

Semiaquilegia adoxoides (DC.) Makino (Ranunculaceae), A Newly Naturalized Plant in Taiwan

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ABSTRACT: *Semiaquilegia adoxoides* (DC.) Makino, a native species of the Ranunculaceae distributed in mainland China, western Japan, and South Korea, has recently been found in central Taiwan, adding a new record for this genus and species to the flora of this island. *Semiaquilegia* can be easily distinguished from other genera of the Ranunculaceae by its actinomorphic flowers, distinct petals, and free carpels. This paper provides descriptions of the genus and species, line drawing, and color photos.

KEY WORDS: Naturalized plant, Newly recorded genus, Ranunculaceae, *Semiaquilegia adoxoides*, Taiwan, Taxonomy.

INTRODUCTION

Ranunculaceae comprises 59 genera and ca. 2,500 species all over the world (Tamura, 1993). Taxonomy of the family in Taiwan has been recently revised by Yang and Huang (1986, 1989, 1992, 1995, 1996a), Yang and Compton (1995), and Yang *et al.* (1991). Eleven genera and thirty-one species were recorded in the revised Flora of Taiwan (Yang and Huang, 1996b). In the survey of our botanical inventory, one additional weedy species, *Semiaquilegia adoxoides* (DC.) Makino, was found naturalized in central Taiwan. It represents a new record for the genus and the species on the island. The genus *Semiaquilegia* Makino, consisting of only one species, is distributed in mainland China, South Korea, and western Japan (Tamura, 1993). This study describes the morphology of the genus and species with a line drawing and color photos.

TAXONOMIC TREATMENT

Semiaquilegia Makino

Herbs perennial with tuberous rhizome. Leaves basal and cauline, ternately compound, blades 3 or 2-fid to -sect. Flowers actinomorphic. Sepals 5. Petals 5, base with short saccate spur. Stamens 8–14; staminodes ca. 2. Pistils 2-5. Follicles 2-5, diverged, sessile, glabrous, apically with short beak. Seeds brown to blackish brown, densely rugose.

Only one species, distributed in China, western Japan, and South Korea.

Semiaquilegia adoxoides (DC.) Makino, Bot. Mag. (Tokyo) 16: 119. 1902.

Figs. 1-2

Isopyrum adoxoides DC., Syst. Nat. 1: 324. 1817.

Isopyrum tuberosum Lévl., Rep. Sp. Nov. 7: 340. 1909.

Isopyrum leveilleianum Nakai, Bot. Mag. (Tokyo) 26: 323. 1912.

Aquilegia adoxoides (DC.) Ohwi, Fl. Jap. 533. 1953.

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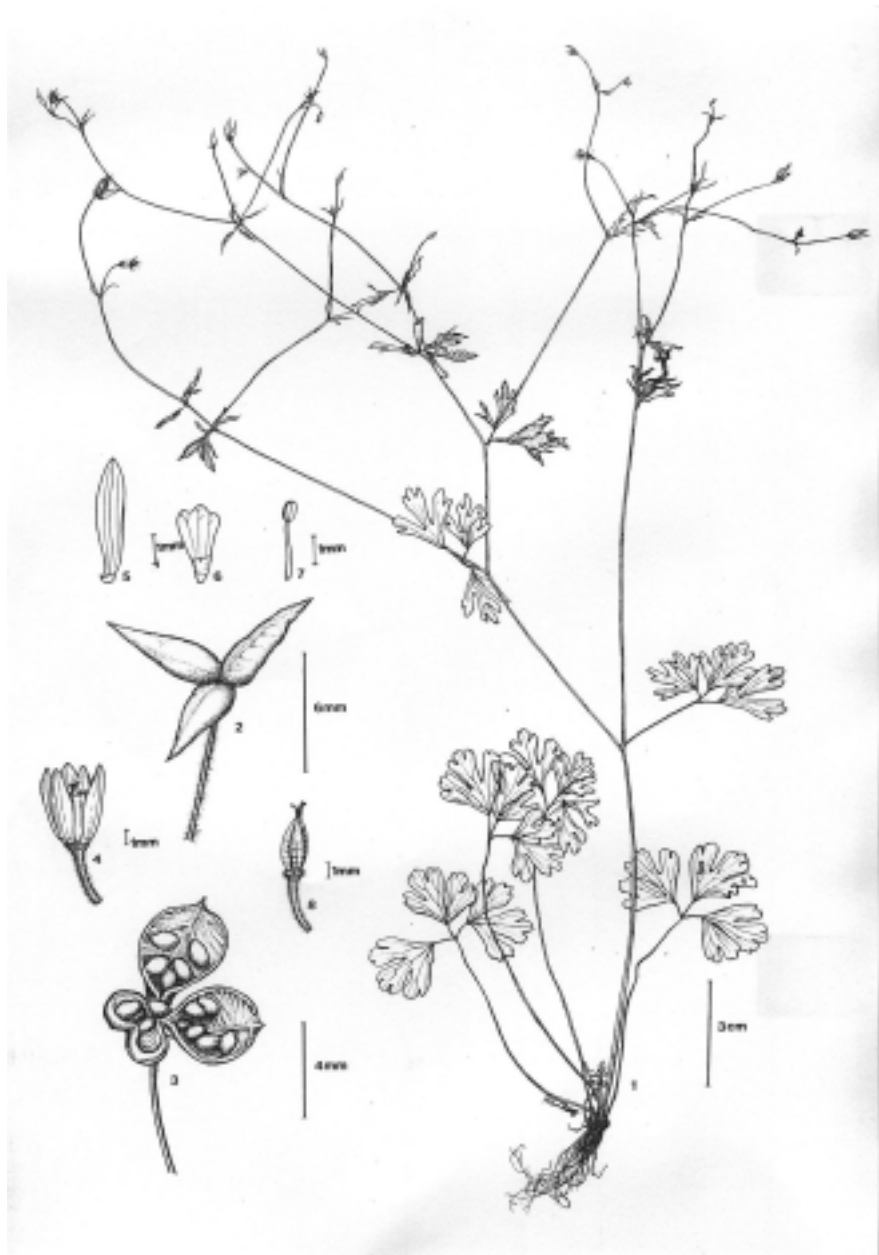


Fig. 1. *Semiaquilegia adoxoides* (DC.) Makino. 1: Habit. 2: Follicles. 3: Dehiscent follicles with seeds. 4: Flower. 5: Sepal. 6: Petal. 7: Stamen. 8: Gynoecium.

Herbs perennial with blackish brown tuberous. Stem 15-30 cm tall, sparsely hairy. Basal leaves numerous; petiole 7-10 cm; leaf blade ovate, suborbicular, or reniform, 1.2-3 cm long, glabrous; ternately compound; leaflets flabellate-rhombic, 1.3-2 cm long, 1-1.5 cm wide, 3-parted, trinerved; segments 1- or 3-lobed. Cauline leaves, similar to basal leaves but smaller; petiole 3-7 mm long. Flowers 4-6 mm in diameter. Pedicel slender, 1-2.5 cm long, spreading white pubescent. Sepals 5, white usually tinged with purple, narrowly elliptic, 4-6 mm long, 1-1.5 mm wide, triplinerved, apex acute. Petals 5, spatulate, 2.5-3 mm long, 1-1.5 mm wide, apex subtruncate. Stamens 8, filament 2-2.5 mm long, white, glabrous; staminodes 2. Follicles 2-5, free, ovoid-ellipsoid, ca. 6-9 mm long, 2 mm diameter, glabrous. Seeds ovoid-ellipsoid, ca. 1 mm long, 0.8 mm in diameter.



Fig. 2. *Semiaquilegia adoxoides* (DC.) Makino. A: Habitat. B: Follicles. C: Tuberous rhizome (arrow).

Specimen examined: TAIWAN. YUNLIN: Kukeng, Apr. 29 2003, T. W. Hsu & J. J. Peng 11199 (TESRI, Taiwan Endemic Species Research Institute).

The genus *Semiaquilegia* is closely related to *Dichocarpum*, both belonging to the tribe *Isopyreae*, but can be easily distinguished by its free carpels.

Semiaquilegia adoxoides is a weed, originally native in mainland China, South Korea, and western Japan. It was found in Kukeng, central Taiwan, at an orchid garden. The species may have been introduced accidentally via seed mixed in orchid seedlings.

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台灣毛茛科的新歸化植物 - 天葵

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摘 要

本文報導最近在台灣中部發現原產於中國大陸、韓國及日本之新歸化植物 - 天葵 (*Semiaquilegia adoxoides* (DC.) Makino)。對台灣而言，此發現是新紀錄屬亦是新紀錄種。天葵屬以其花成輻射狀，具有花瓣，心皮離生而與毛茛科其他所有屬皆不同。本文對本植物進行形態觀察，並提供彩色照片及繪圖。

關鍵詞：歸化植物、新紀錄屬、毛茛科、天葵、台灣、分類。

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