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Juncus tobdenii Noltie (Juncaceae), a New Record from Northern Taiwan

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ABSTRACT: *Juncus tobdenii* Noltie, a species distributed in India (Sikkim), has recently been found in northern Taiwan. A full taxonomic description, habitat information and color photographs are provided here.

KEY WORDS: ***Juncus*, Juncaceae, Taxonomy, Taiwan.**

INTRODUCTION

The genus *Juncus* Linn. (Juncaceae), consisting of about 240 species, is a cosmopolitan genus. It is widely distributed in both hemispheres, especially abundant in cold and temperate regions (Wu and Clemants, 2000). Six species were recorded in the Flora of Taiwan (Kao et al., 2000). One additional species, *Juncus tobdenii* Noltie, was recently found in northern Taiwan. The first collection of the species in Taiwan was made in 1994 by Mr. Yu-Fa Wang from Yuanyang Lake of northeastern Taiwan. However, this specimen was misidentified as *Rhynchospora alba* (L.) Vahl. In year 2000, the second author collected it again at the same locality. Recently a considerable number of specimens have been collected by the first author from Yuanyang Lake and along the Forest track 160 nearby. This study provides a taxonomic description, note on its distribution and photographs to aid in identification.

TAXONOMIC TREATMENT

Juncus tobdenii Noltie, Edinb. J. Bot. 55(1): 42-43, 1998. 鴛鴦湖燈心草 Figs. 1 & 2

Rhizome creeping, 1.5-2 mm across, condensed. Culms densely tufted; erect, ascending, nodding above to lying down; terete, with a single shallow groove, slender; 39-92 cm long, 0.6-1 mm in diameter; pith continuous. Cataphylls on the base of culm, the lowest ones chaffy, brown and shining, striate, apex short acuminate; the uppermost sheathlike, surrounded at the base of culm, 2.5-10 cm, yellowish brown, apex obliquely truncate, aristate. Inflorescence pseudolateral, anthelate, with 10-30 flowers, lax, branched to 2-3 orders. Involucral bract erect, seemingly a continuation of culm, terete, 8-25 cm long. Bractlets 2, at the base of flower, widely ovate, papery, pale brown, 0.8-1 mm long, about 0.5 mm wide, apex acute to acuminate. Tepals 6, subequal, lanceolate, pale brown, 1.7-2.9 mm long, 0.28-0.6 mm wide, apex attenuate. Stamens 3, filaments about 0.9 mm, anthers about 0.5 mm. Ovary trigonous, about 0.9 mm; style about 0.9 mm, stigmas 3. Capsule ellipsoid, 2.4-2.7 mm long; acuminate at apex, about 0.2-0.3 mm long. Seeds ovate-ellipsoid, 0.48-0.52 mm long, 0.22-0.28 mm wide, yellow-brown, transversely reticulate.

Distribution: India, Sikkim, Yakche (3105 m alt.), Lachen (2743 m alt.), Yakla (3048 m alt.); and Taiwan.

Specimens examined: TAIWAN. Hsinchu County: Yuanyang Lake, 1670 m alt., *Y. F. Wang 1033*(TAI), *C. C. Lin, s .n.* 2000(TNM), *S. P. Li 762*(TAI, TNM); 160 Forest Road, 1900 m alt., *S. P. Li 783*(TAI, TNM).

Note: This species was found in the wet places. Some associated herbs included *Polygonum thunbergii* Siebold & Zucc., *Galium trifidum* L., *Juncus effuses* Linn., *Juncus prismatocarpus* R. Brown, *Carex capillacea* Boott, etc. This species, belonging to subgenus *Genuini*, is similar to *Juncus effuses* Linn.; it can be distinguished from *J. effuses* by its slender and single-grooved culms (0.6-1 mm in diameter), and few flowered inflorescence (about 10-30 flowers). On the other hand, *J. effuses* has stout and erect culums (about 2-2.75 mm in diameter), inflorescence more than 100-150 flowers.

Besides *Juncus tobdenii*, there are many other species belonging to the eastern Himalaya element in Yuanyang Lake Area, such as the wetland plants *Carex capillacea* Boott and *Sparganium flallax* Graebner. They all exhibit the same distribution type.

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Fig. 1. Habit of *Juncus tobdenii* Noltie in Taiwan (Yuanyang Lake).



Fig. 2. *Juncus tobdenii* Noltie. A: Inflorescence. B: Ripe fruits.

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臺灣北部新紀錄植物—鴛鴦湖燈心草

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摘　　要

本文報導最近發現於臺灣北部地區原分布於印度錫金地區之新紀錄植物--鴛鴦湖燈心草 (*Juncus tobdenii* Noltie)，本文描述其形態特徵及生育地狀況，並提供彩色照片以供鑑定之用，同時與近似物種燈心草 (*Juncus effuses* L.) 之差異點亦加以說明。

關鍵詞：燈心草屬、燈心草科、分類、臺灣。

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