

CYCADOPHYTIC LEAVES FROM UTTATUR PLANT BEDS OF TIRUCHIRPALLI DISTRICT, TAMIL NADU, INDIA.

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ABSTRACT

Present paper deals with morphological studies on fossil flora of Uttatur Plant beds in Tiruchirpalli district of Tamil Nadu belonging to Early cretaceous age. Two Cycadophytic impressions have been described in this communication.

Key words: Fossil plants, impression, Uttatur plant beds

Introduction

Upper Gondwana rocks occur all along the East Coast. In Tamil Nadu, those are found in Tiruchirpalli district. In Tiruchirpalli district, Uttatur and Kalpadi are the places, rich in fossil plant contents. Recently plant impressions were collected by the author from Uttatur beds in Tiruchirpalli district. It is a new locality and very little work has been undertaken on it. Present study deals with Cycadophytic leaves belonging to genus *Ptilophyllum Morris*

Material and Methods

Plant impressions were collected from Uttatur and Kalpadi in Tiruchirpalli district of Tamil Nadu. They were in the form of impressions on yellowish-red sandstones. The material was collected from stone-quarries near the place.

The impression gives morphological of the plants preserved. In the field the impression were checked for the strength of the material. Some shales are brittle in nature and easily get disintegrated. The others are more durable and can easily be protected. The impression on brittle material were carefully packed by covering cotton material around them and then wrapped in the newspaper bag. The durable material is directly packed in the newspaper bag. All these packed in plastic

bag. They were carefully transported to the laboratory. In the laboratory the impression were cleaned by using soft hair brush. Each specimen is properly labelled. This can be done by applying a white paint on corner of the material. The painted area is further labeled by using India ink.

First habit sketches of the plants were drawn on ivory sheet. The figures are drawn proportionately. Finally they are inked and properly cut of the material on them. The explanation of text figures is given with magnification calculated. The specimens were further photographed using colour film. For this purpose digital camera was used. The developing and printing of the colour film was processed. The enlargements of desirable size were made. The prints were fixed on the cardsheet which forms the plate figures.

Results and Discussion

Two promising members have been described as:

1. *Ptilophyllum cutchense*, Morris 1840 (Text Fig. 1, Plate Fig. 1)

The specimen is a pinnate leaf measuring 6 cm in length and 5 cm in width. Rachis is completely exposed and 0.7 mm broad. The lamina is linear and uniformly broad. Rachis is 1 mm thick, partly concealed by pinnae bases. Pinnae are small, contiguous closely set and arranged alternately. They are 0.5 cm long and

0.1 cm broad, attached to the rachis at an angle of 50–60°. Acroscopic margin slightly falcate, basiscopic margin decurrent. Apex is obtuse. Number of veins are 6. They emerge from entire base, run parallel and show forking. The specimen closely resembles with *P. cutchense*, Morris (Bose and Kasat, 1972). It resembles with the specimen described by Sukh-Dev and Rajanikanth (1988). Thus it supports earlier occurrence on the East coast.
Type : UTR/17/2001

Locality: Uttatur, District Tiruchirpalli, Tamil Nadu
Horizon : Early Cretaceous
Uttatur Formation

2. *Ptilophyllum* sp. cf. *P. gladiatum* Bose and Sukh-Dev 1958 (Text Fig. 2, Plate Fig. 2)

The specimen is a pinnate frond measuring 6 cm long and 1.5 cm broad. Rachis is partly covered by 2 mm thick pinnae base. Pinnae are alternately arranged and broadly lanceolate in shape. They are closely set and attached on the upper surface of the rachis by broad auriculate base at an angle of 55–60°. They measure 7 mm in length and 2 mm in width. Episcopic margin is straight while basiscopic margin is somewhat convex. Apex is pointed. Number of veins are 8, running parallel and dividing once or twice

The present specimen closely resembles with *P. gladiatum* Bose and Sukh-Dev in having broadly lanceolate pinnae, pointed apex, veins 8 in number 4, pinnae attached to the rachis and upper basal angle rounded and lower basal angle straight. Bose and Sukh-Dev (1958) described this species from Bansa in Madhya Pradesh. Besides, gross-morphological features, they have also

described cuticle of this species. However, in the present specimen cuticle is absent. Hence it is identified and described as *Ptilophyllum* sp. cf. *P. gladiatum* Bose and Sukh-Dev.

According to Bose and Kasat (1972) *P. gladiatum* is quite rare in India. Recently Mahabale and Satyanarayana (1979) described *Ptilophyllum* sp. cf. *P. gladiatum* from Raghudevapuram in East Godavari district of Andhra Pradesh. Present specimen is first report from East coast Upper Gondwana beds. Present specimen is collected from Kalpadi in Uttatur plant beds of Tamil Nadu. This supports wider distribution of the species.
Type : KAL/11/99

Locality : Kalpadi, District Tiruchirpalli, Tamil Nadu
Horizon : Early Cretaceous, Uttatur Formation

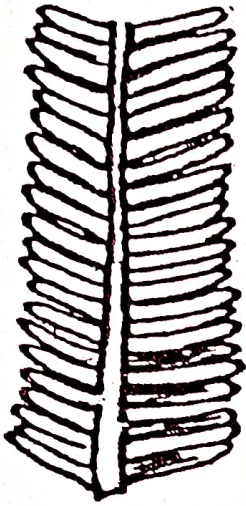
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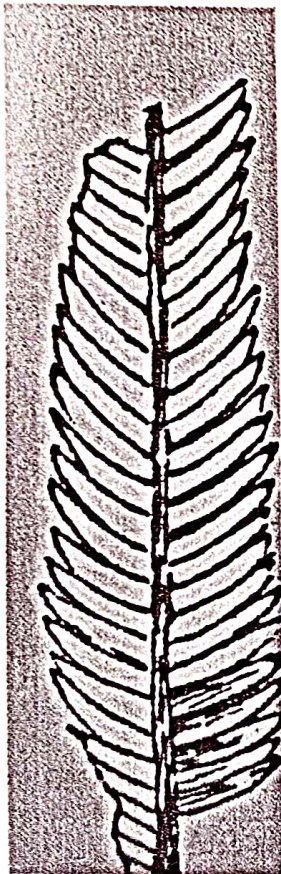
PLATE- 1



Text Figure- 1



Plate Figure- 1



Text Figure- 2

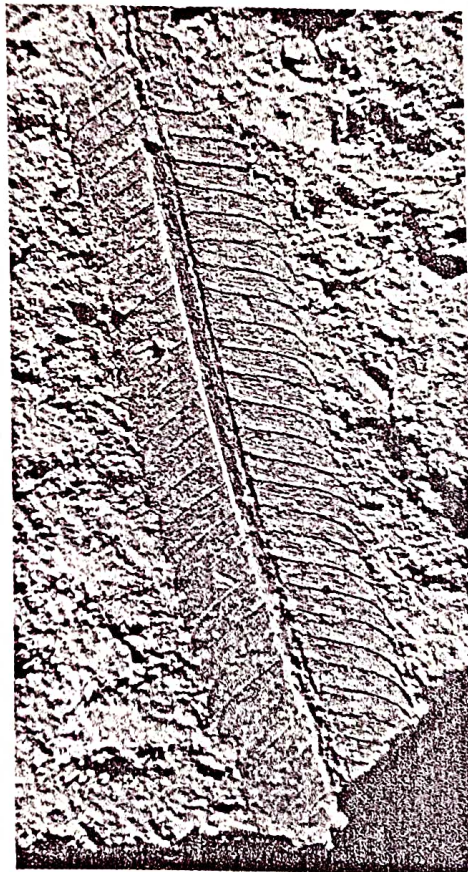


Plate Figure- 2

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