

CHAPTER - III

MATERIAL AND METHODS

The specimens collected for the present investigation are from Upper Gondwana beds of Andhra Pradesh and Tamil Nadu. The plant fossils are preserved as impressions on thin bedded shales. Two localities in Andhra Pradesh are selected for the present work. The first locality is Vemavaram which is 14 miles N.E.N. of Ongole town in Prakasam district. Here plant bearing marine beds are exposed. This formation is considered as the middle stage of the triple grouping suggested by Foote (1879). He classified the Upper Gondwana beds in this area and considered that Vemavaram beds are equivalent to the Kota stage. The plant fossils are found as impressions and are scattered on the surface of cotton fields near the village. Some impressions are found as already exposed while others are exposed by breaking the shales along the bedding plane.

The second locality is exposed at Uppugunduru a village 5 miles away from Vemavaram. Here the shales are found in the stone quarries. The material from the quarries is taken out for road construction and building the houses. The workers in the quarries remove the large shales and break them into smaller pieces. In this process plant impressions are exposed. The collection is mostly made from these shales. Local worker Baburao has helped us in collection of the material. Shri K.N.Raghavarao has rendered a great help in transport and collection of the material. Collections

were made in November, 1981 and May, 1982.

From Sriperamatur only few specimens are collected. Dr.A.V.V.Raju helped us in collection from this place. Here the plant impressions are found on light yellow-coloured sandstones.

The impressions were cleaned carefully by removing dirt on them. They were packed separately in news paper pieces so as to avoid the rubbing of their surfaces. Smaller pieces were packed in suitable-sized bags.

The specimens were thoroughly examined in the laboratory under the magnifying lense. Those showing better preservation were chosen for the investigation. The chosen specimens were carefully cleaned by using soft hair brush so as to remove the dirt from their surfaces. Specimens were serially numbered by using white Camel crylin colour and India ink. The specimens were arranged according to their classification. Bennettitales are quite common in the collection. Coniferales, Cycadales and Ginkgoeales are present in the limited proportions.

The specimens were studied under strong incident light to study their morphological characters. The shape of the leaf, its venation and other characters were noted carefully. Text figures were drawn on white Ivory sheets using India ink. Their magnifications were found out. Photographs of specimens were made under proper adjustment

of lights. For photography single lens reflex camera of 35 mm size (Pentax make) was used. Suitable filters were used for desired effects. Film with 125 A.S.A. speed of "ORWO" make was used. The final photographs were made on Agfa hard grade paper. Correct magnifications of each photograph is calculated and given in the explanation of Plates.

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