

Zeuxine philippinenses (Ames) Ames (Orchidaceae), a Newly Recorded Plant in Taiwan

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ABSTRACT: A new record species of *Zeuxine* Lindley (Orchidaceae), *Z. philippinenses* Ames, from Lanyu, Taiwan is described and illustrated. It is mainly characterized in the triangular-lanceolate leaves which are green but white with dark green reticulation along the midrib and more or less truncate at base; the flowers are erect on the rachis and half-opened; the lip is tripartite, glabrous, more or less urceolate in side view; the hypochile is saccate, ovoid and big while the epichile is relatively tiny, reflexed, undivided and transversely oblong or subreniform.

KEY WORDS: Orchidaceae, *Zeuxine philippinenses*, Morphology, Taxonomy, Taiwan.

INTRODUCTION

There are about 50 (King and Pantling, 1898; Garay and Sweet, 1974; Seidenfaden, 1978; Bose and Bhattacharjee, 1980; Hashimoto and Kanda, 1981; Davis and Steiner, 1982; Kanda, 1984; Deva and Naithani, 1986; Comber, 2001) to 90 species (Ormerod, 2005) of *Zeuxine* in the tropics and subtropics of the Old World. Ten species were recognized in Taiwan (Su, 2000). When the first and the second author made their field collection in a bad weather on 15, Feb. 2005 in Lanyu (Fig. 1), the new record species was found. This study provides the description, habitat and photographs of *Z. philippinenses* in Taiwan.

Zeuxine philippinensis (Ames) Ames Sched. Orch., Corrig., 37, 1938; Ormerod in *Taiwania* **49(3)**: 179, 2004. 菲律賓線柱蘭 Figs. 2 & 3

Adenostylis philippinensis Ames, Sched. Orch. **6**: 9, 1923; Merrill, Enum. Philippine Fl. Pl., p. 276. 1924-1925.

Hetaeria leytenenses Ames, Sched. Orch. **6**: 11, 1923; Ormerod. *l.c.*

Terrestrial herbs. Stem erect, terete, 10 cm long, 0.3-0.4 cm in diameter, glabrous, succulent, light red brown, rooting at lower nodes. Leaves 2-4, petiolate, triangular-lanceolate, 3.2-6 cm long, 1.4-2.3 cm wide, apex acuminate, base more or less truncate, margin entire, green along margins and white with dark green reticulation, along midrib, the white blotches becoming faint with age, glabrous, 5-nerved; petioles 1.5 cm long, sheathed at base. Peduncle

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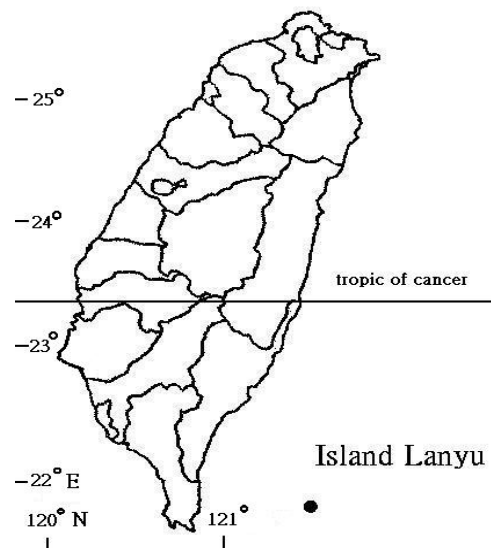


Fig. 1. Distribution of *Zeuxine philippinenses* in Island Lanyu, situated off the southeastern coast of Taiwan.

9 cm long, hairy, with 5 sheathed bracts, the bracts glabrous outside, ciliate at middle and lower margins, bearing 3 red veins; raceme 8 cm long, 13-flowered; floral bracts hairy. Flowers resupinate, half-opened; ovary sparsely hairy, erect on rachis; sepals free, unequal, hairy outside, the dorsal one boat-shaped, 5 mm long, light brown, the lateral ones concave, with inrolled margins at apex, 4 mm long, dark green; petals white, lunar or falcate, appressed to the dorsal sepal and with it formed a hood, 4.5 mm long; lip adnate with column at base, white, tripartite, glabrous, somewhat urceolate in side view, 4 mm long, the hypochile exposed, ventricose-saccate, ovoid, 1.7 mm wide, bearing 2 digitate papillae within, the mesochile short, sulcate, the epichile reflexed, dilated and undivided, transversely oblong or subreniform, 0.8 mm long, 1.7 mm wide, bearing sharp conic cells on upper surface; column 2.2 mm tall, with 2 low ridge-like appendages on ventral side; anther triangular-ovate, 2 mm long; pollinia clavate; stigma 2, on lateral side of column; rostellum straight, arm-like; tegula spatulate, 1.6 mm long; viscidium oblong (Figs. 2 & 3).

Notes: This species is distinctive with its triangular-lanceolate leaf and large ventricose-saccate lip with small reflexed epichile. Ormerod dealt with the synonymy of this species. The types of *Adenotylis philippinensis* and *Hataeria leytens* have no mature flowers left; another collection Wenzel 224 has coronascent flowers (persistent perianths) on burst capsules, whilst *Weber s. n.* has only capsules (Ormerod, 2004). The descriptions of both aforementioned taxa are faulty due to the sparse material that is either too young, advance in fruiting, or simply poor. Our study is written according to fresh plants, it represents the most complete drawing and description on this new record species.

Zeuxine philippinenses is collected in Letyte, Philippines (Ormerod, 2004) and Lanyu, Taiwan. In Lanyu, the species was found at elevations about 200 m, windward, flat understory of the forest. This type of rainforest has two canopy stratum. The upper canopy is about 9 m high; dominant species are *Ardisia sieboldii*, *Diospyros maritima*, *Planchonella obovata* and *Ficus benjamina* var. *benjamina*, accompanied with *Schefflera octophylla*, *Antidesma pleuricum*, *Linociera cumingiana*, *Glochidion lanceolatum*, *Syzygium tripinnatum*, *Elaeocarpus sphaericus* etc. Dominant species of understory are *Psychotria manillensis*, accompanied with *Calamus siphonopathus* var. *sublaevis*, *Dracaena angustifolia*, and the seedling of *Tarenna zeylanica*, *Neolitsea villosa*, *Celtis philippensis* and *Aglaia elliptifolia*.

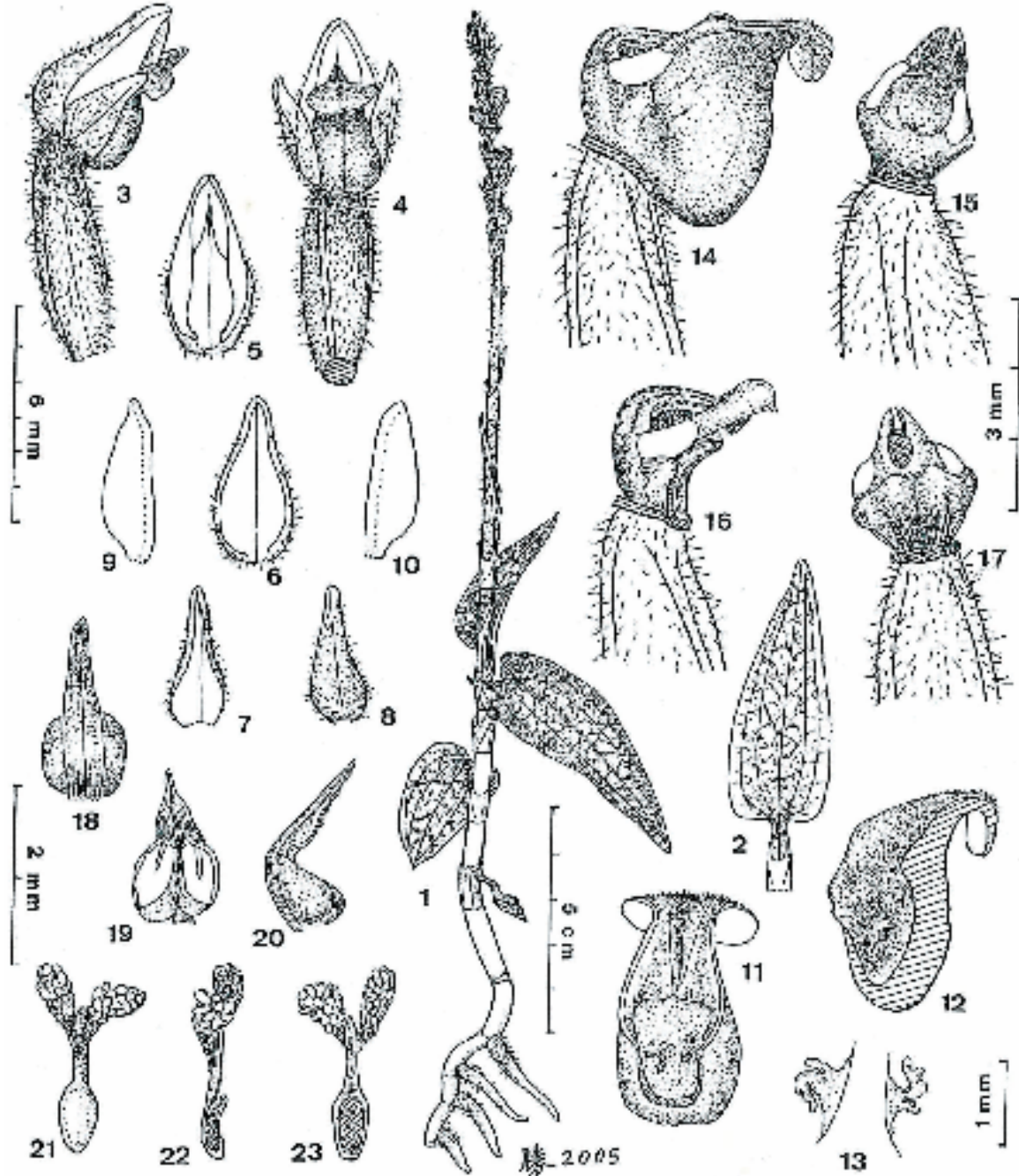


Fig. 2. *Zeuxine philippinenses* Ames. 1: Habit. 2: Leaf, showing the venation. 3: Flower, side view. 4: Flower, front view. 5: Hood. 6: Dorsal sepal, inside. 7: Lateral sepal, inside. 8: Lateral sepal, outside. 9 & 10: Petal. 11: Lip, top view. 12: Lip, *l. s.* 13: Papillae. 14: Column and lip, side view. 15: Column, dorsal view. 16: Column, side view. 17: Column, ventral view. 18: Anther, dorsal view. 19: Anther, ventral view. 20: Anther, side view. 21: Pollinarium, dorsal view. 22: Pollinarium, side view. 23: Pollinarium, ventral view.

Habitat: In mountain forest at western Lanyu isl. (Botel Tabago), Taiwan.

Flowering season: Febuary to early March.

Specimen observed: TAIWAN: Lanyu isl., Taitung, Taiwan, *C. L. Yeh & C. R. Yeh* 4021(PPI), 15, Feb., 2005.



Fig. 3. *Zeuxine philippinenses* Ames, showing 1: Habitat. 2: Habit. 3: Leaves. 4: Flowers.

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台灣蘭科新記錄植物：菲律賓線柱蘭

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摘 要

本文記述產自台灣蘭嶼之蘭科植物新記錄種「菲律賓線柱蘭」之學名、型態特徵、生育環境、產地、花期之鑑別及標本。本種之主要特徵為：葉呈三角狀披針形，葉面綠色，沿中肋有白色斑塊，葉基多少呈截形；花直立於花軸，半張；唇瓣呈三段裂，平滑無毛，側視時多少呈壺型；基段片囊狀，卵形，巨大，先段片相對微小、反捲，不再細裂而呈橫向橢圓形。

關鍵詞：蘭科、線柱蘭屬、菲律賓線柱蘭、分類學、形態學、台灣。

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