

***Capparis cantoniensis* Lour. (Capparaceae), a newly
recorded plant species in the Matsu Islands**

馬祖新紀錄植物 – 廣州山柑

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Abstract

A newly recorded species, *Capparis cantoniensis* Lour. (Capparaceae) is documented from the Matsu Islands, representing not only a new addition to the regional flora but also the first record of the family Capparaceae in this archipelago. This species exhibits a broad distribution across tropical and subtropical Asia, including the Andaman Islands, Assam, Bangladesh, southeastern China, the eastern Himalayas, Hainan, Java, Laos, the Lesser Sunda Islands, Maluku, Myanmar, the Philippines, Sulawesi, Sumatra, Thailand, and Vietnam. Within China, it has been recorded in the provinces of Fujian, Guangdong, Guangxi, Guizhou, Hainan, and Yunnan. Despite the close geographical proximity of the Matsu Islands to the southeastern coast of China, the presence of *C. cantoniensis* had not previously been reported from this region. In this study, we provide a detailed morphological description, accompanied by diagnostic line drawings and high-resolution photographs taken from specimens *in situ*, to support accurate identification and future floristic research.

Key words: *Capparis cantoniensis*, Capparaceae, Matsu

摘要

本文報導廣州山柑 (*Capparis cantoniensis* Lour.) 為馬祖列島的新紀錄種，同時亦為該地區首次記錄之山柑科植物，對區域植物誌具有重要補充意義。該物種廣泛分布於熱帶與亞熱帶亞洲地區，包括安達曼群島、阿薩姆、孟加拉、東喜馬拉雅、中國東南部、海南、爪哇、寮國、小巽他群島、摩鹿加群島、緬甸、菲律賓、蘇拉威西、蘇門答臘、泰國與越南等地。在中國境內，已知分布於福建、廣東、廣西、貴州、海南與雲南等省。儘管馬祖列島地理上鄰近中國東南沿海，過去未

有關於此物種的紀錄。本研究提供詳細的形態描述，並附有特徵線繪圖與原生環境之彩色照片，以利日後之鑑定與植物區系研究之應用。

關鍵詞：廣州山柑、山柑科、馬祖

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Introduction

The Matsu Islands, located in the northwestern Taiwan Strait, comprise five main islands, Dongyin, Beigan, Nangan, Dongju, and Xiju, as well as numerous smaller islets. Geographically, they are situated approximately 211 km west of Keelung, Taiwan, and about 16 km from the coast of Fujian, China. Due to their proximity to the mainland, the islands share a high degree of floristic and faunal similarity with southeastern China (Ota and Lin 1997). Previous botanical surveys have documented a total of 677 vascular plant taxa, including infra-spe-

cific ranks, and encompass 472 genera and 131 families (Huang 2002; Kuo 2004; Tzeng *et al.* 2012; Tzeng *et al.* 2014). In recent years, additional newly recorded and naturalized plant species have been reported from the region (Jung 2017; Lu and Wang 2023; Liou *et al.* 2025). The family Capparaceae, belonging to the order Brassicales within the Rosids, includes around 430 species distributed across 15 genera, with a predominantly Northern Hemisphere distribution (POWO 2025). *Capparis* Tourn. ex L. is one of the largest genera of the family Capparaceae and is important of its economic and medicinal value (Rivera *et al.*

2003; Jiang *et al.* 2007; Chedraoui *et al.* 2017). The genus consists of 146 species distributed in tropical and subtropical Old World to Mongolia (POWO 2025). It occupies mostly xeric habitats and is characterized by the presence of thorns and saccate outer sepals (Jacobs 1960; Jacobs 1965; Hall *et al.* 2002, 2004). The genus is divided into four sections based on leaf persistence and sepal morphology. Species with well-developed and persistent leaves belong to either Sect. *Capparis*, Sect. *Monostichocalyx*, or Sect. *Busbeckea*. Among them, when the sepals are all free in bud, one sepal of the outer pair is distinctly saccate, so the species are assigned to Sect. *Capparis*. However, if both sepals of each pair are equal, then they are placed in Sect. *Monostichocalyx*. When the outer pair of sepals is connate in bud, the species are classified under Sect. *Busbeckea*. In contrast, species with small leaves up to 2 × 0.3 cm and soon caduceous are placed in Sect. *Sodada* (Jacobs 1965). During re-

cent floristic investigations in the Matsu Islands, *Capparis cantoniensis* Lour. is recorded for the first time in this archipelago. Based on the sepal morphology, *Capparis cantoniensis* is classified under Sect. *Monostichocalyx*. This finding not only represents a new record of the species for the Matsu flora, but also marks the first documentation of the genus *Capparis* and the family Capparaceae in the region. Therefore, it contributes significantly to our understanding of the floristic composition and biogeographic affiliations of the Matsu Islands.

Systematic treatment

Capparis cantoniensis Lour. Fl. Cochinch. 1: 331. 1790. 廣州山柑.(Fig. 1-2)

Type: CHINA. Kwang Tung Province, Canton & Vicinity, 9 March 1917, *Levine 1247* (Neotype E 00327222 digital image!; Isonotypes A 00277170 digital image!, GH 00042251 digital image!, K 000380489 digital image!, L 0035314 digital image!, US 00100536 digital im-

age!).

Shrubs, scandent, 2-6 m tall, branch cylindrical, grey to light green, nearly glabrous, internode 1-4 cm; branchlet cylindrical, light green, pale yellow pubescent; twig cylindrical, light green, straight, with ridge angle when young, pale yellow pubescent. Stipular spines firm, flat or recurved, 3-5 mm, on flower twigs, small or absent, apex often brown orange. Leaf alternate, distichous, nearly leathery, leaf blade elliptic, oblong, oblong-lanceolate, or sometimes ovate, 7-10 × 2-4 cm, apex often acuminate and shortly mucronate, base cuneate to broadly cuneate, reddish brown when dry, adaxially pale green when dry, glabrous or when young mid-vein on both surfaces apically sparsely shortly pubescent but glabrescent, mid-vein abaxially raised and adaxially impressed, secondary veins 8-12 on each side of mid-vein and inconspicuous; petiole 4-5 mm, trichomes like those on twigs. Inflorescences axillary and subumbellate or axillary and terminal,

thus forming a panicle, to 9-flowered; peduncle 1-3 cm, trichomes like those on twigs; bracts early falling, subulate, 1-2 mm; bractlets small, sometimes absent. Pedicel 8-12 mm, trichomes like those on twigs. Sepals 4-5 × ca. 3 mm; sepals of outer whorl navicular, outside shortly pubescent, particularly near base, inside glabrous, margin membranous and glabrous; sepals of inner whorl elliptic to obovate, slightly smaller, margin white, membranous, and with white cilia. Petals white, obovate to oblong, 5-6 × 2.0-2.5 mm, inside basal and central parts white pubescent. Stamens 20-30; filaments 1.0-1.5 cm; anthers 0.7-0.8 mm. Gynophore 6-8 mm, glabrous; ovary nearly ellipsoid, ca. 1.5 × 1 mm, glabrous. Fruit spheroid to ellipsoid, 1-1.5 cm in diam., smooth; pericarp thin, leathery. Seeds 1 to several per fruit, globose or nearly ellipsoid, 6-7 mm.

Specimens examined: Lien-chiang County (Matzu Islands), Beigan Township, Wusha, alt. 50-150 m, 17 Aug.

2023, *W.Y. Wang* 3259; Wusha, alt. 20-80 m, 27 Mar. 2024, *W.Y. Wang* 3375 (TAIF)

Distribution: The native range of this species extends from India, including the Andaman Islands, and the eastern Himalayas, through Myanmar to southeastern China and Hainan, and further south to the Indo-Chinese Peninsula and the Isthmus of Kra (Jacobs 1965; Fici *et al.* 2022). It is also native to Bhutan, China, Indonesia, Laos, Myanmar, the Philippines, Thailand, Vietnam, and the Malaysian region (Zhang and Tucker 2008; Fici *et al.* 2022). In China, the species is distributed across several provinces, including Fujian, Guangdong, Guangxi, Guizhou, Hainan, Yunnan (Zhang and Tucker 2008), and Hong Kong (Hu 2007).

Habitat and Ecology: *Capparis cantoniensis* inhabits forests and forest edges, frequently in the shade, and seems to prefer moist places (Jacobs 1965). The population was recorded in Wusha, Beigan Township, Matsu Islands, growing in

crevices of rocky slopes, forest margins, and roadsides at elevations ranging from 20 to 150 m (Fig. 3). The canopy layer is composed of *Casuarinae quisetifolia* L., *Elaeagnus oldhamii* Maxim., *Triadicasebifera* (L.) Small, *Acacia confuse* Merr., *Ficussuperba* var. *japonica* Miq., and *Celtisbiondii* Pamp. The invasive species present include *Leucaenaleu cocephala* (Lam.) de Wit. Additional associated flora includes *Allium grayi* Regel, *Arisaemahete rophyllum* Blume, *Asparagus cochinchinensis* (Lour.) Merr., *Dianella ensifolia* (L.) DC., *Commelina auriculata* Blume, *Melodinus angustifolius* Hayata, *Trachelospermum jasminoides* (Lindl.) Lem., *Bidens alba* var. *radiata* (Sch. Bip.) R.E. Ballard ex Melchert, *Dendranthema indicum* (L.) Des Moul., *Stellaria media* (L.) Vill., *Celastrus hindsii* Benth., *Sedum drymarioides* Hance, *Mallotus repandus* (Rottler) Müll. Arg., *Ajuga nipponensis* Makino, *Salvia bowleyana* Dunn, *Jasminum sinense* Hemsl., *Corydalis decumbens* (Thunb.) Pers.,

Corydalis koidzumiana Ohwi, *Corydalis tashiroi* Makino, *Pittosporum tobira* (Thunb.) W.T. Aiton, *Sageretia thea* (Osbeck) Johnston., *Galium spurium* f. *vaillantii* (DC.) R.J. Moore, *Rubia akane* Nakai, *Dodonaea viscosa* Jacq., *Wikstroemia indica* (L.) C.A. Mey., *Davallia tyermanii* (T. Moore) H.J. Veitch, and *Carex kago shimensis* Tak. Shimizu.

Phenology: Flowering occurs from August to October, with fruiting happening from March to June.

IUCN Red list category: *Capparis cantoniensis* is widely distributed across Bhutan, China, Indonesia, Laos, Myanmar, the Philippines, Thailand, Vietnam, and the Malesian region (Zhang and Tucker 2008; Fici *et al.* 2022). In contrast, on the Matsu Islands, the species is currently known only from a single locality in Wusha, with an area of occupancy estimated to be less than 2 km² and a population size of approximately 50 to 100 individuals. Based on the IUCN

Red List Categories and Criteria (IUCN 2024), these parameters technically meet the thresholds for Critically Endangered (CR) under criteria [B1a+C1+D1+D2]. Nevertheless, according to the IUCN regional assessment guidelines, categories may be adjusted when the extinction risk of a local population is likely to be mitigated by immigration from outside the region. Considering that *C. cantoniensis* is widely distributed in neighboring regions where the Matsu site currently experiences minimal anthropogenic pressure, the final regional assessment for the Matsu Islands population is best placed under Vulnerable (VU).

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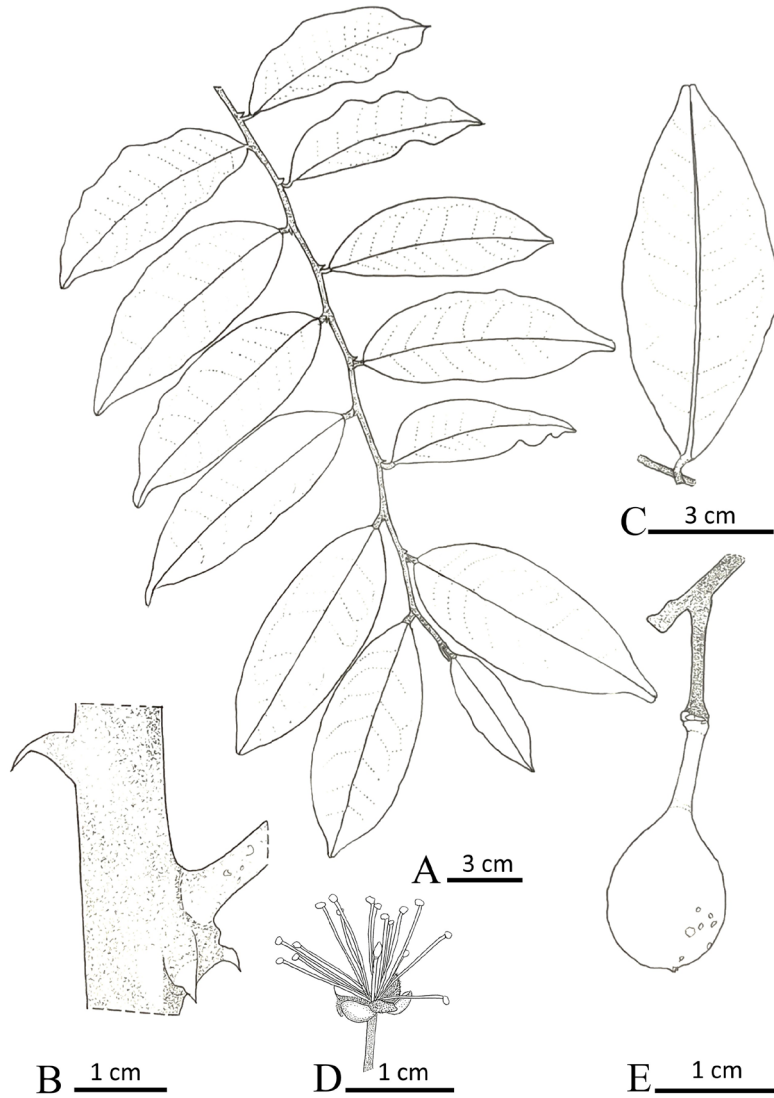


Fig. 1 Illustration of *Capparis cantoniensis* Lour., A. Branches and leaves; B. Branches with barbed thorns; C. Leaf; D. Flower; E. Fruit. (Illustrated by C.K. Yang)

圖 1 廣州山柑線繪圖。A 枝條及葉；B 枝條具倒鉤刺；C 葉；D 花；E 果實

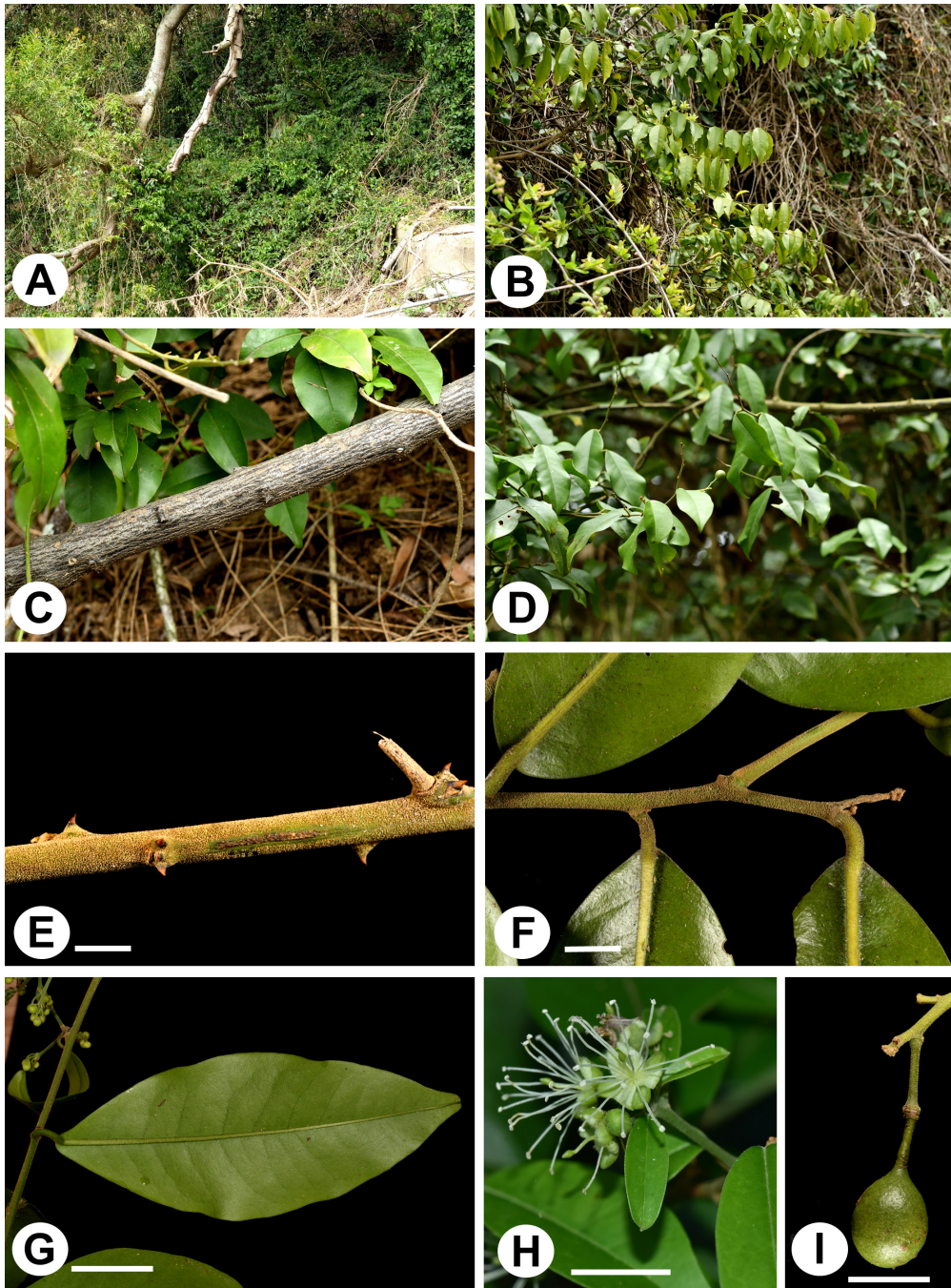


Fig. 2 Habitat and morphology of *Capparis cantoniensis* Lour., A. Habitat; B. Habit; C. Stem; D. Leaves and fruit; E. Branches with barbed thorns and pubescence; F. Young branches and petiole with pubescence; G. Abaxial of leaf; H. Inflorescence; I. Fruit. Scale bars: E = 5 mm; F = 5 mm; G = 3 cm; H = 1 cm; I = 1 cm

圖 2 廣州山柑 (*Capparis cantoniensis* Lour.)。A. 生育地；B. 植株；C. 莖；D. 葉及果實；E. 枝條；F. 幼枝及葉柄密被毛；G. 葉遠軸面；H. 花序；I. 果實。

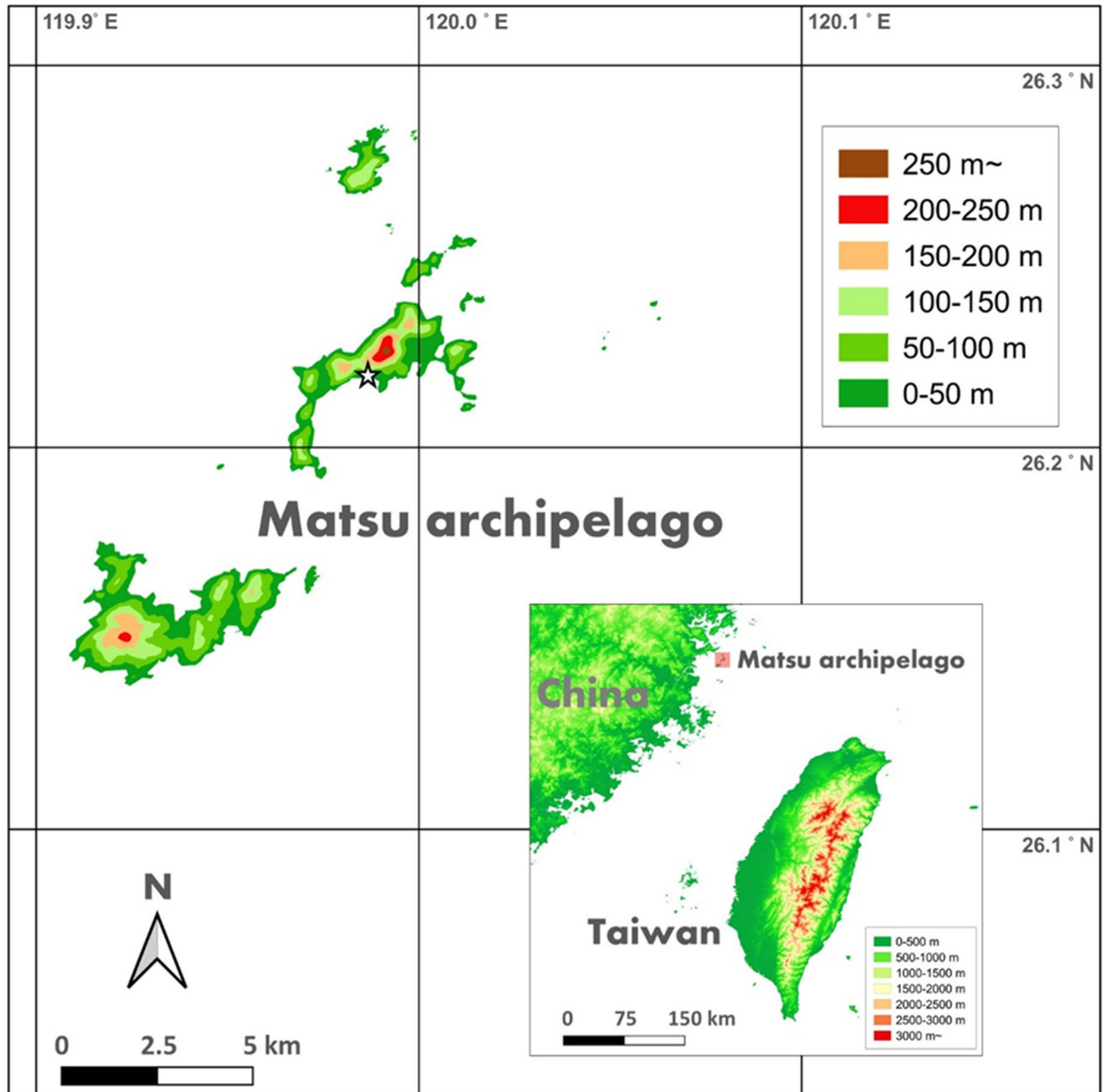


Fig. 3 Locality of *Capparis cantoniensis* Lour. in the Matsu Islands.

圖 3 廣州山柑 (*Capparis cantoniensis* Lour.) 在馬祖的分布圖

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