

A NEW SPECIES OF *MACROTAENIOPTERIS* SCHIMP.
FROM THE RAJMAHAL HILLS, BIHAR,

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ABSTRACT—A new species of *Macrotaeniopteris* Schimp. from the Rajmahal Intertrappeans, exposed near Mirzachowki, Santhal Parganas, Bihar is described. It differs from the other species in possessing rows of round pit-like structures (resin ducts?) in between the secondary veins.

INTRODUCTION

In 1965 the author collected three specimens of this *Macrotaeniopteris* from the upper Intertrappean beds exposed between the south-eastern base of Balbadri Hill and Chunakhali village near Mirzachowki (25°13' : 87°32') in the Santhal Parganas, Bihar. The beds are exposed at a height of about 65 metres on the eastern side of the Balbadri Hill, with a marked dip towards the west; on the western flank they are exposed about 15 meters above the base. Associated with *Macrotaeniopteris* in the beds are *Thinnfeldia chunakhaliensis*, Sah & Dev (1957), *Morrissia mccllellandi*, Bose (1958) and *Nilssonina* spp.

DESCRIPTION

Macrotaeniopteris misrai sp. nov.

Plate 1, Figs. 1—2

Diagnosis. Frond simple with a maximum width of 5.2 cm. Lamina thick with entire at places slightly wavy, margin, laterally attached to the midrib. Midrib 5-9 mm in width. Secondary veins numerous, parallel, about 1.5 mm apart, arising at an angle of about 60°; simple, sometimes forking, rarely anastomosing. Lamina marked with numerous small, circular pits, probably representing resin ducts; pits 55 per sq. cm, arranged in a row between the veins 1-3 mm. apart.

Description. The leaf is preserved in the form of an impression (figs. 1-2). It is strap-shaped and measures about 16 cm in length with a maximum width of 5.2 cm. The apex and base are not preserved in any one of the specimens. The leaf gradually narrows towards the base. The lamina appears to be thick and is laterally attached to a wide and

prominant midrib. The midrib is finely striated and gradually increases in width towards the base. The secondary veins are numerous, prominent and parallel. They arise from the midrib at a wide angle and curve upwards near the margin. Most of the secondary veins are simple, but some fork and anastomose (figs. 2), sometimes forming an island. The pits, probably resin ducts, occur all over the lamina and are closely placed in single rows between the veins.

Holotype. No. B.F. 7 in the Museum of the Geology Department, Lucknow University, Lucknow. Paratype Nos. B. F. 8 and B. F. 9 in the Museum of the Department of Geology, P. P. N. College, Kanpur.

Locality. Intertrappeans exposed between south-eastern base of Balbadri Hill and Chuna-khali village, Santhal Parganas, Bihar, India.

Comparison. The present specimens differ from all the other Indian species namely, *Macrotaeniopteris crassinervis* Feist. *M. lata* (Oldh.) Schimper 1877, *M. satpuransis*, *M. morrissi* (Oldh.) Schimp. and *M. ovata* (Oldh. & Morr.) Schimp. (Feistmantel, 1877) in possessing pits on the lamina. These are similar to the structures described by Harris (1964) as resin bodies in *Nilssonia tenuinervis* Seward. As the frond in our specimens is incomplete, comparison with the other species is difficult. However, it can be readily distinguished from *M. lata* and *M. ovata* in possessing an entire margin and

from *M. morrissi* in the less acute angle of the secondary veins. The pit-like structures give the leaf a distinctive appearance and therefore it is being given a new name. The new species is named after Prof. R. C. Misra, Head of the Department of Geology, Lucknow University, Lucknow.

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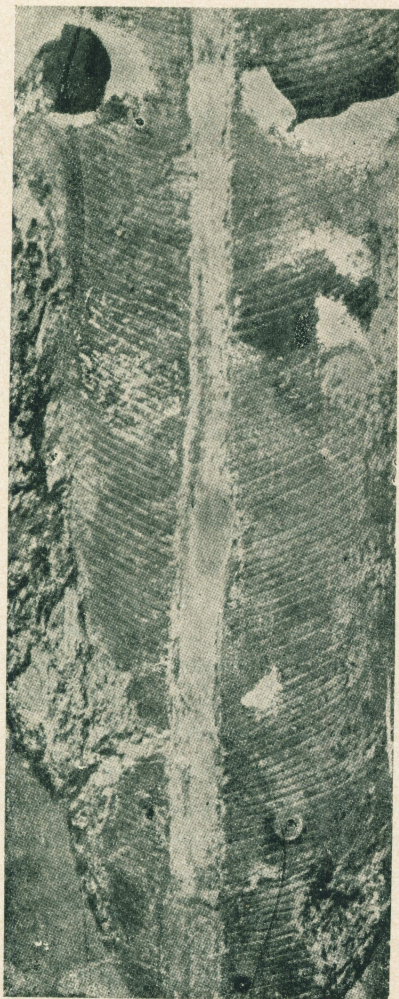
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EXPLANATION OF PLATE I

1. *Macrotaeniopteris misrai* sp. nov. No. B.F. 7 (holotype). x 1.
2. A portion of the above showing venation. Note vein islands. x 2.



1



2

PREM N. AGARWAL : MACROTAENIOPTERIS MISRAI SP. NOV.