



Typification of Grisebach's name *Calamagrostis emodensis* (Poaceae, Agrostidinae)

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Abstract

A lectotype for *Calamagrostis emodensis* (Poaceae, Agrostidinae) is selected and other original material is revised.

Key words: *Calamagrostis garhwalensis*, *C. nepalensis*, Garhwal, India, nomenclature, Sikkim, South Asia

Introduction

Taxonomic investigations of Eurasian species in three closely related genera, *Agrostis* Linnaeus (1753: 61), *Calamagrostis* Adanson (1763: 31) and *Deyeuxia* Clarion ex Beauvois (1812: 43) (Poaceae: Agrostidinae) have resulted nomenclatural and taxonomic changes (Paszko & Ma 2011, Paszko 2012a, Paszko & Pendry 2013a, Paszko & Soreng 2013, Paszko *et al.* 2013, Paszko 2014a), and the description of three new species (Paszko 2012b, Paszko & Pendry 2013b, Paszko & Chen 2013). Here, the precise lectotypification of Grisebach's (1868: 80) name *C. emodensis* is provided. *Calamagrostis emodensis* is a well-defined species with relatively broad leaf blades, a deeply toothed 5-veined lemma bearing a 5–9 mm long awn. Its florets contain a single plump anther (Lu & Phillips 2006, Paszko 2014b). Its taxonomic relationships to *C. garhwalensis* Hubbard & Bor in Bor (1942: 355) and *C. pseudophragmites* (Haller 1797: 11) Koeler (1802: 106) are discussed by Paszko (2014b). Studied specimens of *C. emodensis* are listed by Paszko (2013). Recently, *C. emodensis* has been recorded for the first time in Myanmar's northern Kachin State (Nobis *et al.* 2014).

Taxonomic treatment

Calamagrostis emodensis Grisebach (1868: 80) (Fig. 1).

Protologue:—“H[imalaya] occ[identalis] Garhwal 9000'–15400' [2743.2–4693.9 m] [*Schlagintweit*]; H[imalaya] or[ientalis] Sikkim 6–9000' [1828.8–2743.2 m] (H[ooker f.]: *C. nepalensis* ej, non Ns. [Nees])”.

Lectotype (designated here):—INDIA. Garhwal, Nélong via Múkba across the Damdar or Hat ka Tsaura Pass to Ussilla in the Tons Valley, 26 September to 6 October 1855, '2 Gen. No. of Catalogue: 9721', *Schlagintweit s.n.* (lectotype GOET!, Fig. 1; isolectotypes BREM, JE00010587! (fragm. ex BREM), PH00010148!).

Other syntypes (identified by the present author as *C. emodensis*):—INDIA. Sikkim: without locality, 6000–9000 ft [1828.8–2743.2 m], *Hooker f. s.n.* (GOET006217!, M0156053!, P02650462).

Material excluded by Grisebach (1868: 80) (identified by the present author as *C. nepalensis*):—INDIA. Sikkim: without locality, 6000–9000 ft [1828.8–2743.2 m], *Hooker f. s.n.* (CAL!, L0043903!, LE00009368!, W1916-32358!, W!, W1889-241768!, W1889-38507!).

Excluded syntype (identified by the present author as *C. garhwalensis*):—INDIA. Garhwal, Nélong via Múkba across the Damdar or Hat ka Tsaura Pass to Ussilla in the Tons Valley, 26 September to 6 October 1855, '2 Gen. No. of Catalogue: 9718', *Schlagintweit s.n.* (LE00009367!).

Previous lectotype designation by Bor (1970: 267):—“Garhwal, 9000'–15,400'”.

Notes:—The syntypes are parts of at least two different collections, the first made by Hooker in Sikkim (NE India) and the second by Schlagintweit in the Garhwal Himalayas (Uttarakhand, NW India). It is not clear which of the Schlagintweit brothers collected these specimens as three of them collected in this region. Grisebach noticed that Hooker's collection, previously identified as *C. nepalensis* Nees ex Steudel (1854: 193) and currently recognized by Bor (1960) as a synonym of *C. pseudophragmites*, was a mixed gathering. Unusual morphotypes from this collection, together with Schlagintweit's gatherings, were described by Grisebach as a new species named *C. emodensis*. Three Hooker specimens were located and two of them (GOET, M) were analyzed morphologically and shown to match Grisebach's (1868: 80) description of *C. emodensis*. Based on available illustration of the third specimen (P) *C. nepalensis* can be excluded because the long ligule is not visible but *C. garhwalensis* Hubbard & Bor in Bor (1942: 355) cannot be excluded. Therefore it needs to be revised for confirmation. Schlagintweit's collection from Garhwal was located, and it consists of at least four duplicates. These specimens represent two different species, *C. emodensis* (Schlagintweit s.n., '2 Gen. No. of Catalogue: 9721', BREM, GOET!, JE! fragm. ex BREM, PH!) and *C. garhwalensis* (Schlagintweit s.n., '2 Gen. No. of Catalogue: 9718', LE!).

Bor (1970: 267) attempted to typify the name of *C. emodensis* with unspecified material from Garhwal with a wide elevational range 9000–15,400 ft (2743–4694 m). None of Schlagintweit's duplicates from Garhwal bears the precise locality details (only the main route) and they probably represent at least two different gatherings. In Schlagintweit *et al.* (1863) elevations are given for Nélong [11,350 ft (3459 m)], Múkba [8600 ft (2621 m)] and Ussilla [8940 ft (2725 m)]. One of two syntypes housed at GOET, Schlagintweit's collection identified by Grisebach as '*C. emodensis* m.', is designated here as the lectotype of *C. emodensis*, superseding Bor's lectotype, which was ambiguous.

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