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臺灣兩種新歸化植物-號角樹(錐頭麻科)與蟾蜍樹(夾竹桃科)

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【摘要】號角樹 (*Cecropia peltata* L.) 及蟾蜍樹 (*Tabernaemontana elegans* Stapf.) 為新歸化於臺灣之錐頭麻科及夾竹桃科植物，為從國外引進臺灣做為標本木，最近發現這兩者皆局部歸化於南投竹山低海拔山區；本文描述這兩種植物，並提供形態特徵、地理分布、生育地環境並提供手繪圖及彩色照片。

【關鍵詞】歸化植物、錐頭麻科、號角樹、夾竹桃科、蟾蜍樹、臺灣、分類學

Two Newly Naturalized Plants in Taiwan: *Cecropia peltata* L. (Cecropiaceae) and *Tabernaemontana elegans* Stapf. (Apocynaceae)

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【Abstract】Two newly naturalized plants are reported in this paper. *Cecropia peltata* L. (Cecropiaceae) and *Tabernaemontana elegans* Stapf. (Apocynaceae) have been naturalized in low elevation mountain of Jushan area of Nantou city in central Taiwan. They are introduced and cultivated at botanical garden plant of Taiwan. Description, line drawing, photographs and a distribution map of those two species are provided.

【Keywords】Newly naturalized, Cecropiaceae, *Cecropia peltata*, Apocynaceae, *Tabernaemontana elegans*, Taiwan, Taxonomy

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Introduction

Based on the investigation of plant in Xia-Ping Tropical Botanical Garden, 97 families, 276 genus, 418 species, 45 endemic species, 153 imported cultivated species and 185 native species (Wang *et al*., 2009) have been recorded. *Cecropia peltata* L. and *Tabernaemontana elegans* Stapf. were early introduced to this Botanical Garden. Recently, both species survive in wasteland fields around low elevation mountain of Nantou that reproduce without human efforts and therefore we identify them as naturalized species according to Chen's (2008) definition of naturalized plant, "a naturalized plant is an alien or exotic plant to a given region and has become established in new habitats without human intervention." Since naturalization is considered as the first step of biological invasion (Wu et al., 2004), this investigation reports two recently naturalized plants for monitoring their dispersal in Taiwan in the future. This report shows the species description and illustration, base on live plant materials.

Taxonomic treatments

1. *Cecropia peltata* L., Syst. Nat., ed. 10, 2: 1286. 1759. (HT: Anonymous *s. n.*; Jamaica (LINN-1159.2)) 號角樹**Figs. 1 & 3**

Dioecious tree, 5-25 m tall or more, with slender trunks up to 50 cm in diameter and a narrow crown; bark grey; stems hollow, partitioned at the nodes, bearing conspicuous amplexicaul stipular scars and large; U-shaped leaf scars; leaves peltate, alternate, 30-50 cm in diameter or more, deeply-lobed, 7-11 lobes, ovate to palmate, attached near the base, entire or somewhat sinuous, somewhat pointed, dark green and scabrous above, densely white-tomentose beneath, the stipules enclosing the leaves in bud; petioles 30-50 cm long, tomentose; staminate inflorescence an umbellate cluster of spikes (3-many) 3-5.5 cm long, the flowers consisting of tubular calyces with exserted paired stamens; pistillate spikes 2-6, sessile, yellowish, in fruit 2-5.5 (9) cm long, thick and succulent. Infructescneia formed by numerous very small achenes approximately 1.9 mm long.

Distribution and habitat: *Cecropia peltata* L. is native to tropical Central and South America (Mabberley 2008). The trumpet tree is invasive in Malaysia, Ivory Coast and Cameroon. It also has been found in Hawaii and widely established in the forests to the elevation of several hundred meters on Tahiti and Raiatea (Welsh, 1998). Frugivorous birds disperse the seeds to forests, forest gaps, and disturbed sites. It is early successional, high light demanding, and a fast growing species that colonizes tree-fall gaps of rainforests in the native range. Additionally it quickly occupies gaps and forms dense stands. It sprouts easily after damage (Weber, 2003).

Phenology. Flowering from April to June.

Specimens examined: TAIWAN. Nantou Co., Jushan Township: Xia-Ping, 27 Mar. 2011, *C.-K. Yang 1787* (TNM); 25 Mar. 2012, *C.-K. Yang 1788* (TNM)

Notes: *Cecropia peltata* is a pioneer tree in humid forests setting in tropical American. As such, it has characteristics of invasive species which could establish quickly in disturbed ground (ISSG, 2003). This species has been nominated as one of "World's Worst" invaders. No control methods have been reported in the literature. We found *Cecropia peltata* L., a new naturalized species as a potentially aggressive wood in the

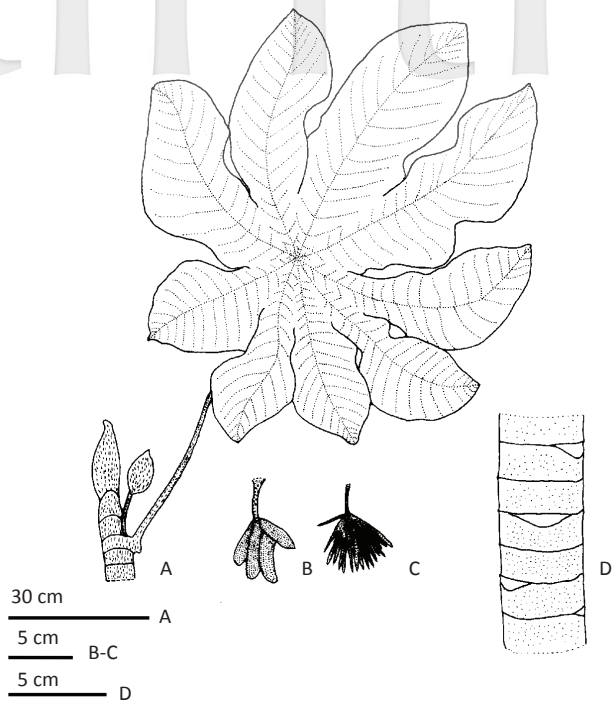

Fig.1 *Cecropia peltata* L.: A. Habit. B. Female flower. C. Male flower. D. Stem

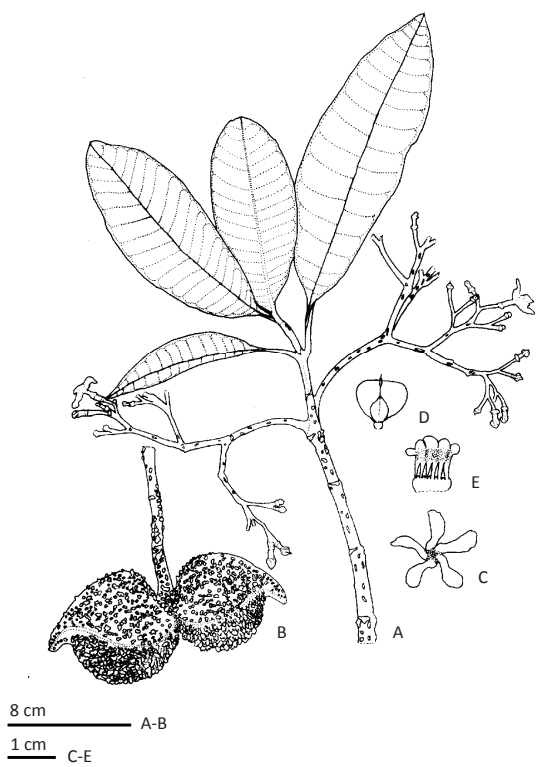

Fig.2 *Tabernaemontana elegans* Stapf.: A. Habit. B. Fruit. C. Corolla. D. Stigma. E. Corolla, expanded adaxial view.

central Taiwan.

2. *Tabernaemontana elegans* Stapf., Bull. Misc. Inform. Kew 1894(1): 24-25. 1894. 蟾蜍樹Figs. 2 & 4

Shrub or small tree is up to 15 m tall, repeatedly dichotomously branched, trunk up to 30 cm in diameter, bark longitudinally fissured, corky. Leaves opposite, simple and entire; ocrea widened into stipules in axils of petioles; blade elliptical or narrowly elliptical, 6–23 cm long, 2–8 cm wide, apex acuminate, acute or obtuse, base cuneate or decurrent into the petiole; petiole 7–30 mm long. Inflorescence a corymb 5–20 cm long, 2 together in the forks of

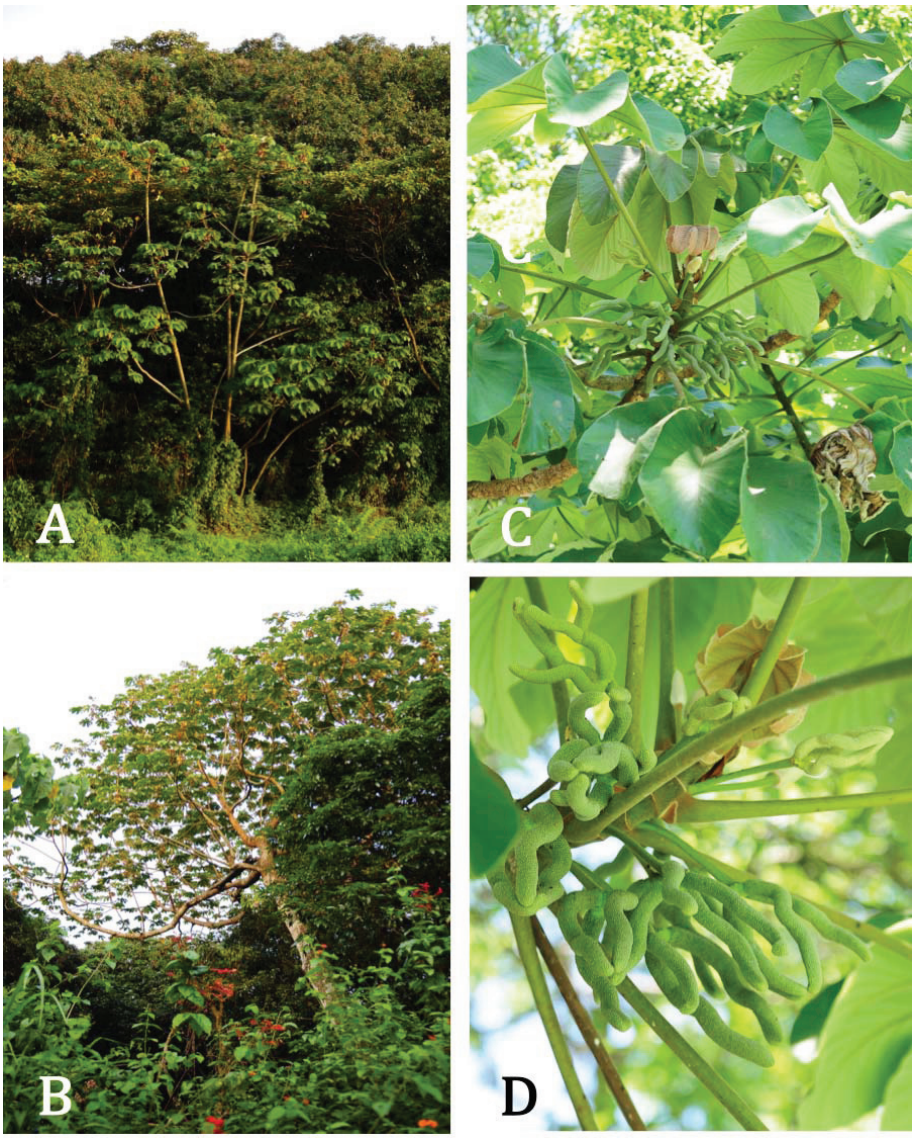

Fig.3 *Cecropia peltata* L.: A-B. Habitat and habits. C. Flowers and leaves D. Female Flowers

the branches, many-flowered; peduncle 1–8.5 cm long, lax. Flowers bisexual, regular, 5-merous, sweet-scented; pedicel 2–6 mm long; sepals orbicular to broadly ovate, 1–2.5 mm long; corolla tube almost cylindrical, 5–7 mm long, lobes obliquely elliptical, slightly falcate, 8–15 mm long, entire, spreading, white, creamy or pale yellow; stamens inserted 2–2.5 mm above the corolla base, included, anthers sessile, narrowly triangular; ovary superior, almost globose, consisting of 2 free carpels, styles fused, slender, straight, pistil head composed of 2 rings, the upper one grading into the slender stigmoid apex. Fruit

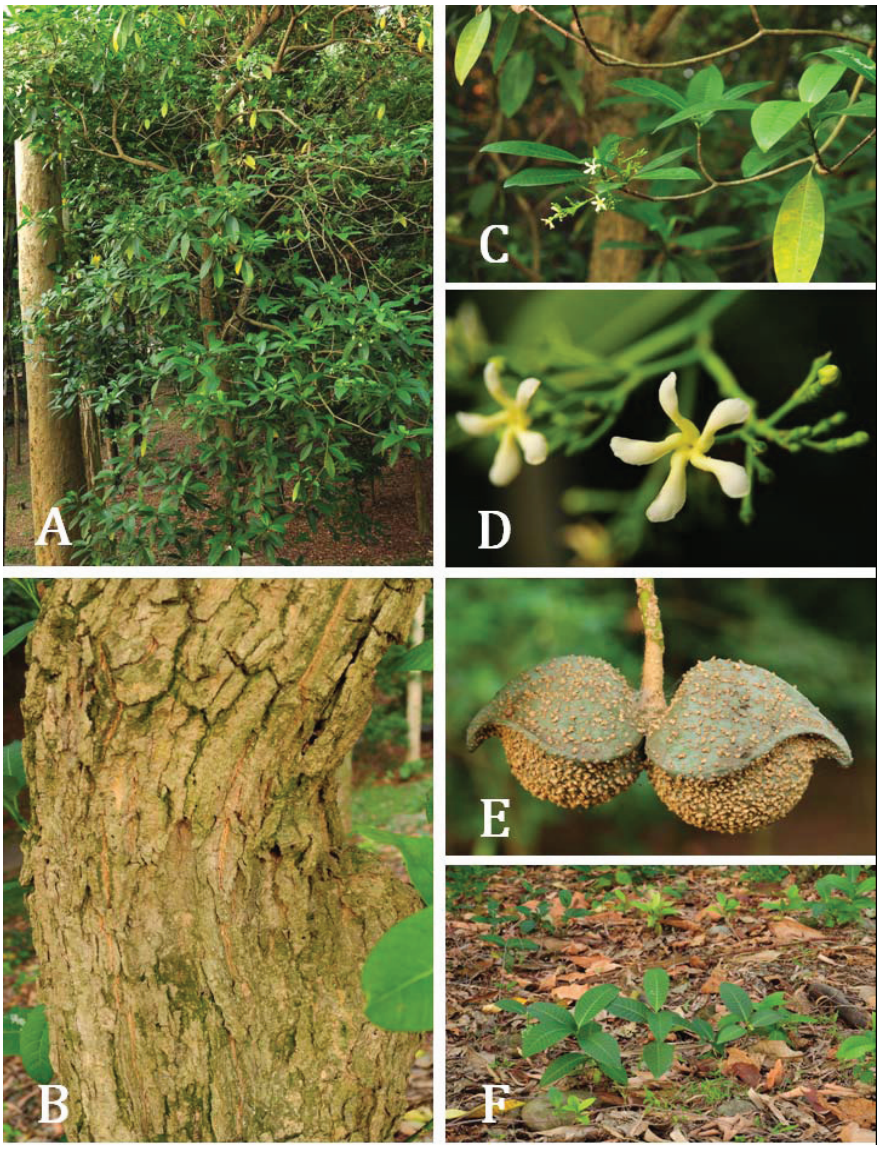

Fig.4　*Tabernaemontana elegans* Stapf.: A. Habitat and habits. B. Bark shallowly furrowed. C-D. Flowers. E. Fruit. F. Seeding

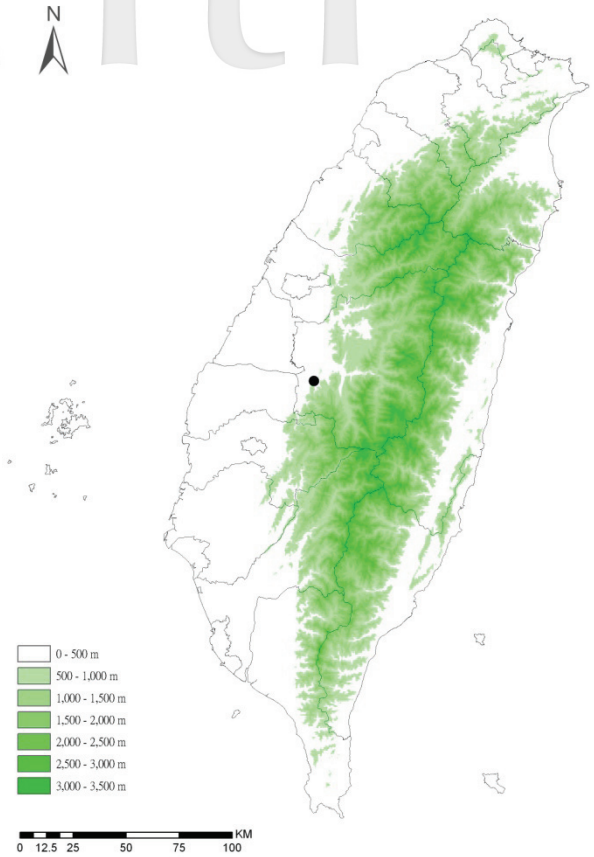

Fig.5 Distribution of *Cecropia peltata* and *Tabernaemontana elegans* in Taiwan.

composed of 2 separate, obliquely ovoid or ellipsoid follicles 5–8 cm long, glaucous or green, with conspicuous brown warts, with 3 ridges, dehiscent, many-seeded. Seeds obliquely ellipsoid, 14–15 mm long, with reticulate grooves, papillose, dark brown, aril orange.

Specimens examined: TAIWAN. Nantou Co., Jushan Township, Xia-Ping, 20 Jul 2011, *C.-K. Yang 1784* (TNM); 25 Dec 2011, *C.-K. Yang 1785* (TNM); *C.-K. Yang 1786* (TNM)

Distribution and habitat: *Tabernaemontana elegans* occurs in East Africa and southeastern Africa, from Somalia south to South Africa and Swaziland (Leeuwenberg, 1991). In Taiwan, it has been found in the Nantou County at 150 m.

Phenology. Flowering from January to December.

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