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Occurrence of a leafy Jungermanniales in the Mesozoic of the Rajmahal Hills, India

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ABSTRACT

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A member of leafy Jungermanniales of Hepaticopsida is seen in a thin section prepared of silicified chert of Nipania, Rajmahal Hills, Jharkhand. The leafy thallii are either simple or bifurcated and have two lateral rows and one ventral row of leaves. Young plant has only few leaves. Multicellular ventral scales resembling those of extant Marchantiales are also seen in the slide. Scattered spores of pteridophytes and pollen grains of gymnosperms are also visible. Occurrence of a fossil leafy Jungermanniales plant is reported for the first time from this fossiliferous area.

Key–words—Petrifaction, Leafy Jungermanniales, Mesozoic, Rajmahal Hills, India.

भारत की मध्यजीवी राजमहल पहाड़ियों में पत्तीदार जुंगेरमेनीएलीज की उपस्थिति

बी.डी. शर्मा

सारांश

झारखंड में राजमहल पहाड़ियों के निपेनिया की सिलिकीभूत चर्ट के निर्मित तनु खंड में हेपटिकॉप्सिडा के पत्तीदार जुंगेरमेनीएलीज का सदस्य देखा गया है। पत्तीदार थेलयाई या तो सामान्य या फिर द्विशाखित हैं तथा उनमें पत्तियों की दो पार्श्व पंक्तियां और एक अधर पंक्ति है। नवोदित पौधे में केवल कुछ ही पत्तियां हैं। मौजूदा मर्केंटीलीज की उन मिलती–जुलती बहुकोशिकीय अधर शल्कों को भी स्लाइड में देखा गया है। टेरिडोफाइटों के प्रकीर्ण बीजाणु एवं अनावृतबीजियों के पराग दाने भी दृष्टिगोचर हैं। इस जीवाश्ममय क्षेत्र से पहली बार जीवाश्म पत्तीदार जुंगेरमेनीएलीज पादप की घटना रिपोर्ट की गई है।

सूचक शब्द—अश्मन, पत्तीदार जुंगेरमेनीएलीज, मध्यजीवी, राजमहल पहाड़ियों, भारत।

INTRODUCTION

THE Mesozoic rocks of the Rajmahal Hills are well known for the preservation of petrifactions of plants (algae to angiosperms) specially of pteridophytes and gymnosperms (Sharma *et al.,* 2001, 2015). However, not much is known about the fossil bryophytes from the area (Bose & Pal, 1982; Sharma *et al.,* 2015). The present report is based on the study of a thin section (Slide No. BDN 301/ Raj N) prepared of silicified chert collected from Nipania, a locality well known for the collection of the Pentoxyleae material (Sahni, 1948; Vishnu Mittre, 1953; Bose *et al.,* 1985; Sharma, 2002, 2014). The slide was prepared by the usual method cutting, grinding and polishing techniques and mounted in canada balsam (Sharma *et al.,* 2001, 2015).

DESCRIPTION

The Slide No. BDN 301/Raj N preserves two specimens of leafy Jungermanniales, fossil spores and multicellular scales of Marchantiales (Pl. 1.1 arrow F). The younger plant (lower one) has only few leaves on a dark coloured axis while the upper mature one is bifurcated and has three rows of leaves (Pl. 1.2, 3), two lateral rows and the third of ventral leaves.

The lateral rows have thin leaves with pointed apices while those of the ventral row are little larger in size and have blunt apices (Pl. 1.3) resembling to some extent the living genus *Porella* sp. (Udar, 1976; Vashishta, 1999). Also present in the slide are scattered spores of pteridophytes and pollen grains of gymnosperms as mentioned above (Sharma & Suthar, 1996).

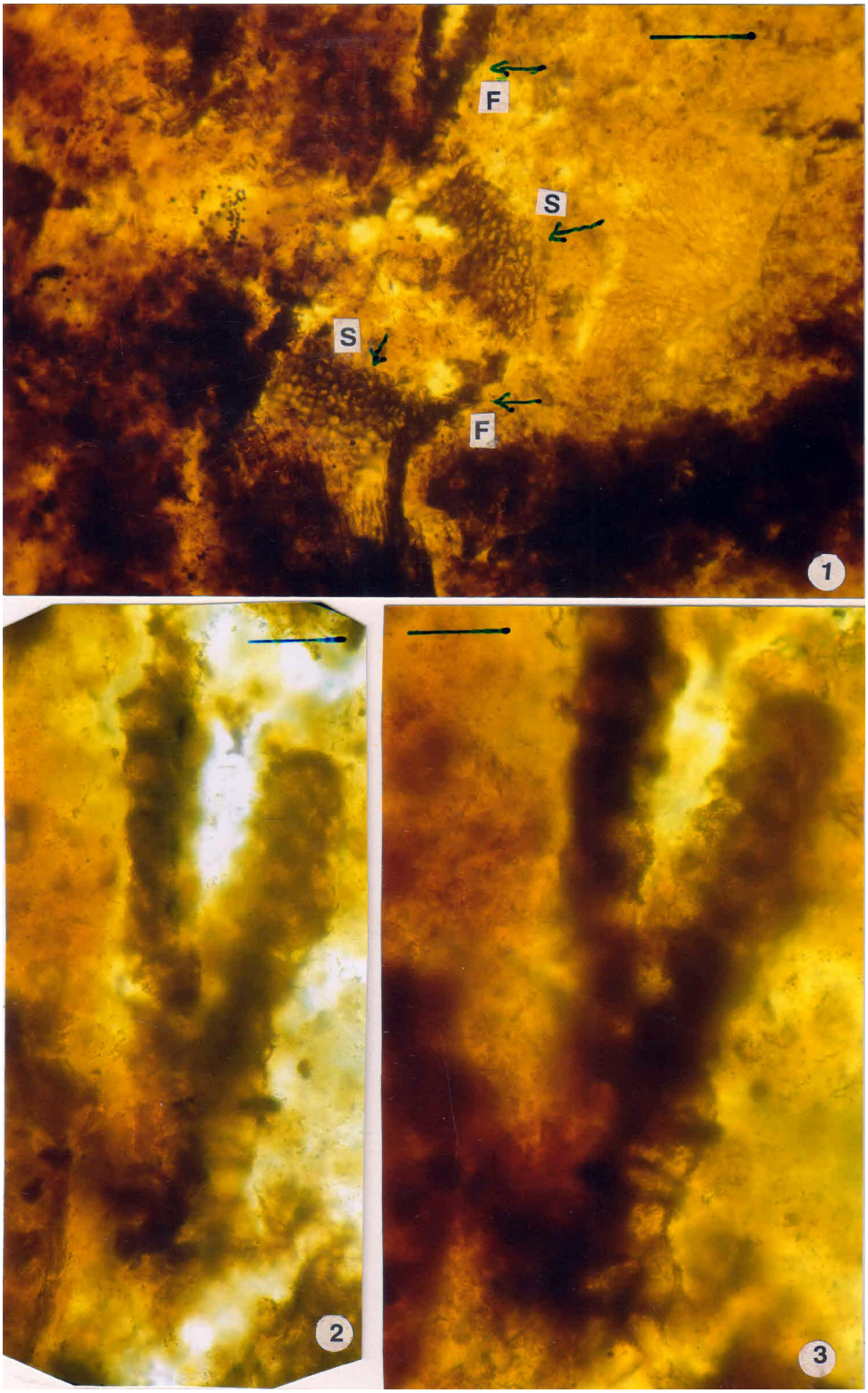

PLATE 1

Further search and investigations are required for assigning the material to generic and specific level.

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