

A new rhizome-like structure from near Jowai, Jaintia Hills, Meghalaya

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INTRODUCTION

GULERIA (1992) listed a large number of plant megafossils from the Tertiary of Northeast portion of India. Awasthi and Mehrotra (1993, 1995, 1997), Awasthi *et al.* (1994), Prakash *et al.* (1994), Choudhury *et al.* (1997), Mehrotra and Mandaokar (1998, 2000), Mehrotra (2000), Mehrotra *et al.* (1998, 1999) and Tiwari and Mehrotra (2000) added further to the list. But there is no record of occurrence of plant megafossils from the Jaintia Hills District. Recently, the author collected for the first time several fragmentary compressions from the area; one of these is a new rhizome-like structure described in the present communication as *Rhizocaulon palaeocenicum* gen. et sp. nov. It was collected from Buruai Colliery which is about 38 km East of Jowai Town, Meghalaya and 8 km from Sutnga on Shangpung-Sutnga Road (Fig. 1).

The Jaintia Hills have Lower Tertiary sediments of the Jaintia Group. A generalized succession is given in Fig. 2.

The Therria Sandstone Formation considered as Upper Palaeocene in age is exposed there and comprises chiefly ferruginous, pyriteous sandstones and carbonaceous shales with thin coal streaks. The plant fossils are observed in carbonaceous shales which are grey in colour.

SYSTEMATICS

Genus—RHIZOCAULON gen. nov.

Species—RHIZOCAULON PALAEOCENICUM gen. et sp. nov.
Pl. 1-1-2

Material—The species is based on two well preserved but incomplete compressions.

Description—An epigeal, unbranched, creeping, cylindrical form; preserved length about 8 cm; maximum width 1 cm; nodes and internodes distinct, nodes about 20 in number, 3-5 mm apart, internodes smooth; rooting at the nodal region, appearing adventitious.

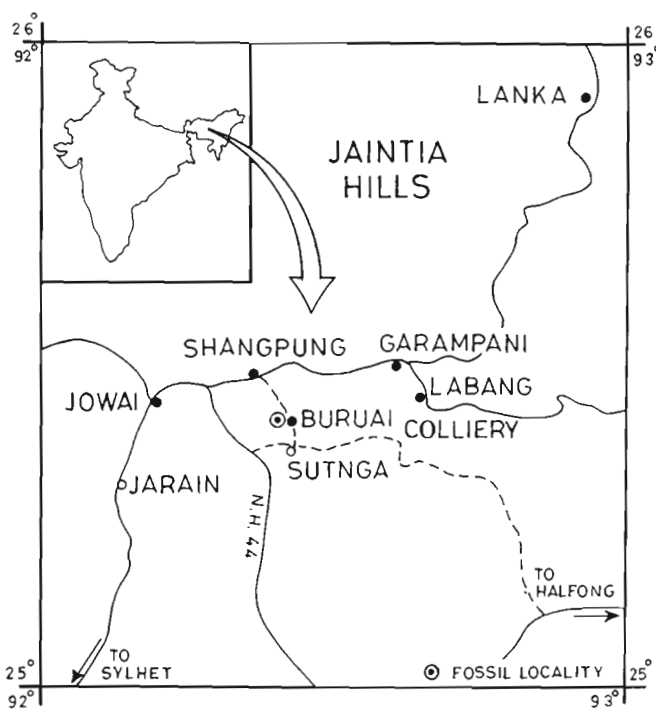


Fig. 1 — A map showing Buruai Colliery near Jowai, Jaintia Hills District, Meghalaya.

Affinities—The above features of the fossil indicate that it could be a rhizome-like structure. However, at first sight the specimen looks like a worm belonging to Annelida type but the nature of segmentation keeps it separated from it. The rhizome is considered as a subterranean stem type of cylindrical form which may be horizontal or vertical in orientation. Considering the length and smooth nature of internodes, the fossil resembles *Aglaonema* Schott of Araceae (Mayo *et al.*, 1997, p. 224, pl. 72). In the absence of other details due to the preservational factor its further comparison can not be made.

Age	Formation and Lithology
Upper Eocene	Kopili Formation
	Alternations of shales and hard sandstones with a few limestone beds.
	Sylhet Limestone.
	Prang limestone: Fossiliferous argillaceous limestone.
Middle Eocene	Narpuh sandstone: Sandstone with subordinate calcareous band.
	Lower Eocene
Lower Eocene	Umlatdoh limestone: Foraminiferal limestone containing a few sandstone beds.
	Lakadong sandstone: Coal bearing quartzitic sandstone.
	Lakadong limestone: Fossiliferous limestone.
	Palaeocene
	Therria sandstone: Medium to coarse grained ferruginous, quartzitic sandstones, containing thin coal seams, carbonaceous shales and at places clay bands.
----- Unconformity -----	
Precambrian	Granites and gneisses

Fig. 2 —The general lithostratigraphic sequence of Jaintia Hills District, Meghalaya (After Raja Rao, 1981).

Though rhizome-like structures are known from the Deccan Intertrappean beds of India (Bande *et al.*, 1988), these are mostly petrified forms and do not occur as compressions. Therefore, it is not possible to compare the present fossil with them. Under the circumstances a new genus *Rhizocaulon* is created to describe such forms.

Generic Diagnosis

RHIZOCAULON gen. nov.

A thin, cylindrical, epigeal structure with distinct nodes and internodes and often rooting at the nodes.

Genotype—*Rhizocaulon palaeocenicum* gen. et sp. nov.

Etymology—It is based on a rhizome-like structure.

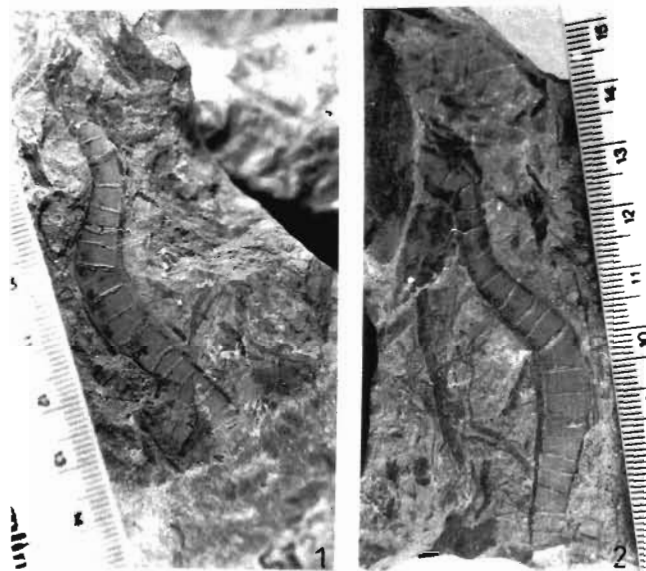


PLATE 1

Rhizocaulon palaeocenicum gen. et sp. nov.

- 1 A cylindrical rhizome-like structure showing nodes and internodes. Specimen no. BSIP 38369. x 1.
2. Counterpart of same specimen showing rooting at the nodal region. Specimen no. BSIP 38368. x 1

Specific Diagnosis

RHIZOCAULON PALAEOCENICUM sp. nov.

An epigeal, unbranched, creeping, cylindrical form; maximum width 1 cm; nodes about 20 in number, 3-5 mm apart, internodes smooth; rooting at the nodal region.

Holotype—Specimen no. BSIP 38368.

Paratype—Specimen no. BSIP 38369.

Etymology—The specific name is after its occurrence in Palaeocene.

Occurrence—Therria Sandstone Formation; Buruai Colliery near Jowai, Jaintia Hills District, Meghalaya; Upper Palaeocene.

The genus *Aglaonema* is an evergreen herb and consists of 21 species distributed in India, Bangladesh, Myanmar, Cambodia, China, Indonesia, Brunei, Laos, Malaysia, Papua, New Guinea, Philippines, Thailand and Vietnam. In India it is found in Meghalaya and Andamans. The genus mostly occurs in tropical humid forest, occasionally in deciduous forest and sometimes in humus and peat deposits.

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