

# CRITICAL REMARKS ON THE SPECIFIC IDENTITY OF *SAHNIANTHUS DINECTRIANUM* SHUKLA

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## ABSTRACT

Based on the critical study of the original material and the available literature, the diagnostic features of *Sahnianthus dinectrianum* Shukla (1958) have been discussed. The species has been shown to have no separate specific identity from the already described *Sahnianthus parijai* Shukla (1944).

## INTRODUCTION

THE genus *Sahnianthus*, with the only species *S. parijai*, was instituted by V. B. Shukla (1944) for a fossil dicotyledonous flower from the Deccan Intertrappean beds of Mohgaonkalan, District Chhindwara, Madhya Pradesh. Since then this flower has been further studied and discussed by various workers (CHITALEY, 1950, 1955; DWIVEDI & SHUKLA, 1958; MAHABALÉ & DESHPANDE, 1957).

In 1958, R. K. Shukla described another species of *Sahnianthus*, viz., *S. dinectrianum*, from the same locality as that of *S. parijai*. This so called new species was based on a solitary flower seen in an oblique longitudinal plane, in a piece of chert that also contained many flowers of *Sahnianthus parijai*. It was considered by its author to be different from *S. parijai* because of the presence in it of two nectaries, an epicalyx and probably a corolla; other characters being the same as in *S. parijai*.

The presence of two nectaries, one on either side of the ovary stalk was considered as the most important feature of *S. dinectrianum*, hence the specific name. These nectaries were said to be in organic connection with the tiny ovary stalk. In this connection it is quite surprising how the author could decide the presence of these nectaries and their organic connection with the ovary stalk when according to him "most of the portion of each nectary is filled with silica leaving a comparatively hollow region in the middle which either might have been present from the beginning or developed subsequently during fossilization"

(SHUKLA, 1958, p. 116). These nectaries thus can as well be considered as artefacts of preservation since not a single cell was observed in them.

Even if we accept the presence of nectaries in *S. dinectrianum* it is not a new feature, because Chitale (1955) had already recorded the occurrence of a nectary on one side of the ovary in *S. parijai*. Further Mahabalé and Deshpande (1957), from a comparative study of the structures found in mature flowers of *Sonneratia* and those in *Sahnianthus* have stated that the stalk of the ovary in *Sahnianthus* is the result of the loss of a spongy tissue possibly of the nectary during fossilization—a condition similar to that found surrounding the ovary of *Sonneratia* today with which *Sahnianthus* is closely allied (MAHABALÉ & DESHPANDE, 1957, PL. 4, FIG. 25, 28 & also PL. 1, FIGS. 4-6).

Thus the presence of nectaries or a nectariferous tissue (if ever we find a conclusive evidence of its actual presence) in *Sahnianthus* does not necessitate the establishment of a new species. On the other hand its presence supports the contention of Mahabalé and Deshpande that *Sahnianthus* is closely allied to the modern *Sonneratia*.

The other character of *S. dinectrianum* considered important was the presence of an epicalyx. Although the epicalyx was represented by a single lobe the author presumed the number of epicalyx lobes to be equal to that of the calyx lobes. Further its presence was justified by the author because it was not uncommon in the Lythraceae to which the flower *Sahnianthus* was believed to belong. However, in my view this single lobe which has been interpreted as an epicalyx by Shukla (1958) is nothing else but a bract similar to that already observed by Chitale (1950) in *Sahnianthus parijai*. The interpretation of a single lobe as an epicalyx also goes against the close sonneratiaceous alliance of *Sahnianthus* convincingly shown by Mahabalé and Deshpande (1957). Shukla obviously

being unaware of this work of Mahabalé and Deshpande, interpreted the single lobe as an epicalyx rather than a bract.

As regards the probable presence of corolla in *S. dinectrianum*, it is important to mention that the stamens in this species have been described as episepalous. The presence of corolla internal to androecium would be a morphological impossibility. Moreover, the solitary specimen of *S. dinectrianum* with the probable presence of a corolla can very well be compared with those specimens of *Sahnianthus parijai* having a doubtful corolla (CHITALEY, 1950, FIG. 2; SHUKLA, 1944, pp. 6-7, specimen No. 6, PHOTO 15; TEXT-FIG. 10). Although Shukla (1958) himself was doubtful about what he thought

might be the petals, he does appear to be inclined to believe that the corolla was present, for he has considered its presence as one of the reasons for instituting a new species.

Thus it is evident from the above discussion that the species *S. dinectrianum* Shukla is just another specimen of *S. parijai* showing the presence of a bract, nectaries and doubtful petals, and has no distinct specific entity.

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