

### Short Communication

## Occurance of two species of *Brachyphyllum*, Lindley and Hutton (1836) Ex Brongniart (1828) from Uttatur Formation, Tamil-Nadu, India

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### Abstract

The paper deals with morphological studies of the fossil flora of Uttatur Formation plant beds in Tiruchirpalli Early Cretaceous age. Gymnospermic impressions are described.

**Keywords:** Fossil plant impression, Uttatur formation plant beds, early cretaceous age.

### Introduction

The Coniferales are represented by genera *Brachyphyllum* belonging to family Araucariaceae. The genus was created for detached leafy branches showing affinities of the family Araucariaceae. It is characterized by spirally arranged, appressed leaves having thick lamina. The leaves are triangular conical or rhomboidal in shape. From India twelve species are reported.

Several plant impression have been collected from localities in Tiruchirpalli district of Tamil-Nadu. The impression were preserved on Ferruginous Sandstone and reddish-yellow in colour. Following two promising impressions are describe.

### Material and Methods

The impression give morphological of the plant 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 other 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 lablled. 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 enlargement of desirable size

were made. The prints were fixed on the cardsheet which forms the plate figures. The explanation of plate figures is given with the magnification calculated.

### Results and Discussion

Coniferales, Genus-*Brachyllum*, Lindley and Hutton 1836. *Brachyphyllum rhombicum* (Feistmantal) Sahn 1928



**Figure-1**  
*Brachyphyllum rhombicum*

The specimen is branched shoot, measuring 12.5 cm in length and 1.2 cm in weadth. The branch is given out at an angle of 45. Leaves are spirally disposed and attached at an angle of 80. They are and rhomboidal in shape 4mm long and 3mm wide. Margins are entire and apex is acute. Free part of the leaf pointed upwards.

It closely agrees with the characters of *B.rhombicum* given by Sahn (1928) in having i. Branched habit, ii. Rhomboidal shaped leaves iii. Acute apex iv. Absence of cuticle and therefore it is described as such.

**Identification and Comparison:** It is compared with *B. royii* in having rhomboidal shape of leaves and acute apex<sup>1</sup>. But differs from *B.royii* in the absence of cuticle. Further *B.royii* is reported from Cutch while present specimen belongs to Uttatur beds of Tamil-Nadu. Another major difference is in *B.royii* cuticle is present. Present specimen is devoid of cuticle. *B.rhombicum* is known Sriperambudur in Tamil-Nadu and South Rewa in Madhya Pradesh<sup>2</sup>. Present specimen is reported from Kalpadi in Uttatur region of Tamil-Nadu. This suggests wider distribution of *B.rhombicum* on the East Coast.

Type - KAL/21/2000. Locality - Kalpadi, Dist- Tiruchirpalli, Tamil-Nadu. Horizon – Uttatur Formation – Early Cretaceous. *Brachyphyllum theraniense*, Sukh Dev and Rajanikant 1988



**Figure-2**  
*Brachyphyllum theraniense*

The specimen is an unbranched leaf twig measuring 4.4 cm in length and 1.2 cm in width. Leaves are oppressed on stem and spirally arranged. They are mostly large and rhomboidal in shape. Leaves measure 6mm long and 4mm wide. Margins are entire and apex is acute. Leaves near the margin are short triangular and project outwards. Hence diamorphic nature of leaves is observed.

**Identification and Comparison:** It resembles with the morphological characters of *B.theraniense* described from Therani in Tamil Nadu<sup>3</sup>. The important feature of the species is dimorphic nature as the leaves. Hence it is identified as such. However present specimen an unbranched twig, while those of Sukh-Dev and Rajanikant's specimen is branched one. Present specimen is collected from Naicolam in Tiruchirpalli district of Tamil Nadu belonging to Uttatur Formation. This supports the occurrence of the species in this region.

Type - NAL/16/2000. Locality - Naicolam, Dist- Tiruchirpalli, Tamil-Nadu. Horizon – Uttatur Formation – Early Cretaceous.

## Conclusion

The Coniferales are represented by genera belonging to family Arucariaceae and Podocarpiaceae. Further it suggests the dominance of Arucariaceae. The present work on the basis of megafossil studies support the Lower Cretaceous age.

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## Referances

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