

FURTHER OBSERVATIONS ON *PACHYPTERIS INDICA* (OLDHAM & MORRIS)
BOSE & ROY

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ABSTRACT

Some new observations on the external features and venation of *Pachypteris indica* (Oldham & Morris) Bose & Roy form the subject matter of this paper.

DESCRIPTION

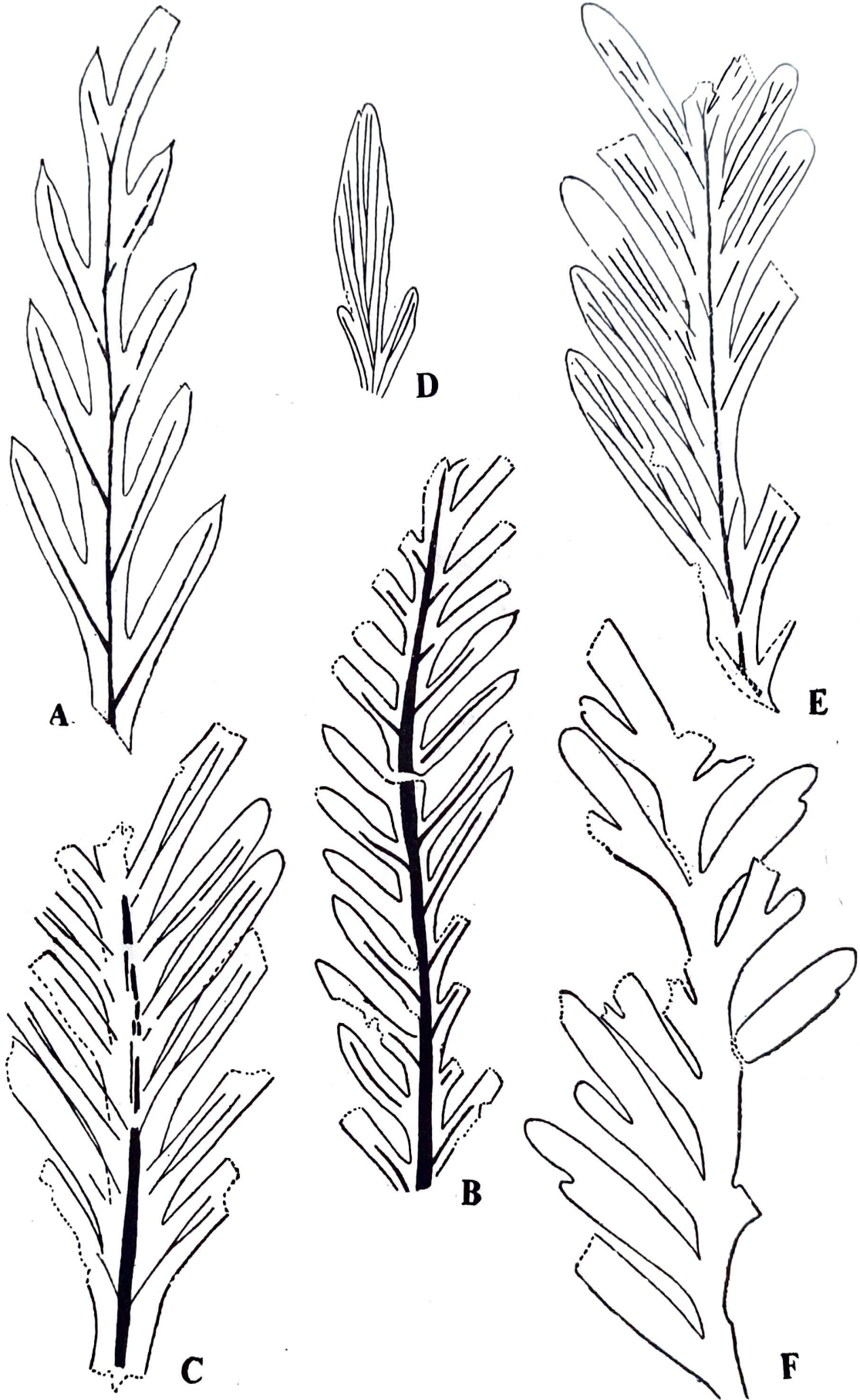
Pachypteris indica (Oldham & Morris) Bose & Roy (1968) was based on the original specimens of *Taxodites* (?) *indicus* Oldham & Morris (1863) and some new specimens collected by Bose and others from Sehora (Sher river), Narsinghpur district, Madhya Pradesh. Recently, fresh collections of *P. indica* were again made from the type locality. Out of them 23 specimens clearly showed the bipinnate nature of the fronds. The largest specimen was found to exceed 22.5 cm in length. The rachis of this specimen is about 7 mm thick. From different fragmentary specimens, it seems *P. indica* was a leaf of fairly large size, perhaps exceeding 35 cm in length.

When transfer preparations were made out of these specimens, a few pinnules were found to have acuminate apex (Text-fig. 1 A, B), besides acute, obtuse or notched (Text-fig. 1 F). Some of the fronds also clearly show the venation of the pinnules. Previously, the venation was described (Bose & Roy, 1968) as "veins concealed, sometimes midrib leaving an impression on lower side, in some midrib clearly visible (under transmitted light), reaching almost upto apex. Lateral veins arising at a small angle, never reaching margin". These characters were seen in some of the narrower pinnules. But in most of the broader pinnules, where venation was visible, it was found that a principal vein entered the base of the pinnule and after running for about 2-4 mm it bifurcated into two, making a very narrow angle (Text-fig. 1 C-E). These in turn further divided once or twice, but always making a narrow angle.

The cuticular structure in all these specimens was found to be similar to the previously described specimens. It was, however, found that concentration of stomata in broader pinnules was less than the narrower forms.

REFERENCES

- BOSE, M. N. & ROY, S. K. (1968). On the occurrence of *Pachypteris* in the Jabalpur Series of India. *Palaeobotanist*, **16**(1): 1-9, 1967.
- OLDHAM, T. & MORRIS, J. (1963). Fossil flora of the Rajmahal Series in the Rajmahal Hills. In "Fossil flora of the Gondwana System". *Mem. geol. Surv. India, Palaeont. indica*, Ser. 2, **1**(1): 1-52.



Text-Fig. 1-A, B, pinnules showing acuminate apex; fig. A (slide no. 33811, $\times 4$) and fig. B (slide no. 33813, $\times 3$). C-E, pinnules showing venation; fig. C (slide no. 34019, $\times 4$), fig. D (slide no. 33810, $\times 2$), fig. E (slide no. 33809, $\times 3$). F, showing notched pinnules, slide no. 33815, $\times 3$.