

Glossopteris damraensis, a new name for *Glossopteris truncata* Chauhan et al. 2011, non McLoughlin 1994

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Manuscript received: 09 October 2012
Accepted for publication: 20 February 2013

ABSTRACT

McLoughlin S. 2013. *Glossopteris damraensis*, a new name for *Glossopteris truncata* Chauhan et al. 2011, non McLoughlin 1994. *Geophytology* 43(1): 13-15.

A new name, *Glossopteris damraensis*, is here established to replace *Glossopteris truncata* Chauhan, Agrawal & Tiwari 2011, which is illegitimate being a junior homonym of *Glossopteris truncata* McLoughlin 1994 described from Australia. The leaves previously attributed to *G. truncata* from the Late Permian of Australia and India are morphologically distinguishable from each other. The new name applied to the Indian material denotes its geographic source.

Key-words: *Glossopteris damraensis*, Glossopteridales, nomenclature, Raniganj Formation, Lower Gondwana, Late Permian, West Bengal, India.

INTRODUCTION

Chauhan et al. (2011) erected four new species of *Glossopteris* leaves from the Raniganj Formation (Late Permian) of West Bengal, and one additional new species from the Karharbari Formation (Early Permian) of Maharashtra. One of these new species, *Glossopteris truncata*, was based on one complete leaf and four fragments from Damra Colliery in the Raniganj Coalfield, West Bengal. Unfortunately, the authors appear to have been unaware that this taxon's specific epithet is preoccupied by *Glossopteris truncata* McLoughlin 1994b described from the Rangal Coal Measures (Late Permian), Blackwater Group, of the Bowen Basin, eastern Australia. The respective Indian and Australian forms described under the name *G. truncata* share a common morphological trait, viz. a sharply truncate lamina base resulting in the development of a distinct petiole. However, they differ in several key morphological features that justify their

existence as distinct species. Since *Glossopteris truncata* Chauhan et al. 2011 is spelled exactly the same as a name based on a different type that was previously and validly published for a taxon of the same rank, it is illegitimate (a homonym) and is to be rejected under Article 53.1 of the International Code of Nomenclature for algae, fungi and plants (McNeill et al. 2012). Because the Australian species has nomenclatural priority, the Indian form is here given a new name: *G. damraensis*.

SYSTEMATIC PALAEOBOTANY

Genus: *Glossopteris* Brongniart

Type species: *Glossopteris browniana* Brongniart.

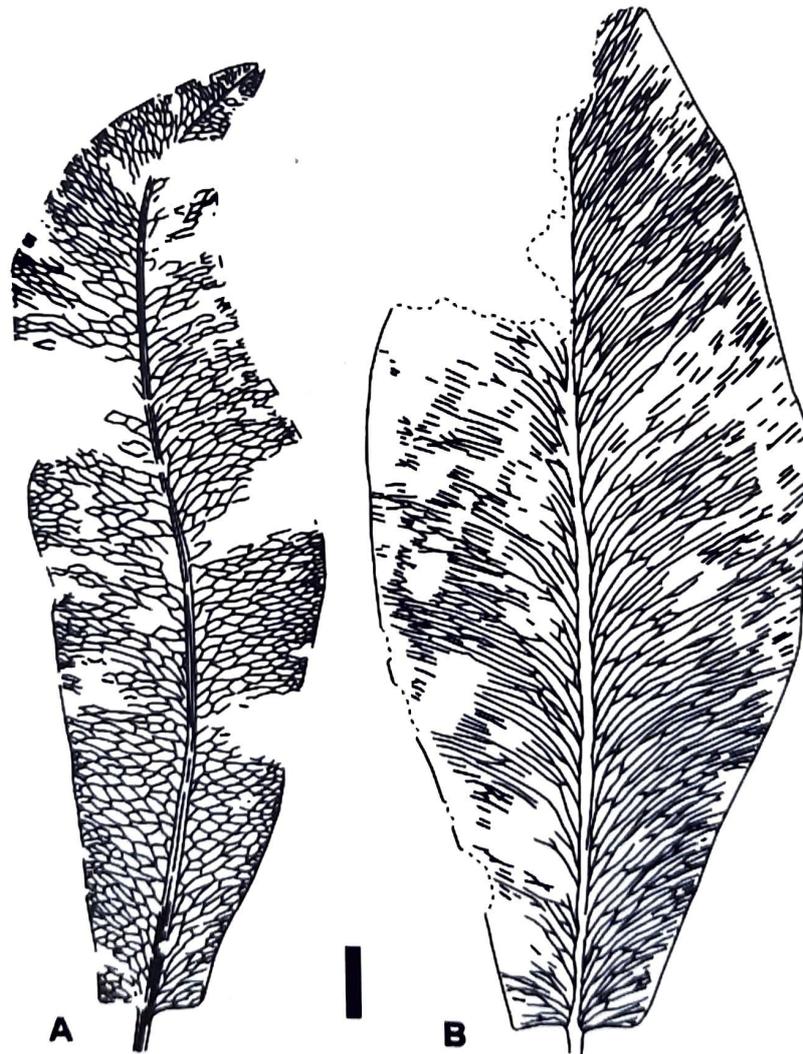
Glossopteris damraensis McLoughlin, nom. nov.

Text-figure 1A

≡ *Glossopteris truncata* Chauhan et al.,
Geophytology 40(1-2): 12-14, plate 4, figures 1-7,

Table 1. Comparison of key morphological characters between *Glossopteris damraensis* nom. nov. (data from Chauhan et al. 2011), from India and *G. truncata* McLoughlin 1994b (data updated from McLoughlin 1994b), from Australia.

Character	<i>Glossopteris damraensis</i>	<i>Glossopteris truncata</i>
Leaf shape (sensu Dilcher 1974) (and length:width ratio)	Narrow elliptic to very narrow elliptic or lanceolate (ca. 3.4–4.5:1)	Elliptic to narrow elliptic or oblanceolate (ca. 2.5–3:1)
Leaf maximum (and average) length	ca. 130 mm (average unavailable)	>180 mm (140 mm)
Range of maximum widths	40–45 mm	44– (60) –102 mm
Leaf base	Petiolate (6–20 mm); lamina truncate	Petiolate (5 mm); lamina normal-obtuse, truncate, rarely auriculate or sagittate
Leaf apex	Acute	Rounded-obtuse to rarely pointed-acute
Midrib	2 mm wide at base, striate, persistent	Up to 8 mm wide at base, faintly striate, persistent
Venation marginal angle	80–85° at mid-leaf	55–75° at mid-leaf
Secondary vein degree of curvature (sensu McLoughlin 1994a)	<5° at mid-leaf	5–15° at mid-leaf
Venation mesh shapes	Short and broad hexagonal to polygonal (2–4 × 1–3 mm) near midrib; similar shape but smaller (0.5–2 × 0.5–1 mm) near margin	Broad polygonal meshes (2 × 8 mm) adjacent to midrib; elongate-polygonal to linear (0.5 × 4 mm) near margin
Marginal vein density	15–20 mid-leaf	14–22 mid-leaf



Text-figure 1. Two species of truncate-based *Glossopteris* leaves. A. Holotype of *Glossopteris damraensis* nom. nov., Late Permian, Raniganj Formation, India; No. 68601, D. D. Pant Collection, University of Allahabad (redrawn from Chauhan et al. (2011)). B. Holotype of *Glossopteris truncata* McLoughlin 1994b, Late Permian, Rangal Coal Measures, Australia; University of Queensland Geology F79.390 (currently held at the Queensland Museum, Brisbane). Scale bar = 10 mm.

text-figures 4A–G. 2011, non McLoughlin, *Palaeontographica* Abt. B 231: 43–45, plate 8, figures 1–4, plate 9, figures 1–7, text-figures 16, 17. 1994b.

Holotype: Specimen No. 68601 of the Divya Darshan Pant Collection, University of Allahabad, India.

Type locality: Damra Colliery, Raniganj Coalfield, West Bengal, India.

Horizon and age: Raniganj Formation; Lopingian.

Diagnosis: The detailed diagnosis provided by Chauhan et al. (2011, p. 12) for the Indian specimens originally assigned to “*Glossopteris truncata*” is adopted for *G. damraensis*.

Etymology: The epithet refers to the Damra Colliery in the Raniganj Coalfield, West Bengal, which is the type locality of the species.

Remarks: *Glossopteris damraensis* nom. nov. is distinguished from *G. truncata* McLoughlin 1994b mainly by its narrower form, slightly lesser length, generally shorter and more broadly polygonal secondary venation meshes, and slightly greater secondary vein marginal angle (Table 1, Text-figures 1A, B). In addition, a range of cuticular characters are known for *G. damraensis* (Chauhan et al. 2011), whereas no micromorphological details are yet available for *G. truncata* (McLoughlin 1994b). Chauhan et al. (2011) adequately compared the specimens here reassigned to *G. damraensis* with several similar Indian *Glossopteris* species. In addition, *G. damraensis* has similar broadly polygonal meshes, venation angle and marginal vein density to *Glossopteris rhombimaculata* McLoughlin 1994b from the Late Permian of the Bowen

Basin, but the latter lacks the distinctive truncate lamina base. *Glossopteris damraensis* is also strikingly similar to leaves associated with *Estcourtia vandijkii* Anderson & Anderson (1985, plate 96, figures 1–11; plate 97, figures 1–10; plate 98, figures 1–7) fructifications from the Estcourt Formation, Karoo Basin, South Africa. The latter leaves differ by their obtuse apices and generally lesser marginal venation angle (30–70°).

ACKNOWLEDGEMENT

Funding for this report is acknowledged from the Swedish Research Council and an Australian Research Council Linkage Project (LP100100339).

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