

Ambrosia psilostachya DC. (Asteraceae) a Newly Naturalized Plant in Taiwan

台灣新歸化菊科 (Asteraceae) 裸穗豬草

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Abstract

This paper describes *Ambrosia psilostachya* DC. (Asteraceae) as a plant newly recorded to Taiwan. It has established its feral population in Kaohsiung County, and is closely related to exotic *A. artemisiaefolia* L. of Taiwan. However, the two species are distinguishable by the structure of their pinnatifid leaves. This paper also provides its distribution, living habitat, breeding (flowering and fruiting) period.

摘要

裸穗豬草(菊科)首次在高雄市左營區半屏山頂被採集，為台灣新歸化植物。本篇報告描述其形態特徵、地理分布及生育環境，並提供彩色圖片與繪圖，同時列製檢索表以區別裸穗豬草與同屬另一歸化植物豬草(*A. artemisiaefolia* L.)。

Key words: *Ambrosia psilostachya*, taxonomy, Taiwan

關鍵詞：裸穗豬草、分類學、台灣

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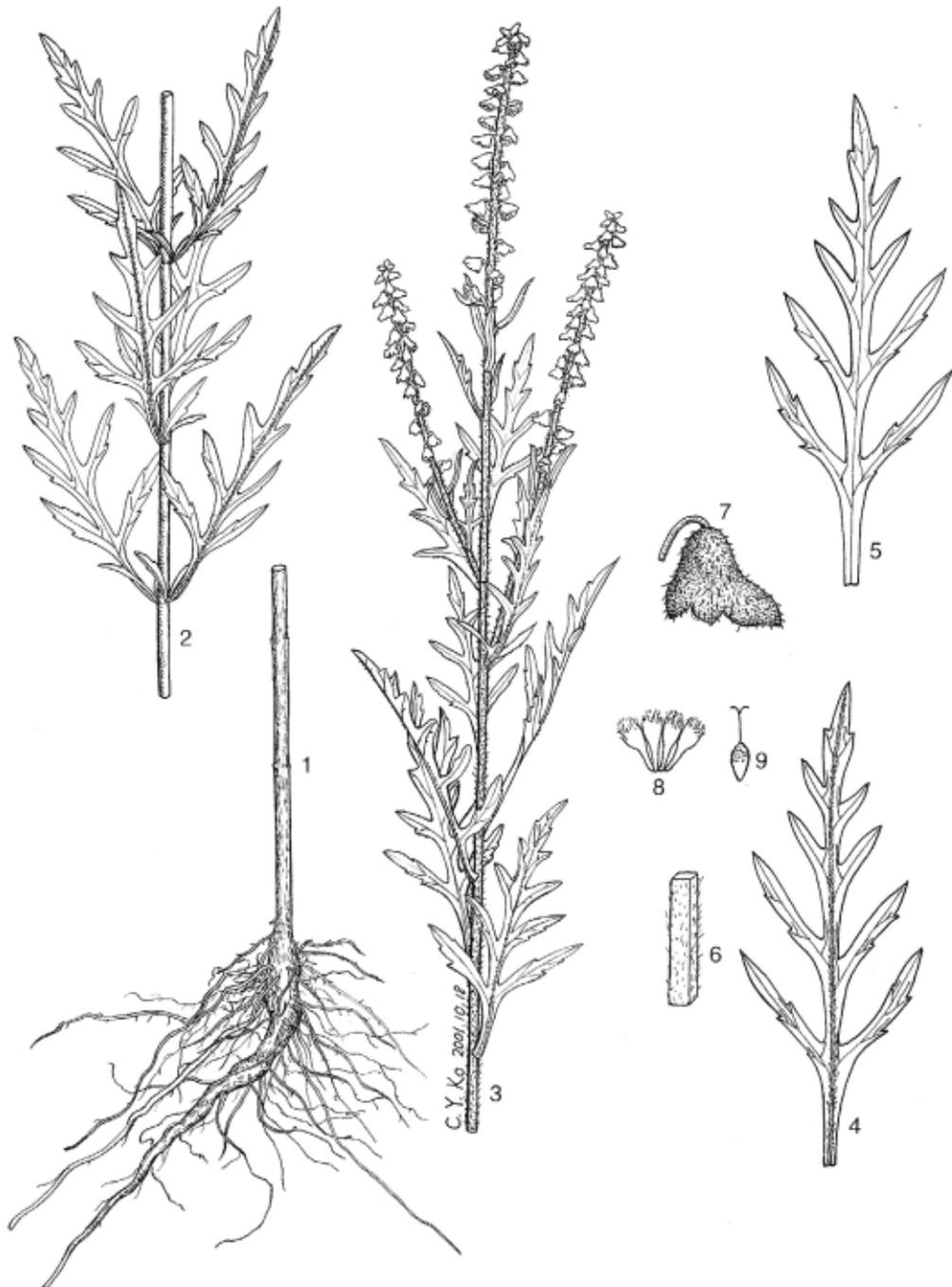


Fig. 1. *Ambrosia psilostachya* (1, roots and stem; 2, stem with leaves; 3, flowering branch; 4, lower surface of leaf; 5, upper surface of leaf; 6, stem with hairs; 7, involucre; 8, floret; 9, pistil).

圖1. 裸穗豬草的各部性狀 (1, 根部; 2, 莖部; 3, 花枝; 4, 葉背; 5, 葉面; 6, 莖的細部形態; 7, 總苞; 8, 小花; 9, 雌蕊)。

The genus *Ambrosia* L. belongs to the family Asteracea, and consists of approximately 40 species native to the New World (Britton and Brown 1970). Of them *A. artemisiaefolia* L. has been introduced to Taiwan (Hsu 1973; Peng 1998). Recently, we found that *A. psilostachya* has also established a feral population in Kaohsiung County of the southern Taiwan. We collected the specimens from Panpingshan (半屏山), Tsoying (左營), Kaohsiung Co., May 28, 2000 (Coll. No. Tseng 2350), Aug. 6, 2000 (Tseng 2557), and Aug. 19, 2001 (Tseng 2676). The specimens are deposited in the Endemic Species Research Institute Herbarium.

A. psilostachya is closely related to *A. artemisiaefolia*, but the two species are easily distinguishable; the former has pinnatifid leaves, while the latter has bi- or tripinnatifid leaves. This paper briefly describes this newly naturalized *A. psilostachya* in Taiwan, and provides with its distribution, habitat, and breeding period.

Ambrosia psilostachya DC., Sp. Pl. 102. 1753; Nagada T., Illustrated Japanese Alien Plants 254. 1972; Britton, N. L. and H. A. Brown. An Illustrated Flora of the Northern United States and Canada. 3: 266. f. 1970.

裸穗豬草 Fig.1

Erect annual or perennial herb. Stem up to 150 cm high with branched panicles in the upper half. Leaves hairy or rough on short stalks, each 5 to 12 cm long, ovate-lanceolate, deeply lobed often with toothed segments; lower leaves opposite, but upper leaves alternate. Male flowers several, not exceeding the involucre, grouped within shortly stalked hemispherical heads in terminal spike-like racemes, with up to



Fig. 2. The habitat of *Ambrosia psilostachya*.
圖2. 裸穗豬草的生育地。



Fig. 3. Plants of *Ambrosia psilostachya*.
圖3. 裸穗豬草的植株。

6-8 connate bracts forming an involucre. Corolla 4-5 mm, lilac, infundibuliform with a long tube, with 4 lobes. Calyx with 6 teeth, persistent in fruit; stamens 4, inserted on the tube of the corolla. Filament slender; anthers small, oblong, and exerted; style filiform and bifid; branches unequal. Female florets few, without a corolla, in 1-flowered heads in the axils of upper leaves; ovary 2-locular with 1 ovule in each loculus.



Fig. 4. Flowering branch of *Ambrosia psilostachya*.

圖4. 裸穗豬草的花枝。

Achene 2-7 mm, scabrid, dry with 1 seed.

Distribution: *A. psilostachya* is native to North America (Britton and Brown 1970; Bassett and Crompton 1975), and has been introduced to Japan (Nagada 1972), Germany and Spain (Takematsu and Ichizen 1987), and New South Wales of Australia from where it has spread to the eastern and southern Australia (Parsons and Cuthbertson 2002). In Taiwan it was found in Kaohsiung County.

Habitat and Ecology: *A. psilostachya* occurs in open grassland in the coastal plain of the southern Taiwan at an elevation of 220m. Its flowering period is from June to September, and

the fruiting period from August to December.

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