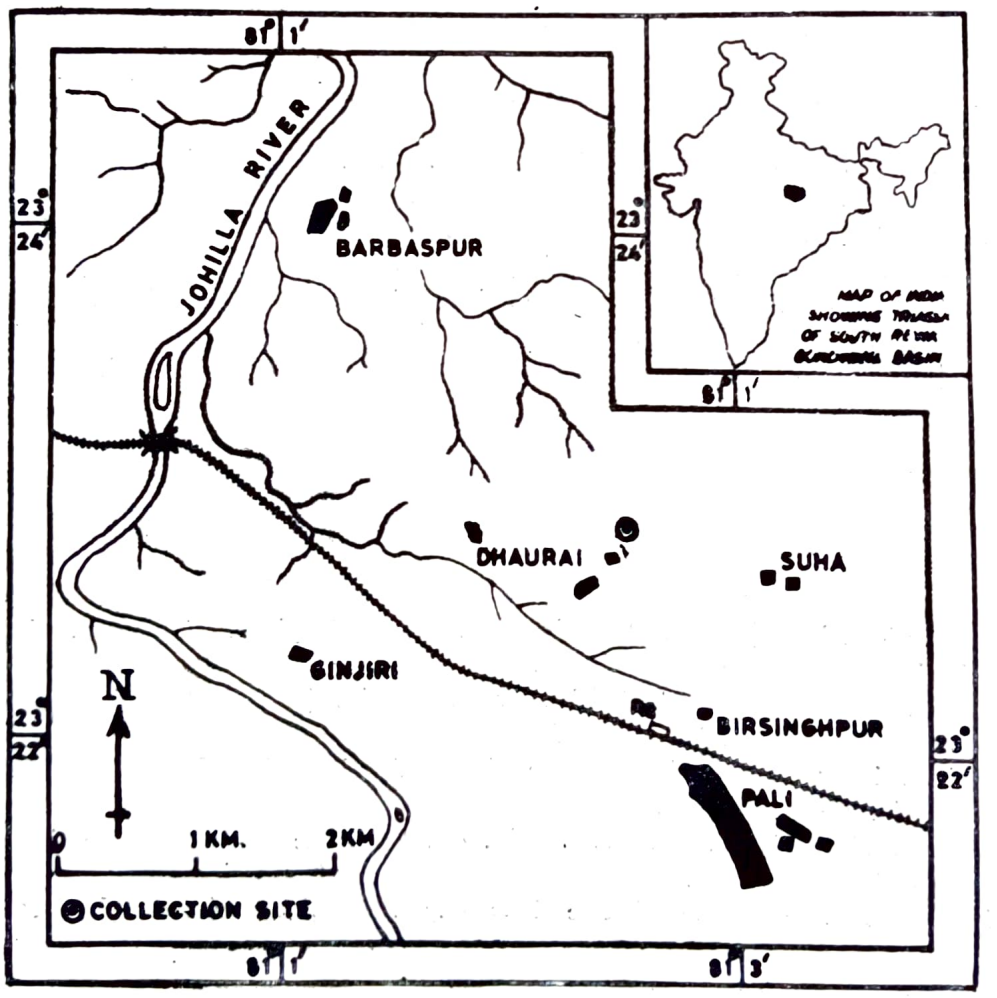
PALAEOBOTANY AND STRATIGRAPHY OF THE DHAURAI HILL BEDS, SOUTH REWA GONDWANA BASIN, INDIA

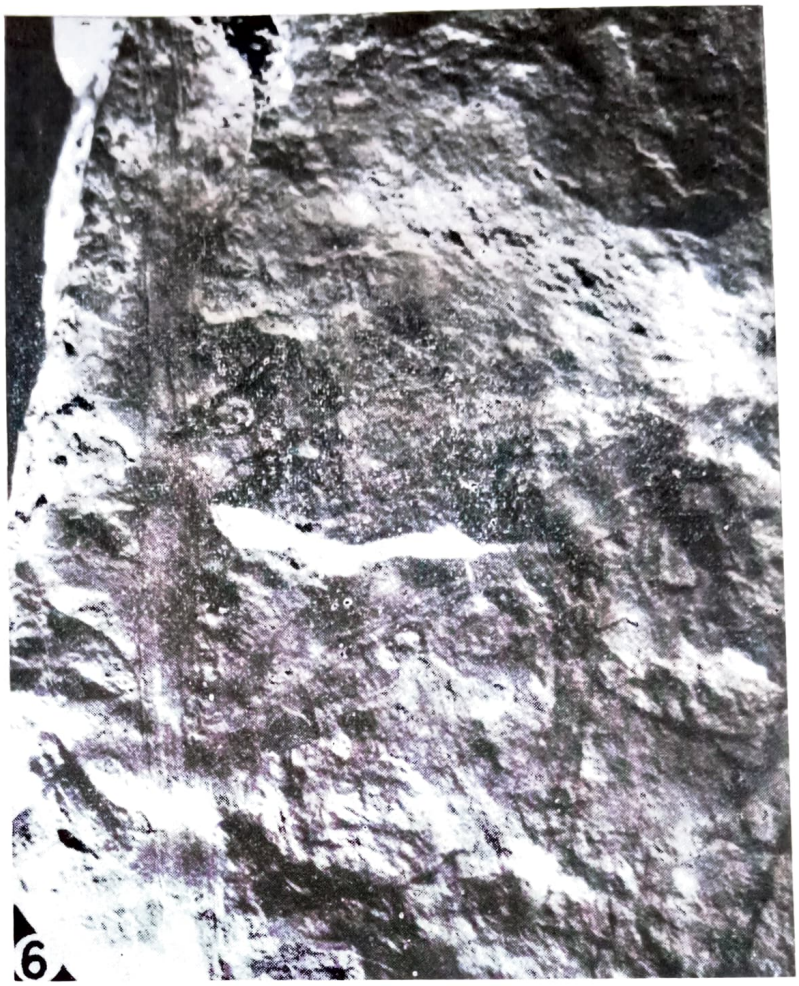
The age of the beds exposed in the hillock adjacent to Dhaurai Village (23°22′50″N :81°1′40″E), Shahdol District, Madhya Pradesh has long been controversial. Hughes-(1884) mapped them in his 'Supra-Barakars'. Rao (*in* Krishnan, 1958, p. 11) considered them to belong to the 'Parsora Stage'. Vimal and Singh (1968, p. 37) opined that the beds at Dhaurai are to be included under the Pali beds whilst Lele (1969) placed them in his 'Daigaon Stage' (According to Sastry *et al.*, 1977 "Daigaon Stage" of (Lele, 1964) is to be called formally as Pali Formation as per priority).

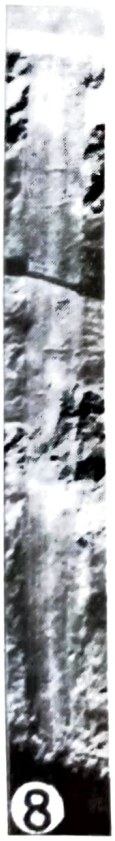
The only previous record of plant fossils from this hillock is of *Thinnfeldia hughesii* (now *Dicroidium hughesii*) by Rao (*in* Krishnan, 1958, p. 12). During my last two visits in the area I have collected a good number of specimens of plant megafossils preserved as impressions, from the fine-grained red ferruginous sandstone exposed on the top of the hillock about 100 m NE of Dhaurai Village and about 1.5 km NNW of Birsinghpur Railway Station (Map 1).

The collection includes *Neocalamites* sp. (Pl. 1, fig. 1), *Marattiopsis* sp. (Pl. 1, figs. 2-5), *Dicroidium hughesii* (Feistmantel) Gothan (Pl. 1, figs. 6, 7) and *Desmiophyllum*



MAP 1—Showing the location of fossiliferous beds near Dhaurai, Shahdol District, Madhya Pradesh.





sp. (Pl. 1, fig. 8). *Dicroidium hughesii* is the most commonly occurring form. Not a single fragment can be compared with *Schizoneura* or *Glossopteris* which are frequently met with in the rocks of the Pali Formation. Equally, *Dicroidium hughesii*, which is the most dominant species at Dhaurai, is a characteristic element of the Parsora Formation and has never been reported from the Pali Formation. The remaining elements, *Neocalamites* sp., *Marattiopsis* sp. and *Desmiophyllum* sp. are also known from various localities of the Parsora Formation.

The hillock comprises a basal gritty sandstone with a few thin pebble zones followed by ironstone bands, variegated ferruginous shales and fine-grained ferruginous sandstone. The fossiliferous fine-grained ferruginous sandstone is identical to that exposed in the Ghorari Nala (locally called as Kamrai Nala), near Parsora (23°25′50″N : 81°5′35″E), yielding plant fossils. Moreover the overall lithology of the hillock is typical of the Parsora Formation (Lele, 1969; Sastry *et al.*, 1977).

A perusal of the foregoing account reveals the fact that both megafloral content as well as lithological features of the Dhaurai beds are typical to those of the Parsora Formation. Therefore both on palaeobotanical as well as lithological grounds the Dhaurai beds appear to belong to the Parsora Formation.

References

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Explanation of Plate

1. *Neocalamites* sp., specimen showing whorls of linear leaves at nodes, B. S. I. P. specimen no. 35777, x 1.

2-5. *Marattiopsis* sp., 2, 3. Part and counterpart of a pinna-apex, B. S. I. P. specimen no. 35778, x 1. 4, 5. Part and counterpart of a pinna broken at both ends, B. S. I. P. specimen no. 35779, x 1.

6,7. *Dicroidium hughesii* (Feistmantel) Gothan, 6. Leaf fragment showing lanceolate pinnae bearing a few circular scars (probably insect galls), B. S. I. P. specimen no. 35780, x 1. 7. Two leaf fragments appearing to be the parts of an original forked frond, B. S. I. P. specimen no. 35781, x 1.

8. *Desmiophyllum* sp., B. S. I. P. specimen no. 35782, x 1.

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