

of the criteria to screen drought resistant varieties from others.

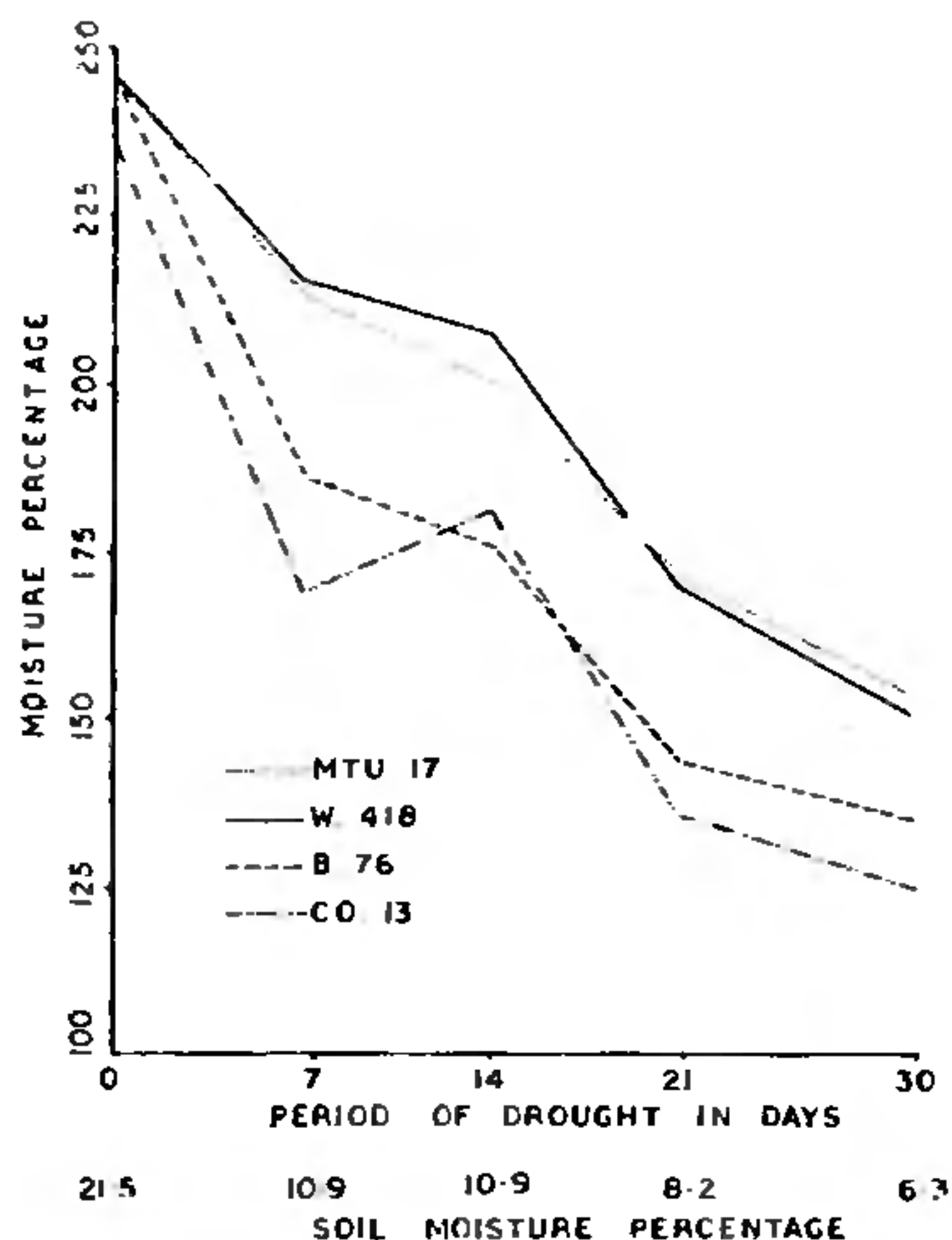


FIG. 1. Percentage of moisture on dry weight basis in shoot of different rice varieties under increasing soil moisture stress of soil.

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Central Rice Research Institute, D. P. BHATTACHARJEE  
S. C. PAUL.  
Cuttack-6, October 6, 1966.

1. Asana, R. D., *Proc. First Conf. of Research Workers of Plant Physiology*, Indian Council of Agricultural Research, 1960, p. 57.
2. Stocker, O., *Indian J. Plant Physiol.*, 1961, 4, 87.

### A FOSSIL LAGENIDILEAN FUNGUS FROM THE DECCAN INTERTRAPPEAN BEDS OF MOHGAON-KALAN, MADHYA PRADESH

AMONGST the rich variety of hitherto known plant fossils constituting the Deccan Intertrappean flora, fungi are rather poorly represented. Two fungal perithecia, named as *Perisporiacites varians* and *Palæosordaria lagena*, and some dispersed fungal spores were described from Sausar by Sahni and Rao<sup>1</sup> in 1943. Traces of septate mycelium were also recorded by Sahni<sup>2</sup> in the seed of *Enigmocarpon*. Some septate hyphæ with (sic) spores similar to those of the Mucorales were recovered by Chitale<sup>3</sup> in 1950 from a maceration of the

Mohgaon chert. Comparatively recently a fossil rust infecting the fruit of *Enigmocarpon parijai* has been described by Dwivedi<sup>4</sup> under the generic name *Shuklania*.

While examining a thin ground section of a piece of chert from Mohgaon-kalan (22° 1' N.; 79° 11' E.), district Chhindwara, Madhya Pradesh, we have come across some small globular structures (Fig. 1) inside the general

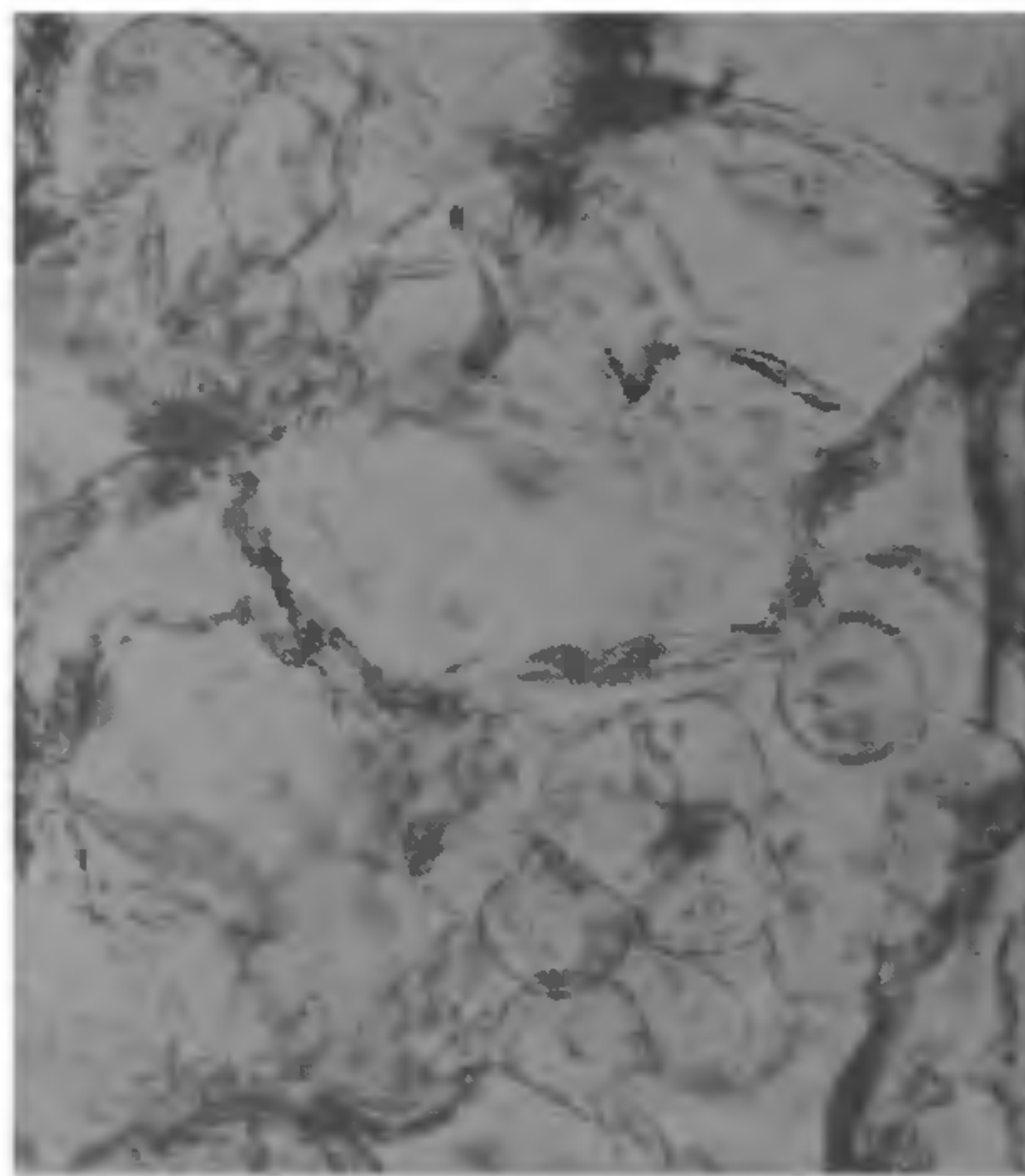


FIG. 1, × 700

tissue of the basal region of a *Sahnipushpam* flower. On closer examination these globular bodies appear to be fungal sporangia strongly reminiscent of the Lagenidiales. The sporangia are more or less rounded, about 12–15 μ across, thin-walled and devoid of any recognizable contents. At places the adjacent sporangia are clearly seen as interconnected, indicating their origin from a filamentous structure by constriction or septation and subsequent development into the typical globose structures usually found in the Lagenidiales.

Though these sporangia-like bodies are so very suggestive of Lagenidialean affinities, yet in the absence of any zoospores it is impossible to ascribe them definitely to any genus. Lagenidiales are well known as aquatic fungi. It is quite probable that the fossil fungus reported herein, infected the *Sahnipushpam* flower while it was lying in water prior to silicification.

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Lucknow for their kind suggestions and help in the identification of the present fossil.

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and the Middle Siwalik with the Nagri and Dhok-Pathan of Sarmatian and Pontian ages respectively. The Middle Siwaliks of this area can be correlated with the fossiliferous beds of Haritalyangar<sup>3</sup> (31° 32' : 76° 38'), Kot-Kahlur (31° 18' : 76° 31') and Aitham (32° 47' : 76° 01') in Jammu and Kashmir, where also the author has found for the first time some vertebrate fossils of Sarmatian and Pontian ages.

The author is much indebted to Shri. T. Banerjee, Superintending Geologist, for critically going through the manuscript and for valuable suggestions.

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Dehra Dun, October 24, 1966.

UMA SHANKER MISRA.

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1. Medlicott, H. B., *Mem. Geol. Surv. Ind.*, 1864, t. 3, p. 122.
2. Boileau, V. H. and Kohli, G., (Unpublished Report of the Geological Survey of India), 1952.
3. Pilgrim, G. E. *Rec. Geol. Surv. Ind.*, 1963, t. 43, Pt. 4, p. 319.

**VERTEBRATE FOSSILS FROM  
DERA-GOPIPUR TEHSIL,  
DISTRICT KANGRA (PUNJAB)\***

AN area of about 120 sq. km. of Siwalik country lying between Dera-Gopipur (31° 53' : 76° 13') and Rani Tal (32° 00' : 76° 14') has yielded a rich assemblage of vertebrate fossils during the field season 1965-66. In all about 116 mammalian remains of different species have been found. The identification of the different finds is under way.

The stratigraphic sequence exposed in the area is tabulated in Table I. A few characteristic fossils are mentioned in the table.

TABLE I

Sub-group	Thickness in metres	Characteristic fossils	Horizon	Age	Equivalent time stratigraphic unit Europe
Upper Siwalik	735	No vertebrate fossil found	Pinjaur	Pliocene	Villafranchian
Middle Siwalik	354-650	<i>Mastodon (Tetralophodon punjabiensis)</i> , <i>Hipparion theobaldi</i> , <i>Giraffa punjabiensis</i> , <i>Boselaphus</i> sp., <i>Proleptobos</i> sp., <i>Trogoceros</i> sp., <i>Genetta (?)</i> . <i>Superba</i> Pilg.	Dhok-Pathan	Upper Miocene	Pontian
	734-935	<i>Driopithecus punjabis</i> Pilg. <i>Stegolophodon cautleyi</i> , <i>Conolysus</i> sp.	Nagri	Middle Miocene	Sarmatian
Lower Siwalik	25- 46	<i>Trilophodon Chinjiensis</i> , <i>Tetralophodon</i> sp., <i>Amphicyon palaeindicus</i> , <i>Aceratherium</i> sp., <i>Giraffokeryx</i> sp.	Chinji	do.	Upper Tortonian

The fossils from the Lower and Middle Siwalik of this area will be of great help in correlation of the different rock units. Systematic mapping of the Siwalik belt has shown that the rocks suffer from rapid facies changes which introduce difficulty in subdividing the individual rock units. The present find of the fossils from the Lower and Middle Siwalik rocks of Dera-Gopipur—Rani Tal area has proved the time-equivalence of the Lower Siwalik rocks of this area with the Chinji of upper Tortonian age,

**ON SOME ASPECTS OF THE  
PRE-CAMBRIAN GEOLOGY OF PARTS  
OF THE SHILLONG PLATEAU, ASSAM\***

THE Shillong Plateau of Assam is a block of pre-Cambrians fringed by Cretaceous-Eocene shelf sediments. The pre-Cambrians comprise high grade metamorphics including granulites, amphibolites, gneisses and schists, and metasediments of the Shillong Series, besides several bodies of granite. This note attempts to highlight the implications of some recent remapping