

Geographic distribution of the genus *Cycadopteris* during the Upper Gondwana

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A leaf of the genus *Cycadopteris* Zigno is reported for the first time from the Athgarh Formation, Orissa. The distribution of the genus *Cycadopteris* in India during the Upper Gondwana is discussed.

Key-words—Megafossil, *Cycadopteris*, Corystospermaceae, Athgarh Formation, Upper Gondwana (India).

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सारांश

उपरि गोंडवाना में साइकेडॉप्टेरिस प्रजाति का भौगोलिक वितरण

नीरू पांड्या

उड़ीसा में अथगढ़ शैल-समूह से साइकेडॉप्टेरिस जिग्नो प्रजाति की एक अशिमित पत्ती पहली बार अभिलिखित की गई है। भारत में उपरि गोंडवाना काल में साइकेडॉप्टेरिस प्रजाति का वितरण भी विवेचित किया गया है।

ONLY a few species of the genus *Cycadopteris* Zigno are known from the Upper Gondwana (Bose, 1957, 1958; Bose & Dev, 1958). Recently a small leaf of *Cycadopteris* was collected from the Athgarh Formation and is described in this paper.

DESCRIPTION

Family—Corystospermaceae

Genus—*Cycadopteris* Zigno

Cycadopteris sp.

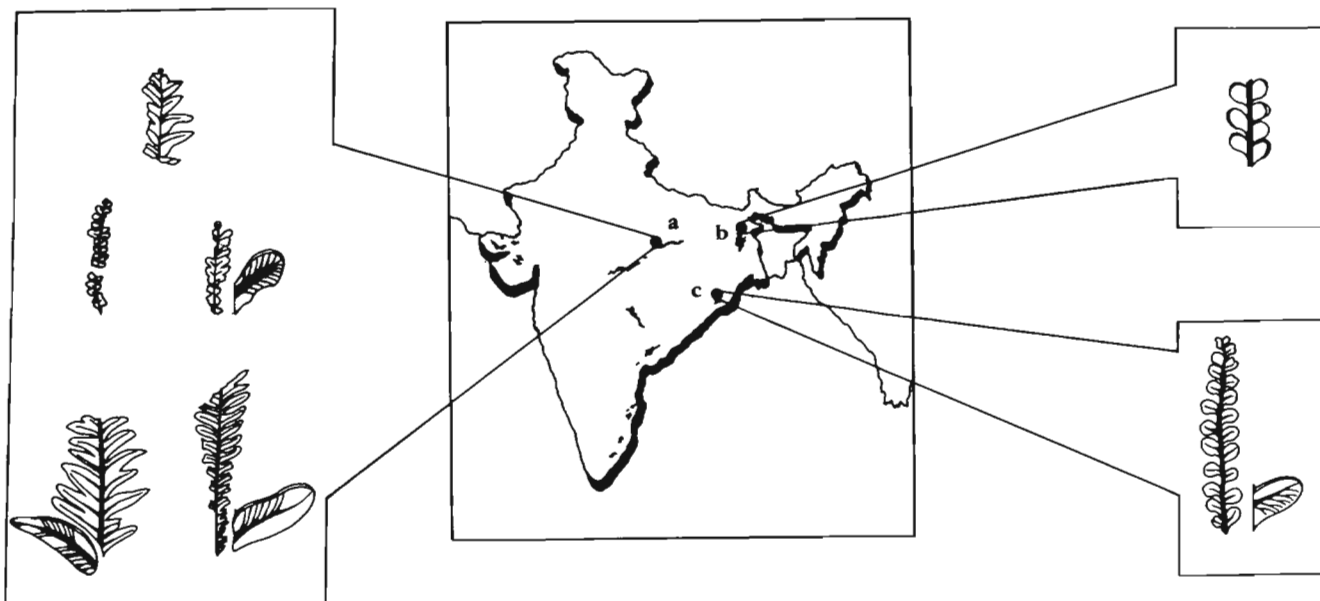
Pl. 1, figs 1-3

Description—Pinna incomplete, 3.4 cm long and 0.5 cm wide. Rachis less than 1 mm broad. Pinnules broadly ovate, with rounded apex and slightly decurrent base, alternate, rather sparse, attached at an angle of 60°-90°, 2-3 mm long and 1.5-2 mm

broad, margin thickened. Midrib broad, persisting up to apex and dividing the lamina longitudinally into broader basiscopic half and narrow acroscopic half. Secondary veins prominent, arising at an acute angle and forking once or twice.

Collection—Specimen no. BSIP 68/3132; Talbast, Cuttack District, Orissa; Athgarh Formation, Early Cretaceous.

Remarks—*Cycadopteris* sp. resembles *C. pulcherrima* (Bose & Dev, 1958) in shape and size of pinnules. In *C. brauniana* (Bose & Dev, 1958) and the present specimen the basiscopic half of pinnules is larger than the acroscopic half. However, the pinnules in *Cycadopteris* sp. are comparatively distant, small and lack phytollemma. *Cycadopteris* sp. is also somewhat comparable to the smaller pinnules of *C. zeilleri* Antevs 1915 in shape, size and arrangement of pinnules; however, the former species lacks cuticular details.



Text-figure 1—Distribution of the genus *Cycadopteris* during the Upper Gondwana in India; **a**, Bansa-Patparha, Jabalpur Formation, Madhya Pradesh; **b**, Chunakhal, Rajmahal Formation, Bihar; and **c**, Talbast, Athgarh Formation, Orissa.

The genus *Cycadopteris* is characterized by thick leathery leaves, turned-margin, generally flange over midrib, sunken stomata and sometimes papillae over the leaves which are xeromorphic characters. The present specimen though preserved as impression has small and thick leaves suggesting a rather dry environment for the Athgarh Formation.

Distribution—The genus *Cycadopteris* was so far known from Early Cretaceous of Bansa and Patparha, (Jabalpur Formation), Madhya Pradesh and Chunakhal (Rajmahal Formation), Bihar. Its occurrence in the Athgarh Formation is significant as this occurrence extends its geographic distribution from Madhya Pradesh and Bihar to Orissa during the Early Cretaceous Period (Text-fig. 1).

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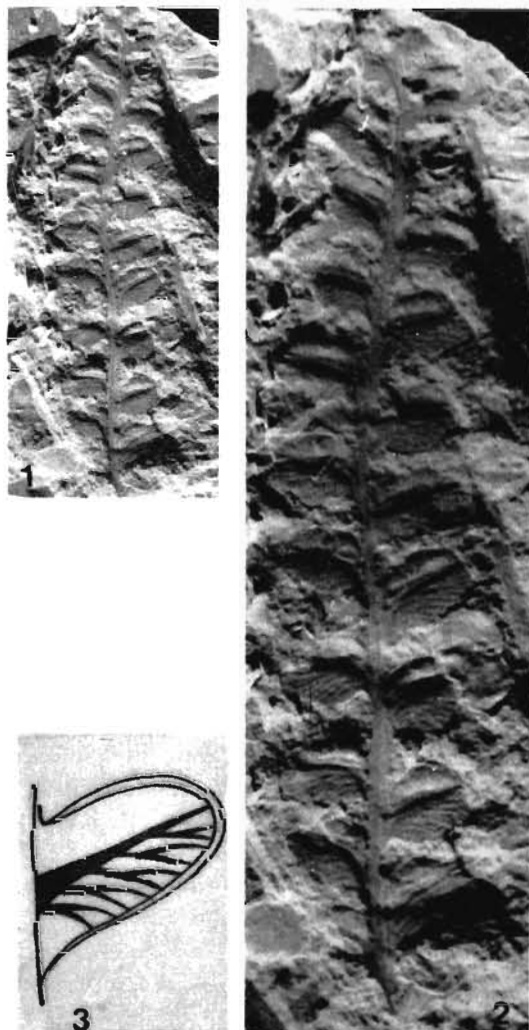


PLATE 1

1. *Cycadopteris* sp., Specimen no. BSIP 68/3132, x 2.
2. Above specimen magnified, x 6.
3. A pinnule based on the above specimen showing venation, x approx. 8.