

Melothria pednula L. (Cucurbitaceae), A Newly Naturalized Plant in Taiwan

Tsai-Wen Hsu⁽¹⁾, Jen-Jye Peng⁽¹⁾, and Ho-Yih Liu^(2, 3)

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ABSTRACT: *Melothria pendula* L. (tribe Melothrieae), a New World Cucurbitaceae species, has been found in central Taiwan, and represents a new record of this genus and species for this island. This paper describes the morphology of the species and provides a line drawing and a key to the genera within the tribe Melothrieae in Taiwan.

KEY WORDS: Cucurbitaceae, *Melothria pendula*, Naturalized plant, Taiwan, Taxonomy.

INTRODUCTION

The genus *Melothria* L. (Cucurbitaceae), consisting of 10 species, is an entirely New World genus (Jeffrey, 1962; Mabberley, 1987). Its type species, *Melothria pendula* L. is native in eastern N. America. However, we recently found it has become a newly naturalized invasive plant locally abundant in central Taiwan. This paper describes the morphology of the species and provides a line drawing and a key to the genera within the tribe Melothrieae in Taiwan.

TAXONOMIC TREATMENT

***Melothria pendula* L., Sp. Pl. 35. 1753.**

Figs. 1-3 垂瓜果

Vines with perennial roots; tendrils simple. Leaves simple, alternate, ovate to widely ovate, 3-7 cm long, 3-4 cm wide, apices mucronate, bases cordate or hastate, 3-5(-7)-angled or -lobed, margin mucronately toothed, densely hispidulous on both surfaces; primary veins 5-7, palmate; petioles c. 2 cm long, hairy. Flowers unisexual, axillary; monoecious; staminate flowers slightly smaller than pistillate flowers; corolla campanulate, 5-lobed, yellow, the lobe bilobed at apex. Staminate flowers few, usually in 6-7-flowered raceme; pedicels c. 5 mm long; stamens 3, two 2-theous, one 1-theous, epipetalous, subsessile. Pistillate flowers solitary; pedicels 2.5-3 cm long; calyx-lobes c. 1 mm long; corolla 8-10 mm in diameter, corolla-lobes obdeltate, c. 3 mm long, 3-4 mm wide; staminoids present; style 3, apex biforked; ovary inferior, 3-locular. Berry pendent, oblong-elliptic, 15-19 mm long, c. 12 mm in diameter, with white spots when young. Seeds ovate, c. 4 mm long, 2 mm wide, with white hairs.

N. America. Taiwan, roadside and in crop fields.

CHANGHUA: Tienwei, Hsu 9317.

1. Taiwan Endemic Species Research Institute, Chi-Chi, Nantou 552, Taiwan, Republic of China.

2. Department of Biological Sciences, National Sun Yat-Sen University, Kaohsiung 804, Taiwan, Republic of China.

3. Corresponding author.

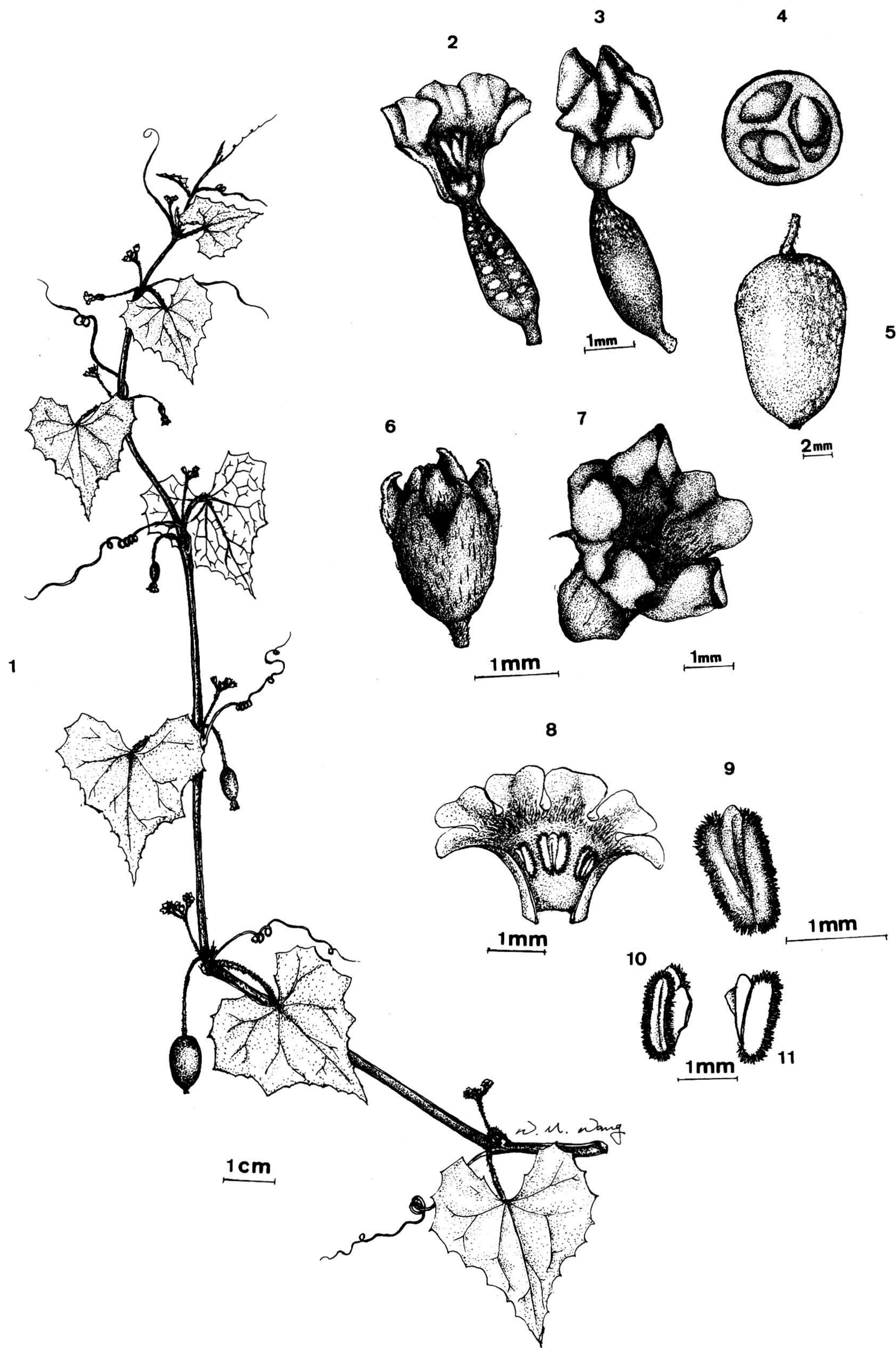


Fig. 1. *Melothria pendula* L. 1. Flowering branch; 2. dissected pistillate flower; 3. pistillate flower; 4. ovary c. s.; 5. immature fruit; 6-7. staminate flowers. 8. dissected staminate flower; 9-11. stamens.



Fig. 2. *Melothria pendula* L. in its natural habitat.



Fig. 3. *Melothria pendula* L. showing a staminate flower with bilobed petals, two 2-anther-theous stamens and one 1-anther-theous stamen.

Notes

The Taiwan Cucurbitaceae, since the European expedition period (Forbes and Hemsley, 1887; Henry, 1896), has been revised several times (Chuang, 1966; Hsiao, 1977; Liu, 1989, 1993; Ying, 1990). In addition to the species reported previously (Liu, 1993; Wang and Wu, 1997), this paper will sum up the Taiwan wild Cucurbitaceae plants to 15 genera and 23 species.

Melothria L. is in the tribe Melothrieae. This tribe, based on the delimitation emendated by Jeffrey (1962, 1990), has five genera in Taiwan: *Cucumis* (cultivated only), *Melothria*, *Mukia*, *Solena*, and *Zehneria*. The latter 4 genera had been sunk into a single genus *Melothria* by Cogniaux (1916), but was resurrected and redelimited by Jeffrey (1962). *Melothria* is easily distinguished from other members of the tribe by having long-stalked fruits, compressed seeds, racemose male inflorescences, and three stamens, 2 of the which are 2-thecous and the other 1-thecous. Since the genus name *Melothria* was used by many Taiwan taxonomists in the past (e. g. Chuang, 1966; Hsiao 1966), the key of the genera of the current usage within the tribe Melothrieae in Taiwan is as follows:

Key to genera of Melothrieae in Taiwan

1. All three stamens are 2-thecous *Zehneria*
1. Two stamens 2-thecous, one stamen 1-thecous.
 2. Anther-thecae sigmoid *Cucumis*
 2. Anther-thecae straight or curved.
 3. Flowers subsessile *Mukia*
 3. Flowers pedunculate.
 4. Seeds compressed; plants monoecious *Melothria*
 4. Seeds turgid; plants dioecious *Solena*

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臺灣新歸化瓜科植物—垂瓜果

許再文⁽¹⁾、彭仁傑⁽¹⁾、劉和義^(2,3)

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摘 要

本文報導最近在台灣中部發現之一種新歸化種—垂瓜果 (*Melothria pendula* L., 垂瓜果族)，本植物原產於新大陸，對台灣而言，其為新紀錄屬亦是新紀錄種。本植物以其果長柄、種子扁平、雄花序總狀及雄蕊三枚，其中二雄蕊 2 枚花藥，另一雄蕊 1 枚花藥，而與其它垂瓜果族的成員有所不同。本文對本植物進行形態觀察，提供彩色照片及繪圖，並提供臺灣垂瓜果族植物屬的檢索表。

關鍵詞：瓜科、垂瓜果、歸化植物、臺灣、分類。

1. 台灣省特有生物研究保育中心，南投 552，臺灣，中華民國。

2. 國立中山大學生物科學系，高雄市 804，中華民國。

3. 通信作者。