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Rubus amphidasys Focke (Rosaceae): A Newly Recorded Plant in Taiwan

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ABSTRACT: *Rubus*, comprising about 700 species in the world, is a large genus of the family Rosaceae. Thirty-five species and four additional varieties were recorded in the 2nd edition of Flora of Taiwan. In the course of our botanical inventory, *Rubus amphidasys* Focke, heretofore unknown in Taiwan, was collected from northern part of the island. *Rubus amphidasys* is easily distinguished from other congenors by having a mixture of densely bristly hairs and glandular hairs on branches and calyx. In addition, small prickles are rarely found on its stems. In this report we provide a description, line drawings, and colored photographs taken from the wild to aid in identification.

KEY WORDS: New record, Rosaceae, *Rubus*, *Rubus amphidasys*, Taiwan, Taxonomy.

INTRODUCTION

The genus *Rubus* (Rosaceae) consists of about 250 (Hsieh and Ohashi, 1993) or 700 species (Robertson, 1974; Liu, 1994; Lu et al., 2003) in the world, depending on species concepts. Plants of *Rubus* are classified into 12 subgenera by Focke (1910, 1911, 1914). Taiwan is rich in species of *Rubus*, with 37 taxa known from this island of only 36,000 km^2 , which were grouped under subgenera *Chamaebatus* (1 species), *Malachobatus* (16 species) and *Idaeobatus* (20 species) (Naruhashi et al., 2002). Despite that Taiwanese *Rubus* has been studied by Liu and Yang (1969), Chang (1979), Hsieh (1989), Ying (1985), and Hsieh and Ohashi (1993), many taxonomic problems remain for this difficult genus (Naruhashi et al., 2002).

Rubus amphidasys Focke (subgenus *Dalibardastrum* Focke) was recently found in northern Taiwan. In this study we provide a taxonomic description, line drawings, and colored photographs taken from the wild to aid in identification of this new record.

TAXONOMIC TREATMENT

Rubus amphidasys Focke in Engler, Bot. Jahrb. 29:396. 1900; Focke, Bibl. Bot. 72(1): 108. 1910. 周毛懸鉤子 Figs. 1 & 2

A scandent shrub, branchlets with dense reddish brown long glandular hairs, soft bristles, and long hairs, usually unarmed. Leaves alternate, simple, subcoriaceous, cordate to broadly ovate, 5-9 cm long, 5-10 cm wide, both surfaces villous, base cordate, margin 3-5-lobed, apex shortly acuminate or acute, lateral lobes obtuse, serrate; petioles 3-5 cm, villous, with long reddish-brown, glandular hairs and soft bristles; stipules free, laciniate, 3-4 deeply-lobed, lobes linear, villous and with long glandular hairs. Inflorescences terminal or axillary, in racemes with 5-12-flowered cymes; rachis, pedicels, and abaxial surface of calyx densely covered by long glandular hairs, soft bristles, and yellowish long hairs; bracts lobed, lobes linear, villous, stipitate glandular; pedicel 5-15 mm long. Flowers 1-1.5 cm in diameter; calyx tube ca. 5 mm, with dense reddish brown long glandular hairs, 2-3 mm long; calyx lobes 5, lanceolate-triangular, 5-7 mm long, 2-3 mm wide, apex caudate, erect in fruit; petals 5, white, broadly ovate to oblong, 4-6 mm long, 3-4 mm wide, margin serrulate; stamens numerous, ca. 60, white, filaments 2-3 mm long; pistils longer than stamens; ovaries glabrous, with long hairs at base. Aggregate fruits dark red, compressed globose, ca. 1 cm in diameter, glabrous, enclosed in persisent calyx and filaments; pyrenes rugose.

Distribution: China (Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Zhejiang) (Lu et al., 2003). In Taiwan, found at low elevations in the northern part. On slopes, along roadsides, and among shrubby thickets.

Specimen examined: TAIWAN. Taipei Co.: Hsichih Town: Hsiwan road, 500 m, 14 Oct 2000, *Chen et al. 445* (HAST), fl, bud; Shinshanmenghu, 26 Jul 2001, *Hsu10328* (TESRI).

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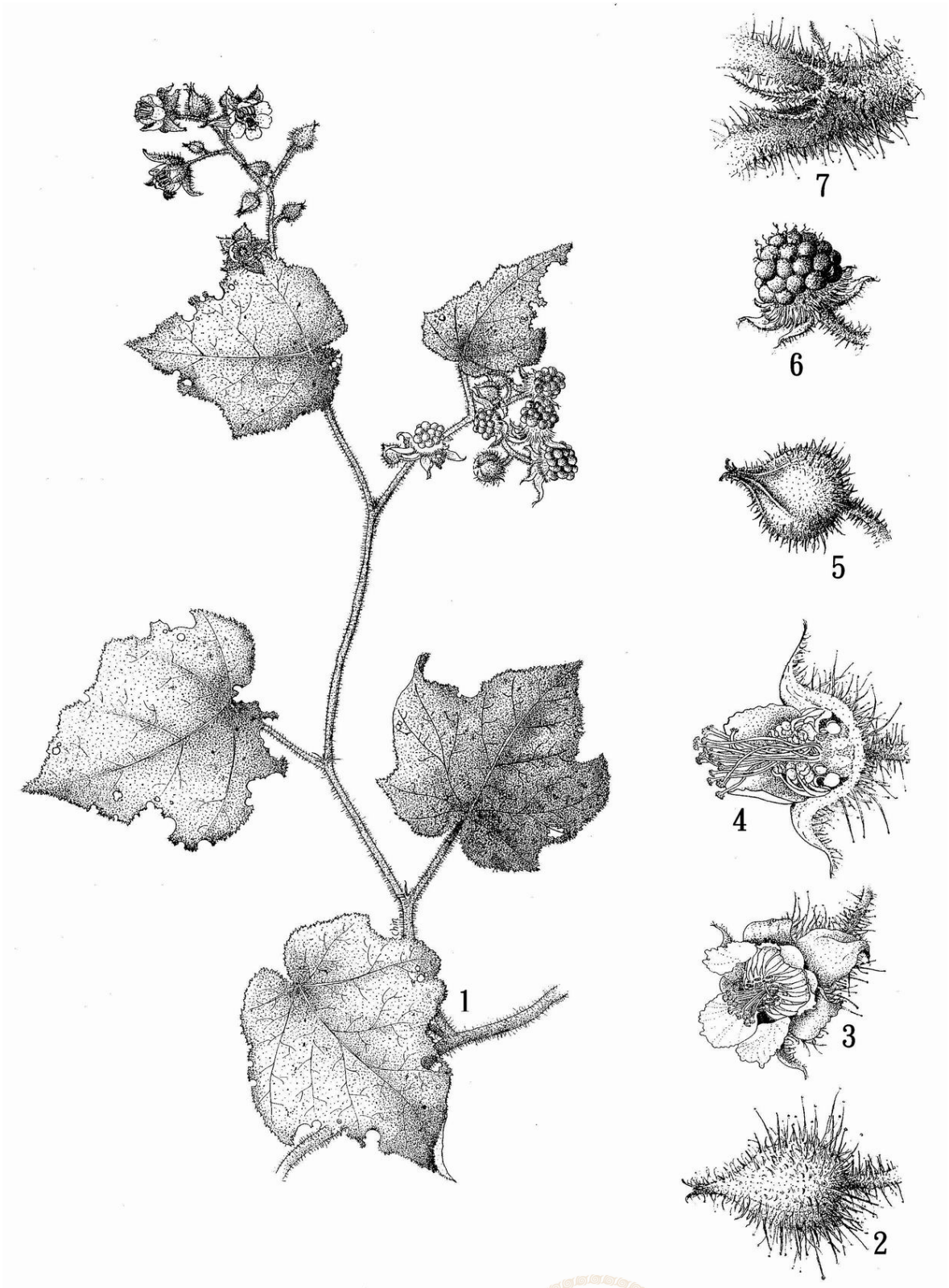


Fig. 1. *Rubus amphidasys* Focke. 1: Habit. 2: Flower bud. 3: Flower. 4: Longitudinal section of flower. 5: Flower bud. 6: Aggregate fruits. 7: Branch with stipule.

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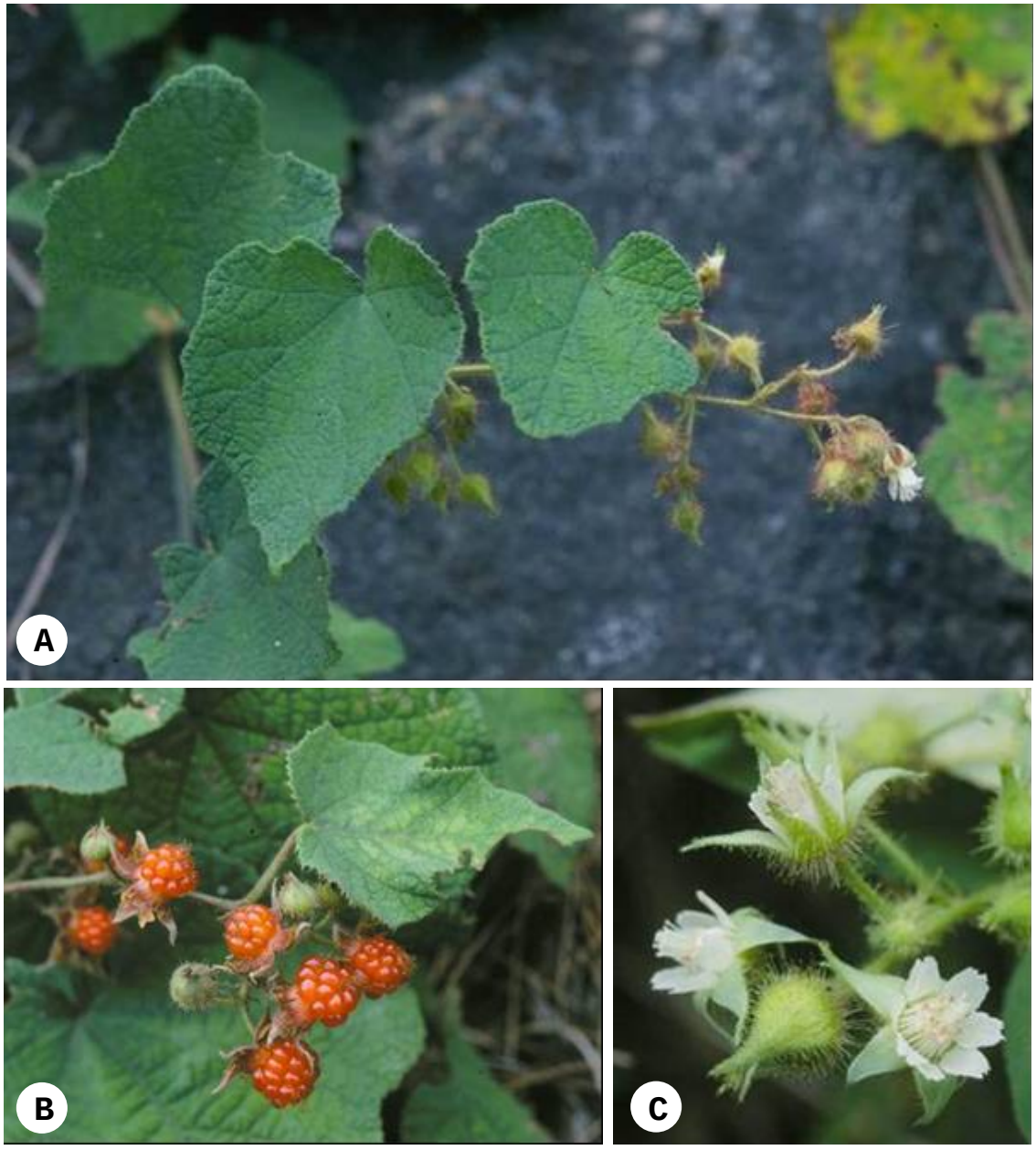


Fig. 2. *Rubus amphidasys* Focke. A: Habit. B: Fruits. C: Flower buds and flowers.

Taipei city: Waishuanghsi, abandonded Tsuishan Shooting Range, 350m, 14 Oct 2000, *Chen et al. 448* (HAST), fl, fr; Neishuangchi, 16 Oct 1993, *S. Y. Lu 24152* (TAIF), fl, fr; Taluntoushan, 18 Jul 1997, *H. L. Chiang 468* (TAIF), fl, fr; Neihu, 21 Sep 1983, *S. Y. Lu 12968* (TAIF), fl, fr; Wuchihshan, 4 Jun 1984, *S. Y. Lu 14826* (TAIF).

Notes: Naruhashi et al. (2002) reported chromosome numbers for all 37 species of *Rubus* in Taiwan then known. An examination of their voucher specimen for *Rubus rufus* Focke [2*n* = 28: *Chen et al. 445* (HAST)] revealed that it represents *Rubus amphidasys* Focke, which resembles *R. rufus* but is easily distinguishable from the latter by the usually unarmed branchlets with dense reddish brown, long glandular hairs, soft bristles, long yellowish hairs, and persistent stipules. *Rubus rufus* has prickly branchlets and caducous stipules. The occurrence of *R. amphidasys* in Taiwan is here documented for the first time.

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ACKNOWLEDGMENTS

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臺灣新紀錄薔薇科的植物：周毛懸鉤子

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摘　　要

懸鉤子屬為薔薇科植物，臺灣植物誌第二版紀錄有 35 種 4 變種，最近我們在北部植物調查時發現另一新紀錄植物－周毛懸鉤子；該植物以其枝條密生毛與長腺毛，枝條幾近於無刺等特徵而明顯不同於臺灣所產的該屬植物。本文章提供該種的形態描述、繪圖與彩色圖片。

關鍵詞：新紀錄、薔薇科、懸鉤子屬、周毛懸鉤子、臺灣、分類。

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