

Distimake aegyptius (L.) A.R.Simões & Staples
(Convolvulaceae), a newly naturalized species of
Distimake in Taiwan
臺灣萼龍藤屬的新歸化物種—埃及萼龍藤
(旋花科)

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Abstract

The genus *Distimake* Raf. in Taiwan comprises six species, including two native species - *D. quinatus* (R.Br.) A.R.Simões & Staples and *D. vitifolius* (Burm.f.) Pisutimarn & Petrongari, and four naturalized species - *D. tuberosus* (L.) A.R.Simões & Staples, *D. dissectus* (Jacq.) A.R.Simões & Staples, *D. cissoides* (Lam.) A.R.Simões & Staples, and *D. quinquefolius* (L.) A.R.Simões & Staples. This study documents *D.*

aegyptius (L.) A.R.Simões & Staples as a newly naturalized species in Taiwan found in low-altitude open areas across Changhua, Yunlin, and Pingtung. Morphological descriptions, color photographs, and an identification key for *Distimake* species in Taiwan are provided to facilitate accurate identification.

Key words: Convolvulaceae, *Distimake*, naturalized plant, Taiwan.

摘要

臺灣的萼龍藤屬 (*Distimake* Raf.) 有六種，包含兩種原生種：掌葉萼龍藤 (*D. quinatus* (R.Br.) A.R.Simões & Staples) 和葡萄葉萼龍藤 (*D. vitifolius* (Burm.f.) Pisutimarn & Petrongari，原稱掌葉菜欒藤)；四種歸化種：萼龍藤 (*D. tuberosus* (L.) A.R.Simões & Staples)、七爪萼龍藤 (*D. dissectus* (Jacq.) A.R.Simões & Staples)、蔓生萼龍藤 (*D. cissoides* (Lam.) A.R.Simões & Staples)、五葉萼龍藤 (*D. quinquefolius* (L.) A.R.Simões & Staples)。本文報導歸化於彰化、雲林和屏東低海拔開闊地的埃及萼龍藤，並提供該種的形態描述、彩色圖片及臺灣的萼龍藤屬植物檢索表以協助鑑定。

關鍵詞：旋花科、萼龍藤屬、歸化植物、臺灣

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Introduction

Following the dissolution of the tribe Merremieae in 2017, the broadly circumscribed genus *Merremia* Dennst. ex Endl. was reclassified into several genera, including *Camonea* Raf., *Decalobanthus* Ooststr., *Distimake* Raf., and *Merremia s.s.* (Simões and Staples 2017). Among them, *Distimake* comprises 35 species and exhibits a widespread distribution across tropical America and tropical Africa, with disjunct occurrences in Asia and northern Australia (Simões and Staples 2017). In addition, *Camonea vitifolia* (Burm.f.) A.R.Simões & Staples was transferred to *Distimake* based on molecular, morphological, and palynological evidence (Pisuttimarn *et al.* 2023).

The genus *Distimake* is distinguished by a set of diagnostic morphological traits. The leaves are typically five- to seven-palmately lobed or compound. The calyx generally consists of flat sepals that are appressed to the base

of the corolla tube, becoming accrescent during fruit development. The corolla is usually white or pale yellowish, occasionally featuring a dark red center, entirely glabrous, and dries with distinct dark lines along the mid-petaline bands. Anthers dehisce in a spiral manner. Fruits are usually four-valved capsules, with the calyx becoming significantly accrescent in fruit and the sepals reflexing at maturity. Seeds are glabrous (Simões and Staples 2017). In Taiwan, the genus *Distimake* comprises six species, including two native species - *D. quinatus* (R.Br.) A.R.Simões & Staples (Lu 1972) and *D. vitifolius* (Burm.f.) Pisuttimarn & Petrongari (Wang and Yen 1995), and four naturalized species - *D. tuberosus* (L.) A.R.Simões & Staples (Staples and Yang 1998), *D. dissectus* (Jacq.) A.R.Simões & Staples (Tsai *et al.* 2010), *D. cissoides* (Lam.) A.R.Simões & Staples (Ko and Liu 2011), and *D. quinquefolius* (L.) A.R.Simões & Staples (Chung *et al.* 2017).

This study documents the discovery of *Distimake aegyptius* (L.) A.R. Simões & Staples, a species native to the tropical and subtropical regions of the Americas, and tropical Africa, in Sandimen Township, Pingtung, Taiwan. According to the plant observation database Nature Campus (自然攝影中心植物觀察資料庫, <http://nc.biodiv.tw/bbs/index.php>), this species was first recorded in Taiwan between 2012 and 2014 in Yunlin, where it has been observed growing in fallow fields. Additionally, recent records from iNaturalist Taiwan (愛自然 - 臺灣, <https://taiwan.inaturalist.org>) indicate its presence in Changhua and Yunlin during 2023–2024. Based on these observations, we report that *D. aegyptius* is a newly naturalized species of *Distimake* in Taiwan. Taxonomic descriptions, color photographs of *D. aegyptius*, and an identification key for the *Distimake* species in Taiwan are provided to facilitate accurate identification.

Taxonomic treatment

Distimake aegyptius (L.) A.R.

Simões & Staples, Bot. J. Linn. Soc. 183: 583. 2017.

埃及萼龍藤 (Fig. 1)

Synonyms:

Merremia aegyptia (L.) Urb., Symb. Antill. 4: 505. 1910.

Ipomoea aegyptia L., Sp. Pl. 162. 1753.

Type: ‘America calidiore’, *Herbar. Linn. No. 218.35* (lectotype, LINN)

Climbing plant, stems twining dextrorsely, young stems densely hirsute, long hairy, yellowish. Leaves 5-palmately compound, leaflets 4–17 × 2–6 cm, oblanceolate or elliptical, the apex and base acuminate, margins entire, both surfaces hirsute. Petioles 3–25 cm, densely hirsute, long hairy, yellowish. Petiolules nearly sessile. Dichasial cymes 10–50 cm, axillary; peduncles 7–30 cm long, densely hirsute, long hairy; bracts small, linear, deciduous; pedicels 0.5–4 cm, densely hirsute, long hairy, yellowish. Sepals 5, unequal, elliptic-oblong, 1.6–2.4 cm long, 0.9 cm wide, the outer

2 slightly larger, abaxial surfaces densely hirsute, long hairy, yellowish; the inner 3 smaller, abaxial surfaces subglabrous. Corolla white, infundibuliform, 3.5 cm in diameter, 3 cm long; margin shallowly 5-lobed, midpetaline bands 5. Stamens 5, not extruded out of corolla, base 4 mm adnate to corolla, the longer 1.5 cm long, the shorter four 1–1.3 cm long; anthers twisted, 4 mm long, vertically dehiscent. Ovary subglobose, 1 mm long, base with disc; style 2 cm long; stigma bifid, globose; 4-loculed, 4-ovuled. Capsules subglobose, 7–8 mm in diameter, drooping, surrounded by the persistent sepals. Seeds 4, trigonous, 5–6 mm long, brown, glabrous.

Distribution: *Distimake aegyptius* is native to tropical and subtropical regions of the Americas and tropical Africa. It has been introduced to various parts of the world, including Cape Verde, Comoros, Hawaii, India, Madagascar, the Marianas, Mauritius, Myanmar, the Northern

Territory (Australia), Pakistan, Réunion, Vietnam, the western Himalayas, and Western Australia (POWO 2024). In Taiwan, the species is naturalized in Changhua, Yunlin, and Pingtung (Fig. 2).

Phenology: Flowering: October to December. Fruiting: December to February.

Ecology: In Taiwan, *Distimake aegyptius* is typically found in disturbed open areas at low altitudes, exhibiting a twining growth habit, often enveloping nearby plants and forming extensive vegetative cover.

Voucher specimen: TAIWAN. Yunlin County: Mailiao, 2 Feb. 2014, L.-H. Yang 630 (TAIE); same loc., ? Feb. 2022, L.-H. Yang 1000 (TAIE). Pingtung County: Sandimen, 5 Dec. 2024, P.-H. Chen 3923, 3924 (TAIF); same loc., 13 Jan. 2025, P.-H. Chen 3925, 3926 (TAIF).

Key to the Species of *Distimake* in Taiwan

1. Leaves palmately lobed..... 2

1. Leaves palmately compound 4

2. Leaves pubescent.....

...1. *D. vitifolius* (葡萄葉萼龍藤，新擬)

2. Leaves glabrous 3

3. Leaves entire.....

..... 2. *D. tuberosus* (萼龍藤)

3. Leaves irregularly incised.....

..... 3. *D. dissectus* (七爪萼龍藤)

4. Leaflets entire 5

4. Leaflets with serrate margins.....

.....6

5. Leaflets < 4 cm long, glabrous.....

..... 4. *D. quinatus* (掌葉萼龍藤)

5. Leaflets > 4 cm long, hirsute.....

..... 5. *D. aegyptius* (埃及萼龍藤)

6. Leaflets pubescent.....

.....6. *D. cissoides* (蔓生萼龍藤)

6. Leaflets glabrous.....

.....7. *D. quinquefolius* (五葉萼龍藤)

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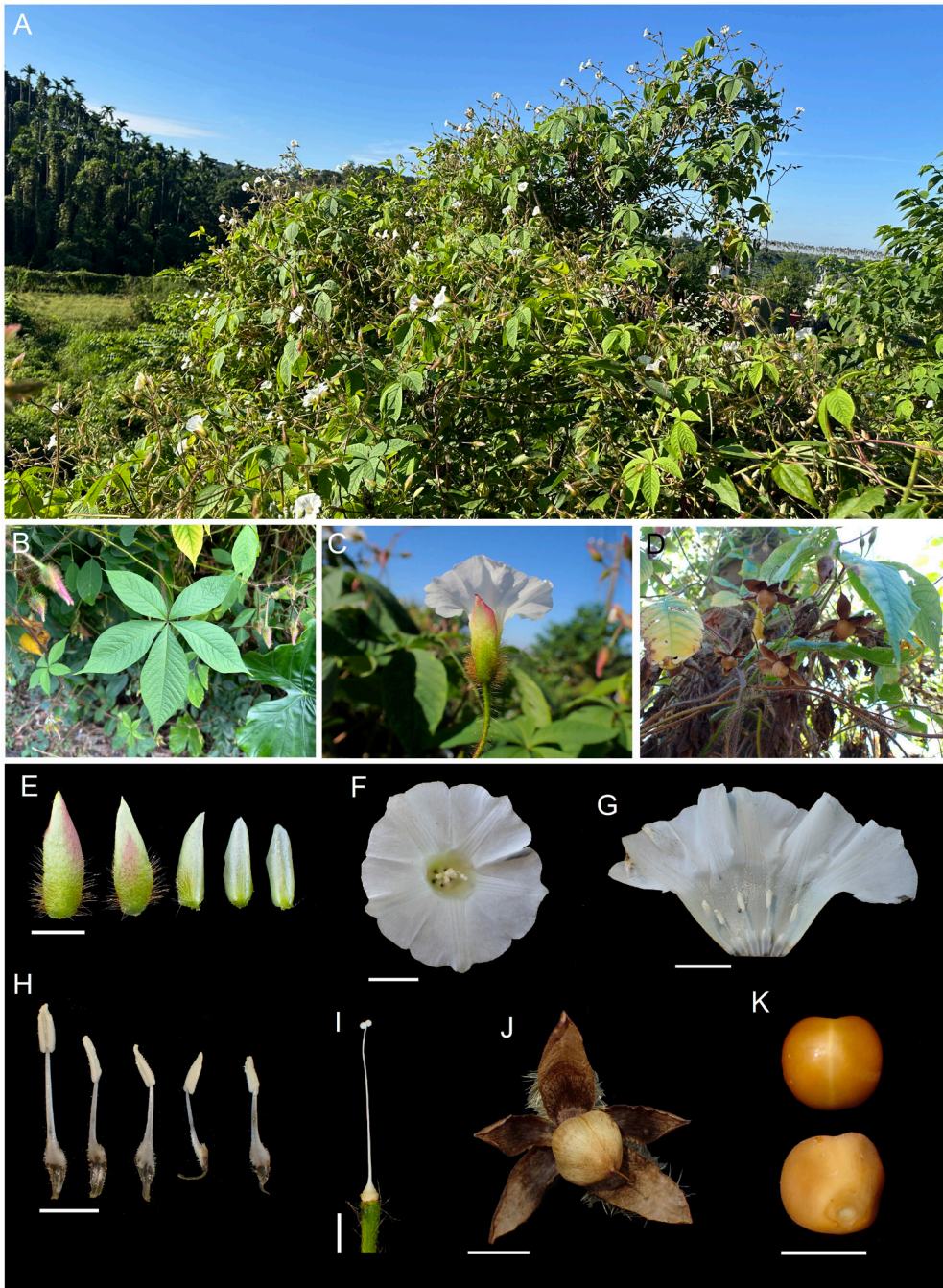


Fig. 1 *Distimake aegyptius* (L.) A.R.Simões & Staples. A, habitat; B, leaf; C, lateral view of flower; D, capsules; E, sepals; F, front view of flower; G, corolla (with stamens); H, stamens; I, pistil; J, capsule; K, seeds. Scale bars: E, F, G, and J=1 cm, H, I, and K=5 mm.

圖 1 埃及萼龍藤 (*Distimake aegyptius* (L.) A.R.Simões & Staples)。A：生育地；B：葉；C：花的側面；D：蒴果；E：萼片；F：花的正面；G：花冠（與雄蕊）；H：雄蕊；I：雌蕊；J：蒴果；K：種子。比例尺：E、F、G、J=1 cm，H、I、K=5 mm。

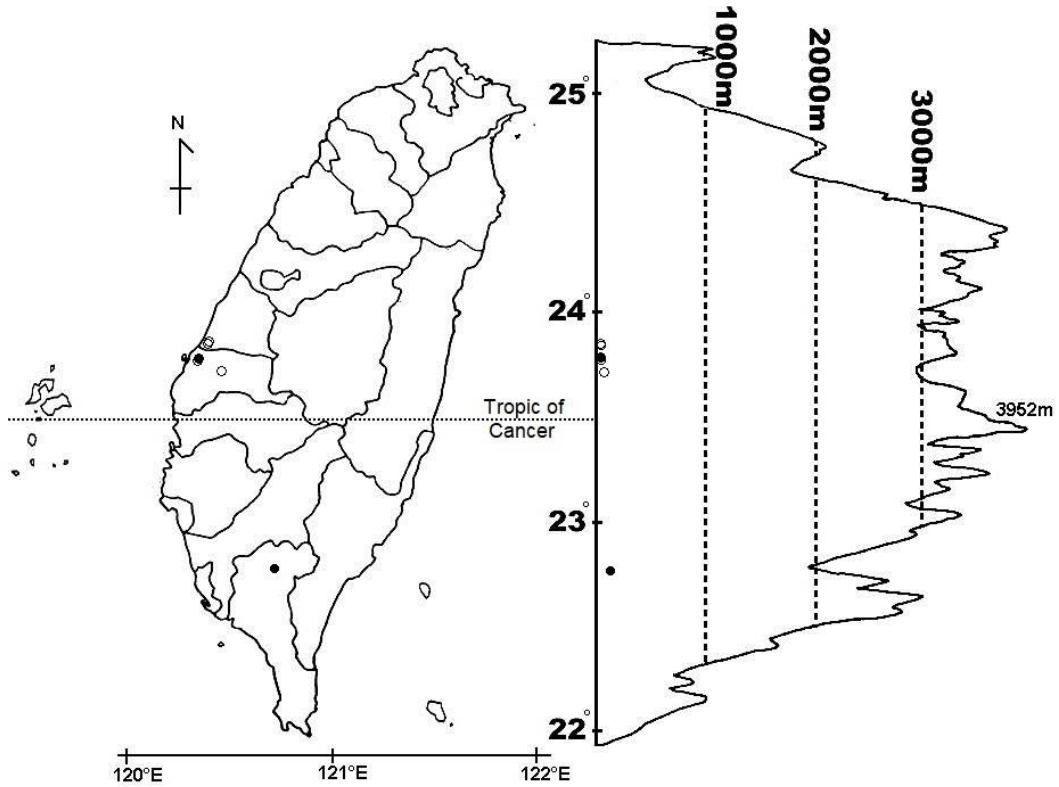


Fig. 2 Distribution of *Distimake aegyptius* (L.) A.R.Simões & Staples in Taiwan. The distribution in the map is based on verified voucher specimens (●) and additional iNaturalist Taiwan observations (○).
 圖 2 埃及萼龍藤 (*Distimake aegyptius* (L.) A.R.Simões & Staples) 在臺灣的分布。地圖上的分布點是根據引證標本 (●) 和愛自然 - 臺灣的觀察 (○)。

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