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Deyeuxia gaoligongensis (Poaceae: Agrostidinae), a new species from Gaoligong Shan in Yunnan, China

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Abstract

Deyeuxia gaoligongensis, a new species from the Gaoligong Shan region of NW Yunnan, SW China, is described and illustrated. The new grass is morphologically similar to *D. debilis*, but differs from the latter by its well-developed lemma awn that is twisted at the base, geniculate, and inserted on the lower half of the back of the lemma.

Key words: *Calamagrostis*, *Deyeuxia debilis*, Hengduan Mountains, taxonomy

Introduction

The new species, *Deyeuxia gaoligongensis* B.Paszko, *sp. nov.*, is a member of the subfamily Pooideae, tribe Poeae, subtribe Agrostidinae (Clayton & Renvoize 1986). The subtribe is characterized by 1-flowered spikelets and alongside several small genera includes three of the most taxonomically difficult grass genera: *Agrostis* Linnaeus (1753: 61), *Calamagrostis* Adanson (1763: 31) and *Deyeuxia* Clarion ex Beauvois (1812: 43), which form an intergrading complex of three incompletely separated entities (Phillips & Chen 2003). *Agrostis* is always distinguished as separate genus, whereas the two latter genera have been combined or treated as separate genera in different Floras. *Calamagrostis* s.l. is commonly recognized in North America, Central America, Europe and Russian Asia (Hitchcock 1951, Tzvelev 1976, Conert 1989, Marr *et al.* 2007), whilst in South and South-East Asia many authors have recognized the segregate genus *Deyeuxia* (Bor 1960, Lu 1987, Agrasar 2006, Lu *et al.* 2006). According to Phillips & Chen (2003) *Deyeuxia* is distinguished from *Calamagrostis* on the basis of differences in the ratio of lemma length to lower glume length, the ratio of callus hair length to lemma length and the presence or absence of the rachilla prolongation. Until now generic concepts in the Agrostidinae have only been superficially examined by DNA studies (Soreng *et al.* 2007, Saarela *et al.* 2010) and its genus-level taxonomy is still controversial.

Recent studies confirmed that species of *Calamagrostis* s.l. are characterized by complex patterns of morphology (Howard *et al.* 2009, Paszko & Nobis 2010, Paszko 2011, Paszko & Ma 2011) and some taxonomic and nomenclatural problems in Indian species of *Agrostis*, *Calamagrostis* and *Deyeuxia* have been detected and resolved (Paszko 2012b), including the description of a new species from NW India, *Calamagrostis gamblei* Paszko (2012a: 327).

Revision of collections of *Deyeuxia* and its allies for the Flora of Nepal and Flora of Pan-Himalayas in the herbarium of the Royal Botanic Garden Edinburgh (E) revealed an enigmatic grass collected in Gongshan County (Northwest Yunnan Province, China) during expeditions investigating the flora of the Gaoligong Shan. The new species has a tufted habit and it is similar in spikelet morphology to *Deyeuxia debilis* (Hooker 1896: 262) Veldkamp in Korthof & Veldkamp (1984: 220). It has spikelets with callus hairs as long as the lemma, 5-veined lemmas, lemma awns geniculate and twisted (sometimes slightly twisted) at the base, arising

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