

# MIOFLORA FROM PARSAPANI, SATPURA GONDWANA BASIN— PRELIMINARY REPORT

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## ABSTRACT

A section of coaly and carbonaceous shales in the Parsapani area has yielded a miospore assemblage comprising 30 species belonging to 18 genera. The miospore assemblage is predominated by the genera *Callialasporites* and *Araucariacites*. *Cyathidites* and *Alisporites* are other important taxa. The mioflora shows a certain resemblance with the Vemavaram and Upper Katrol miofloras.

## INTRODUCTION

The village of Parsapani ( $22^{\circ} 35'$ :  $78^{\circ} 03'$ ) lies on the northern slopes of the Satpuras. The rocks exposed in the Parsapani area belong to the Upper Gondwanas (Bagra-Denwa and Jabalpur Groups); the Jabalpurs being about 150 feet in thickness (CROOKSHANK, 1936). The Jabalpurs consist of massive sandstones alternating with white clays, sometimes including coaly-carbonaceous shale and earthy hematite. Hematite nodules are the chief megafossil-bearing rocks in the area. Megafossils are also occasionally met with in the white clay and in the carbonaceous shale. The present report is first of its kind on the mioflora of the Parsapani area.

## MATERIAL

Material for the present investigation was collected from the following locations around Parsapani village:

1. About 2 km S.E.S. of Parsapani, in the Hathidoh Nala. Sample Nos. PPO, PPO-1 (sandstone), PPO-2 (conglomerate) representing the Bagra facies. Unfossiliferous.
2. About  $2\frac{1}{2}$  km S.E. of Parsapani in the Hathidoh Nala.  $2-2\frac{1}{2}$  feet thick exposure on the left bank upstream, comprising basal 1 foot of coaly shale (sample no. PP-A) overlain by  $1-1\frac{1}{2}$  feet of carbonaceous shale containing megafossils (sample no. PP-B); representing Jabalpur Series. Miospores present.
3. About  $1\frac{1}{2}$  km E.S.E. of Parsapani in the Chhota Nala.  $3\frac{1}{2}$  feet thick exposure of megafossil-bearing white clay on the right bank, upstream (sample no. PP-D). Megafossil-bearing hematite nodules occur in the nala bed. Sponge spicules in the white clay.
4. About  $\frac{3}{4}$  km N. of Parsapani in the Gualbaba Nala (continuation of Chhota Nala north of Parsapani-Pathai dirt road). White clay (sample no. PP-C). Unfossiliferous.
5. White clay near Saltlick on Bagra-Parsapani dirt road. Sponge spicules.

## MIOspore ASSEMBLAGE

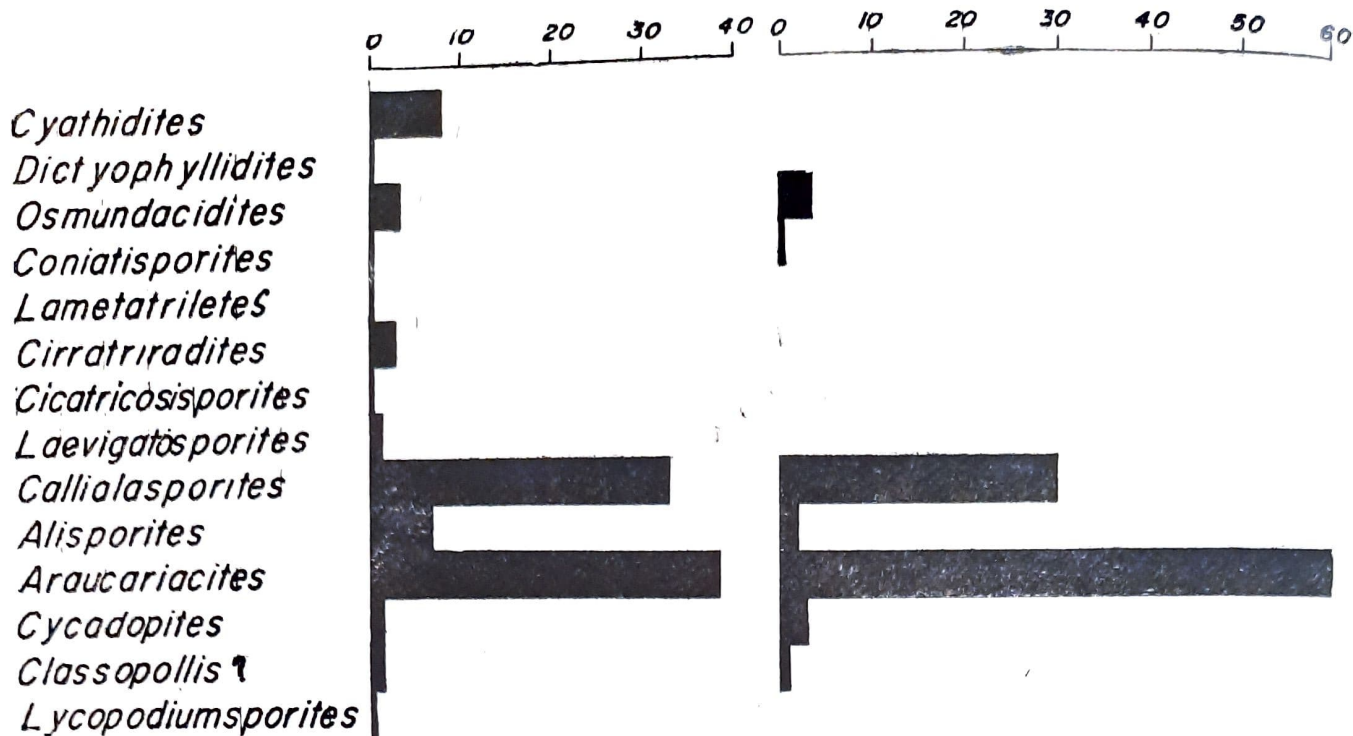
Following species have been identified in the assemblage:

- Cyathidites australis* Couper, 1953
- Cyathidites punctatus* (Delcourt & Sprumont) Delcourt *et al.*, 1963
- Cyathidites densus* Kumar, 1973
- Dictyophyllidites* sp.
- Lametatriletes* sp.
- Coniatisorites* sp.
- Osmundacidites* sp.
- Cicatricosisporites ludbrooki* Dettman, 1963
- Cicatricosisporites* sp.
- Venusteasporites* sp.
- Lycopodiumsporites* sp.
- Cirratriradites* sp.
- Aequitriradites triangulatus* Singh *et al.*, 1963
- Laevigatosporites* sp.
- Callialasporites dampieri* (Balme, 1957) Dev, 1961
- Callialasporites trilobatus* (Balme, 1957) Dev, 1961
- Callialasporites segmentatus* (Balme, 1957) Dev, 1961
- Callialasporites discoidalis* (Döring, 1962) Bharadwaj & Kumar, 1972
- Callialasporites lametaensis* Kumar, 1973
- Callialasporites plicatus* (Singh & Kumar, 1969) Kumar, 1973
- Callialasporites triletes* Singh, Srivastava & Roy, 1964
- Alisporites ovalis* Kumar, 1973
- Podocarpidites* sp.
- Alisporites* sp.
- Platysaccus* sp.
- Araucariacites australis* Cookson, 1947
- Araucariacites ghneriensis* Singh, Srivastava & Roy, 1964
- Araucariacites indicus* Dev, 1961
- Podosporites* sp.
- Cycadopites sakrigaliensis* Sah & Jain, 1965
- Classopollis* sp.

## DISCUSSION

A frequency count of the miospores in the two samples shows (*see text-figure*) that both the samples are miofloristically similar. The lower sample (PP-A/1437) shows the predominance of the genera *Callialasporites* and *Araucariacites* both being 33 per cent and 38.50 per cent respectively. The other prominent genera in this assemblage are *Cyathidites*, *Osmundacidites*, *Cirratriradites* (incl. *Aequitriradites*), and *Alisporites* (incl. *Podocarpidites*). A single spore of *Lycopodiumsporites* was met within a count of 200 specimens. The upper sample (PP-B/1437) has almost similar frequency count except for the total absence of *Cyathidites* and *Cirratriradites*, and a much higher frequency of *Araucariacites* (60%).

In the miospore frequency the present assemblage shows definite resemblance to those from Vemavaram (KAR & SAH, 1970), Upper Katrol (VENKATACHALA, KAR & RAZA, 1969) and assemblage K from Bhuj (VENKATACHALA, 1969). In all these assemblages



SAMPLE NO PP-A/1437                      SAMPLE NO P-B/1437  
**MIOSPORE FREQUENCY at PARSAPANI**

*Araucariacites* and *Callialasporites* are the predominant genera, with disaccate nonstriate pollen being fairly represented. On the other hand, the miospore assemblage of Jabalpur Stage (BHARADWAJ, KUMAR & SINGH, 1972) differs in having appreciable percentage of the genera *Cycadopites* and *Classopollis*.

The Vemavaram and the Upper Katrol miospore assemblages have been referred to Upper Jurassic, while assemblage K from Bhuj is referred to Lower Cretaceous (see BHARADWAJ, 1969) which goes on to show that the basal Lower Cretaceous mioflora continued to be the same as that of the Upper Jurassic. However, on faunistic evidence the Vemavaram beds are also referred to Lower Cretaceous (KRISHNAN, 1960). Megafossil assemblage from Parsapani being devoid of typical Lower Cretaceous forms, on the basis of our present knowledge about the mioflora from the Hathidoh Nala exposure, these can at best, for the present, be referred to Upper Jurassic.

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