

Urochloa glumaris (Trin.) Veldkamp (Gramineae), a Neglected Species in the Flora of Taiwan

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Abstract. *Urochloa glumaris* (Trin.) Veldkamp is a native grass but was neglected in the *Flora of Taiwan*. The present study gives a description and line drawing of this species.

Key words: Gramineae, Taiwan, Taxonomy, *Urochloa glumaris*.

INTRODUCTION

Urochloa P. Beauv. is a genus of pantropical species. These plants grow in shady or open habitats. They are significant weeds, and are cultivated for fodder or as grain crops (Watson and Dallwitz, 1992). Taxonomists have held different opinions as to the delimitation of this genus. Clayton and Renvoize (1986) distinguished *Urochloa* from its closely related genus, *Brachiaria*, by the orientation and shape of the spikelets: those of *Brachiaria* are adaxial and plump while those of *Urochloa* are abaxial and plano-convex. Veldkamp (1996) nearly completely reduced *Brachiaria* to *Urochloa*. Recent studies on the phylogeny of the Paniceae showed that *Urochloa* and *Brachiaria* are within a monophyletic group. This group was called "the PCK clade" because all of the taxa use the phosphoenol pyruvate carboxykinase (PCK) subtype of the C4 photosynthetic pathway. In spite of strong support for the monophyly of the PCK clade, relationships among these taxa are still unclear (Zuloaga *et al.*, 2000; Duvall *et al.*, 2001; Giussani *et al.*, 2001; Aliscioni *et al.*, 2003).

Urochloa paspaloides, one of the synonym of *U. glumaris*, of Taiwan was reported in the checklist of the flora of Orchid Island (*Lanyu* in Chinese; Chang, 1988), however it was not included in the *Flora of Taiwan* (Liu, 2000) or in the *Manual of Taiwan Vascular Plants* (Liu *et al.*, 2001).

Urochloa glumaris in Taiwan has never been morphologically described based on examination

of a specimen and has never been published in any article. Recently, when checking the records of plant collections and specimens of herbaria, the author found that *U. glumaris* is distributed not only on Orchid Island but also along the seashore of southeastern Taiwan. This study provides a description and line drawing of this species.

TAXONOMIC TREATMENT

Urochloa glumaris (Trin.) Veldkamp. *Blumea* 41(2): 420. 1996. 雀稗尾稈草 (Figs. 1, 2)

Panicum glumare Trin., *Gram. Pan.* 143. 1826; *Mém. Acad. Sci. St. Pétersb*, ser. VI, 3: 244. 1834.

Urochloa paspaloides J. Presl, *Reliq. Haenk.* 1(4-5): 318. 1830.

Brachiaria paspaloides (J. Presl) C. E. Hubb., in Hooker's, *Icon. Pl.* 4: t. 3363. 1938.

Urochloa glabra Brongn., in Duperrey, *Voy. Monde*, Phan. 121. 1832.

Panicum ambiguum Trin., *Mém. Acad. Sci. St. Pétersb*, ser. VI, 3: 243. 1834.

Urochloa ambigua Pilg., in Engl. & Prantl, *Nat. Pflanzenfam.*, ed. 2, 14e: 35. 1940.

Panicum urochloa Steud., *Nomencl.*, ed. 2, 2: 264. 1841.

Growing in loose spreading tufts. Culms slender, erect from a geniculate-ascending base, 20~70 cm tall, 1.5~2.5 mm thick below, copiously branched at lower nodes, internodes 4~10 cm long, glabrous, smooth. Leaf blades linear, 6~20 cm long, 3~8 mm wide, cuneate to obtuse at base, gradually acuminate at apex, flat, herbaceous, soft, roughened on upper surfaces, fairly smooth

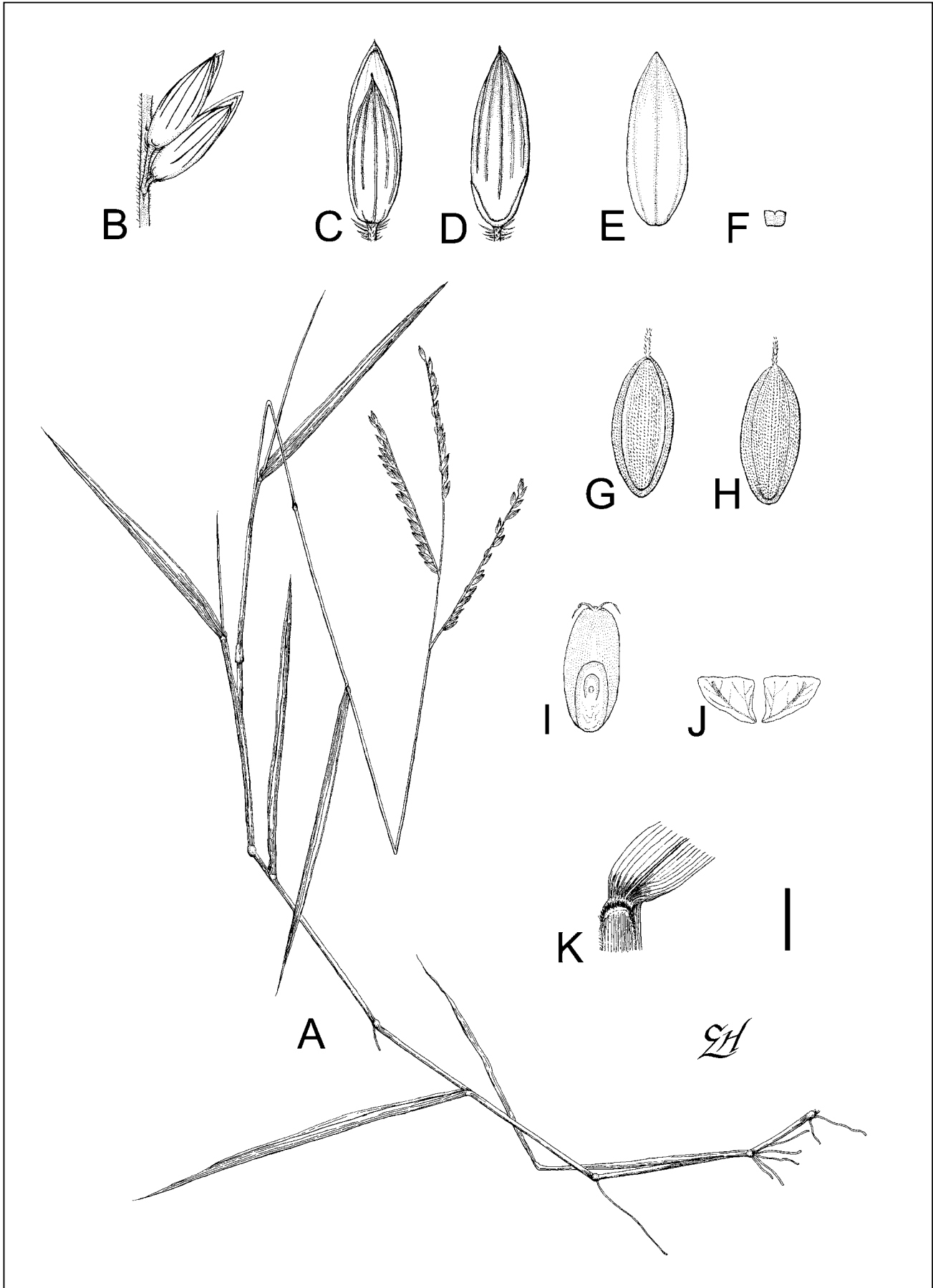


Fig. 1. *Urochloa glumaris* (Trin.) Veldkamp. A, habit; B, pair of spikelets; C and D, dorsal (C) and ventral (D) views of a spikelet; E, lower lemma; F, lower palea; G and H, dorsal (G) and ventral (H) views of an upper floret; I, caryopsis; J, lodicules; K, ligule. Bar = 2 cm for A; 1.5 mm for B; 1 mm for C~I; 0.1 mm for J; and 5 mm for K. (C.L. Huang 337)

beneath, sparingly pilose on both surfaces; ligule with 1~1.2-mm-long hairs; sheaths glabrous, pilose along margins. Inflorescence exerted, distantly bearing 2~5 racemes on an elongated axis; axis angular, scabrous on sharp edges, usually hispid-pubescent, internodes 1.5~3 cm long; racemes alternate, erect-patent, 2.5~7 cm long, somewhat loosely bearing spikelets from base, rachilla compressed-triquetrous, 0.5~0.7 mm wide, pubescent at base, puberulous with short hairs, scabrous on wing-like angles. Spikelets mostly paired on unequal pedicels, a few apical ones solitary, pedicels somewhat densely pubescent and hispid on edges; body of spikelet lanceolate to lance-elliptic, dorsiventrally compressed, 3.5~4 mm long, 1~1.2 mm wide, glabrous, awnless, obtuse at base, acute at apex. Glumes well developed, unequal; lower glume 2/3~3/4 of spikelet length, chartaceous, lance-elliptic, apex acuminate to subcaudate, 5-nerved; upper glume at least as long as 2nd lemma, chartaceous, lance-elliptic, apex acuminate to subcaudate, 5~7-nerved. Sterile lemma back flattened, apex acuminate, 5-nerved; sterile palea vestigial. Fertile lemma oblong-elliptic, 2.5 mm long, 1 mm wide, contracted at both ends, apex mucronate (mucro ca. 0.3 mm long, puberulous), indurate, yellowish; fertile palea equaling fertile lemma. Anther 0.9~1.35 mm long. Caryopsis ellipsoid, 2 mm long.

Distribution and notes: Distributed in India, southeastern China including Guangdong, Guangxi, and Yunnan Provinces, the Ryukyu Islands (Japan), Taiwan, the Philippines, Malaysia, and New Caledonia (Koyama, 1987; Veldkamp, 1996). It is good fodder that can increase the milk yield of cattle (Veldkamp, 1996). In Taiwan, the plant occurs at the sides of trails (Fig. 2), roadsides, and open places along the southeastern seashore. It was associated with *Brachiaria subquadripara* (Trin.) Hitchc., *Digitaria henryi* Rendle, *Digitaria setigera* Roth, *Ischaemum indicum* (Houtt.) Merr, and *Wedelia biflora* (L.) DC.

Specimens examined: TAITUNG: Lanyu, Mar. 24, 1975, C.E. Chang 8082 (TAI); Hsiaoyehliu, Jan. 20, 1995, J.S. Wu 5-047 (TNM); Hsiaoyehliu, Sept. 9, 2004, C.L. Huang 337 (TNM); Lanyu, Mar. 28, 2005, C.L. Huang 431 (TNM).



Fig. 2. *Urochloa glumaris* (Trin.) Veldkamp. A, its natural habitat; B, the inflorescence; C, spikelet with an open upper flower.

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臺灣植物誌遺漏之禾本科植物—雀稗尾稈草

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本文報導一種臺灣植物誌未記載的禾本科植物—雀稗尾稈草 (*Urochloa glumaris* (Trin.) Veldkamp)，文中提供其分類特徵之描述及手繪圖。

關鍵詞：禾本科，分類，臺灣，雀稗尾稈草。