

THE OCCURRENCE OF *SAGENOPTERIS* PRESL IN KUTCH, INDIA

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ABSTRACT

Fragmentary leaflets of *Sagenopteris* resembling *S. colpodes* Harris (1940) are described here. The specimens were recently collected from Kurbi Village in Kutch.

Key-words — Caytoniales, *Sagenopteris*, Kutch (India).

सारांश

कच्छ, भारत में सेजिनॉप्टेरिस प्रेसल की प्राप्ति — महेंद्र नाथ बোস एवं जयश्री बैनर्जी

यहाँ सेजिनॉप्टेरिस काल्पोडिस हेरिस (1940) के अनुरूप सेजिनॉप्टेरिस के खंडित पर्णकों का वर्णन किया गया है। ये प्रादर्र्ण हाल में कच्छ के कुर्बी नामक गाँव से एकत्रित किये गये थे।

INTRODUCTION

THE genus *Sagenopteris* was first recorded from India by Feistmantel (1876) from Jabalpur. The specimen was unfortunately not figured and its whereabouts are now not known. From the same place Feistmantel (1877) figured a specimen as *Glossopteris* ? or *Sagenopteris* ?. This latter specimen on re-examination by one of us (M.N.B.) has proved to be a detached pinnule of *Cladophlebis medlicottiana* (Oldham) Pascoe described by Sukh-Dev (1972). Feistmantel (1879, 1880, 1881) from the Permian of India had also figured *Sagenopteris* ? *stoliczkana* Feistmantel, *S. sp.*, *S. ? polyphylla* Feistmantel and *S. sp. cf. S. rhoifolia* Presl. All these species have now been found to be *Glossopteris*. Jacob (1938) recorded a species as *Sagenopteris bhambhanii* Jacob from Sakrigalighat, Rajmahal Hills. He, however, did not give any specific diagnosis nor did he figure the specimen. Unfortunately, the whereabouts of the specimen are now not known.

Recently, from a "Nala" cutting south-east of the village Kurbi (41E/8) in Kutch, we have collected several pieces of leaflets which in our opinion belong to *Sagenopteris*. The venation of these leaflets is very close

to *S. colpodes* Harris (1940). Some of the present specimens show at places a black crust over their surface but none of them have yielded any cuticular preparation. Therefore in the absence of cuticle, we are here provisionally describing them as *Sagenopteris sp. cf. S. colpodes* Harris.

DESCRIPTION

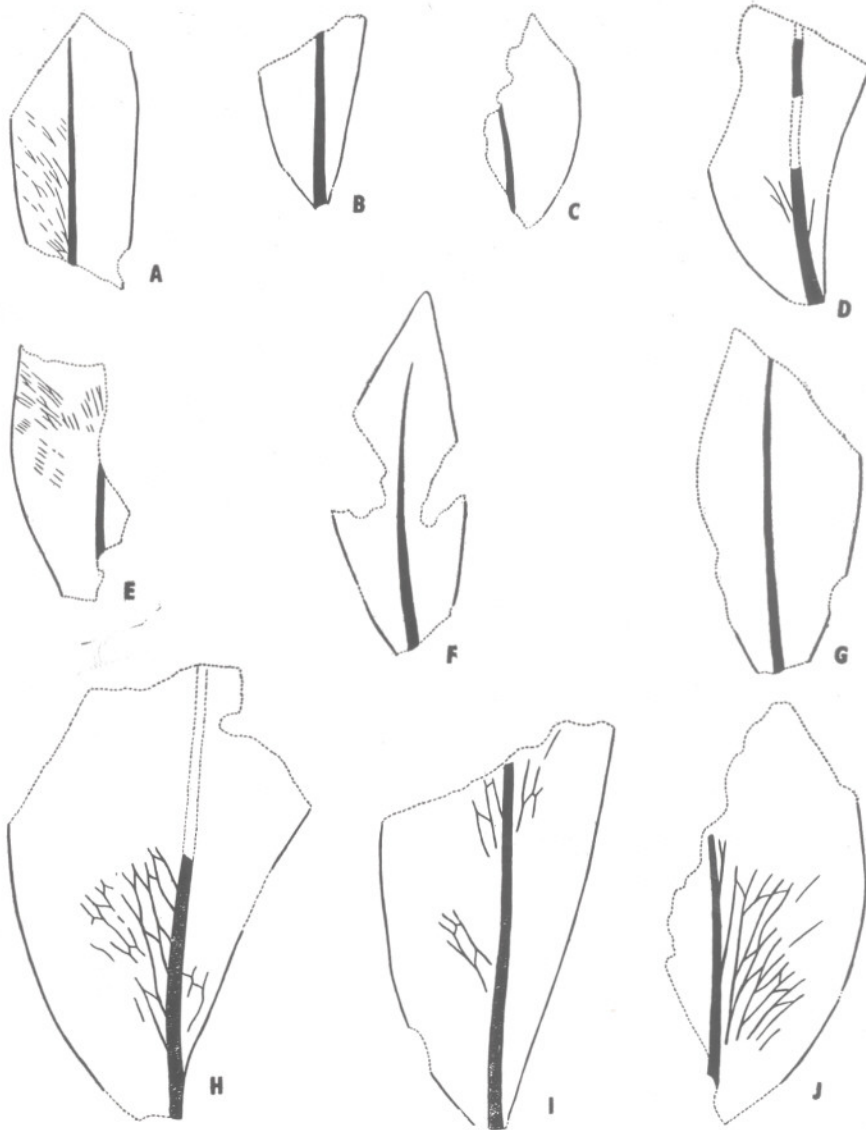
Sagenopteris sp. cf. S. colpodes Harris

Pl. 1, figs 1-10; Text-fig. 1A-J

Detached leaflets, most complete leaflet measuring 4.5×1.1 cm and the broadest leaflet measuring 4.7×2.1 cm. Lamina of leaflets inequilateral, mostly ovate, some lanceolate; margin entire; apex obtuse, base not preserved. Mid-vein prominent, evanescent towards apex, mostly disappearing considerably below apex. Secondary veins arising at an angle of 10-25° forming meshes, meshes 3.5-5×0.9-1.1 mm, smaller towards margin.

Locality — South-east of Kurbi Village near the village school.

Comparison — The asymmetrically placed midrib is evanescent towards apex and the elongated vein meshes are the charac-



TEXT-FIG. 1 — *Sagenopteris* sp. cf. *S. colpodes* Harris; A-G $\times 1$, B.S.I.P. nos. 1/2002B, 7/2002B, 7/2002B, 8/2002B, 2/2002B, 10/2002B, 9/2002B and 4/2002B. H-J $\times 2$, B.S.I.P. nos. 2/2002B, 7/2002B and 8/2002B.

teristic features of the present specimens. In general shape and in the nature of vein meshes the specimens resemble most *Sagenopteris colpodes* Harris (1940, 1964, figs 1A, 2I, K). The only factor which is not known in these specimens is that none of the leaflets are attached to the original frond. In *S. phillipsi* (Brongniart) Presl, described by Harris (1964), the leaflets are longer and narrower, also the meshes are

bigger in size. *S. suspecta* Hollick (1930) has much broader apex. The leaflets of *S. nariwaensis* Huzioka (1970) are somewhat identical in shape to one of our specimen (Pl. 1, fig. 3). But the leaflets of the former are narrower and much bigger in size. *S. glossopteroides* Hsü et Tuan (1974) is more like *Mexiglossa* of Delevoryas and Person (1975). *S. stenofolia* Hsü et Tuan (1974) is slightly bigger in size and has larger

vein meshes. The smaller leaflets of *S. sp.* cf. *S. colpodes* may be compared with *Sagenopteris* sp. described by Lundblad (1950) in general shape, especially the one which is not fused.

The leaflets of *S. paucifolia* (Phill.) Ward, described by Halle (1913, pl. 1, figs 1-5) from Graham Land, are bigger in size and have acute and strongly curved apex. Moreover, in these specimens the secondary veins arise at an angle of 10-15° and the vein meshes are much more numerous. *S. nilssoniana* (Brongn.) Ward described by

Frenguelli (1941) from Patagonia has more rounded apex with broad secondary vein meshes. *S. longicaulis* Du Toit from Argentina, figured by Jain and Delevoryas (1967), has larger and broader meshes and the secondary veins arise at an angle of about 65°.

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EXPLANATION OF PLATE

PLATE 1

Sagenopteris sp. cf. *S. colpodes* Harris

- 1-7. *Sagenopteris* sp. cf. *S. colpodes* Harris; B.S.I.P. nos. 7/2002B, 1/2002B, 9/2002B, 8/2002B, 2/2002B, 10/2002B and 4/2002B. × 1.
8. Fig. 6 magnified to show venation; B.S.I.P. no. 10/2002B. × 4.
9. *Sagenopteris* sp. cf. *S. colpodes* Harris; B.S.I.P. no. 5/2002B. × 4.
10. A portion of the specimen in fig. 4 magnified, B.S.I.P. no. 8/2002B. × 4.



PLATE I