

# *Grewinium*, a substitute name for *Grewioxylon* Shallom non Schuster

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SCHUSTER (1910) instituted a fossil wood genus *Grewioxylon* (Type: *G. swedenborgii*) showing affinities with modern *Grewia laevigata* of family Tiliaceae. Kräusel (1922) transferred *Grewioxylon swedenborgii* to *Dipterocarpoxyton* Holden (1916) belonging to family Dipterocarpaceae on account of the presence of vertical gum canals. Moreover, absence of *Pterospermum* type of tile cells in *G. swedenborgii* justifies this transfer. Subsequently Schweitzer (1958) transferred this species under *Shoreoxylon* Den Berger (1923) as *S. swedenborgii* due to presence of vertical gum canals in concentric rings in it. Shallom (1963), ignorant of Schuster's (1910) publication, again instituted the genus *Grewioxylon* for the fossil wood of *Grewia*. Although this fact was recognized by Prakash and Dayal (1965) who, however, maintained Schuster's genus because of its priority and emended its diagnosis. It would have been better that Prakash and Dayal and subsequent workers had placed their species under the genus *Grewioxylon* Shallom, instead of *Grewioxylon* Schuster, as Schuster's genus had already become an illegitimate genus vide Art. 56.1 of International Code of Botanical Nomenclature (Greuter *et al.*, 1994) due to transfer of its type species to other genus (Greuter *et al.*, 1994).

Since *Grewioxylon* Shallom, became a later homonym of *Grewioxylon* Schuster, as it is spelt exactly like the name based on different type that was previously validly published for the taxon of same rank as per Art. 53.1 of ICBN. Therefore, it is considered desirable to propose a substitute name (*nomen novum*) according to Art. 58.3 of ICBN. Hence, a substitute name *Grewinium* is proposed for *Grewioxylon* Shallom (1963) non Schuster (1910).

**GREWINIUM** Srivastava & Guleria nom. nov.

**GREWIOXYLON** Shallom, 1963, p. 171

*Type species*—*Grewinium intertrappeum* Srivastava & Guleria comb. nov., J. Indian bot. Soc. 42 : 171, pl. 1, figs 1-5, text figs A-F; 1963.

*Extended Diagnosis*—Wood-diffuse-porous. *Growth rings*-indistinct or delimited by narrow line of terminal parenchyma. *Vessels*-small to medium sized; solitary and in radial multiples of 2-4 (or more); vessel members short with oblique or tailed ends; perforations simple; intervessel pits small, bordered and alternate. *Parenchyma*-paratracheal present, terminal and diffuse present or absent; strands irregularly storied. *Rays*-fine to broad; heterocellular; narrow rays have storied tendency; broad rays consist of *Pterospermum* type of tile cells interspersed among procumbent cells. Radial gum canal like structures absent or present in median portion of broad rays. *Fibres*-nonseptate, irregularly storied.

*Remarks*—Extended diagnosis is given because of addition of certain anatomical characters like radial gum canal type structures are present/absent in some Indian Deccan Intertrappean (Maastrichtian-Danian) woods, which differentiate *Grewinium* from extant *Grewia*. Although radial gum canals are not of common occurrence in the family Tiliaceae, Mouton and Jacquet (1981) have recorded their sporadic occurrence in some genera.

Hence fossil woods of *Grewioxylon* except two informal species, viz., *Grewioxylon* sp. cf. *G. mahurzariense* Lakhanpal *et al.*, 1978 and *Grewioxylon* sp. Selmeier, 1985 described until now are named as:

*Grewinium intertrappeum* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon intertrappea* Shallom, J. Indian bot. Soc. 42 : pl. 1, figs 1-5, text figs A-F; 1963.

*Grewinium indicum* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon indicum* Prakash & Dayal, Palaeobotanist 13: 21, pl.1, figs 6, 7, pl. 2, figs 8-13, text fig. 2; 1965.

*Grewinium mahurzariense* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon malurzariense* Prakash & Dayal, *Palaeobotanist* 13 : 17, pl. 1, figs 1-5, text fig. 1; 1965.

*Grewinium fontanesii* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon fontanesii*, Vozenin-Serra, *Palaeontographica* 177B: 146, pl. 5, figs 1-5, pl. 6, figs 1-4; 1981.

*Grewinium neuimaieri* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon neuimaieri* Selmeier, *Münchner Geowiss. Abh.* 6: 98, pl. 3, figs 1-3, pl. 4, fig. 2, pl. 5, figs 3, 5, pl. 8, figs 1, 2; 1985.

*Grewinium ortenburgense* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon ortenburgense* Selmeier, *Münchner Geowiss. Abh.* 6: 102, pl. 3, fig. 4, pl. 4, figs 3, 4, pl. 5, figs 1, 2, pl. 6, figs 1-4, pl. 7, figs 1, 2, 4, pl. 8, figs 3-6; 1985.

*Grewinium canalisum* Srivastava & Guleria, comb. nov.

Basionym: *Grewioxylon canalisum* Bande & Srivastava, *Geophytology* 24: 131, pl. 1, figs 1-7; 1995.

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