 3-veined. Lip parallel to ovary, fleshy, 8.6 × 4.7 mm, 3-lobed; hypochile conspicuous, long, clawed, deeply concave, with 2 rounded, erect auricular side lobes; epichile heart-shaped in outline, strongly convex, furrowed with 7 longitudinal thick furrows, margin entire, apex obtuse. Column cream-coloured, straight, 2.8 × 1.65 mm; clinandrium cordate, concave; anther cap 1.75 × 1.4 mm, semi-orbicular, truncate, indistinctly two chambered; pollinia 2, yellow, 1.3 × 1.0 mm, oblong, apices rounded, obliquely, deeply perforate, stipes more or less rectangular, hyaline, 1.1 × 0.8 mm, viscidium rectangular, 0.7 × 0.7 mm, pale brown; stigma large, more or less obovate; rostellum beaked in front.

Flowering and Fruiting: July–November.

Habitat: Epiphytic, found on tree trunks near sea shore and open canopy areas in tropical evergreen forest, often growing on *Bruguiera gymnorhiza* (L.) Lam., *Heritiera littoralis* Aiton., *Lagerstroemia hypoleuca* Kurz, *Manilkara littoralis* (Kurz) Dubard, *Pongamia pinnata* (L.) Pierre, *Terminalia bialata* (Roxb.) Steud.. Naturally found in

littoral forest areas of Kyd and Pitman Islands, South Andaman, Andaman and Nicobar Islands, India. (Fig. 3).

Distribution: India: (Andaman & Nicobar Islands); Indonesia.

Specimen examined: India, Andaman and Nicobar Islands, South Andaman, Kyd Island, 11°57.39'N & 92°44.52'E, 24m, 22.01.2016, Sanjay Mishra & party 32502 (PBL) .

Note: Seidenfaden (1971) suggested that *L. unguiculata* could not be separated from *L. javanica* J. J. Sm. comparing Smith's description. However, *L. unguiculata* can be easily distinguished from *L. javanica* by its broader convex epichile with seven longitudinal thick furrows and broader petals.

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