

MIDDLE EOCENE SABALOID PALMS

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E. W. Berry reported three palm types from the middle Eocene clay deposits of western Kentucky and Tennessee. Two of these were pinnately compound types. The third being palmately compound. The palmate palm fossils in the Indiana Paleobotanical collection from the same sediments suggest that there are more than one genus and species of palmately compound palm leaf fossils. Berry's specimens of Sabalites grayanus, were identified primarily on the basis of gross features, leaflet distribution and venation. A detailed study of the palm material from the Indiana University collection is in progress and a thorough examination of fine features, particularly cuticular characteristics, as well as gross features has indicated that there are clearly two and perhaps three kinds of palmately compound palm leaf fossils rather than the one that Berry reported. The first group has been identified as a member of the genus Sabal indicating that it was a clearly defined group as early as the middle Eocene. These palms are large, costa-palmate leaf fragments similar to modern sabals such as S. texana. The second group is comprised of palmate leaf fragments of Sabalites grayanus but contains two subgroups. Those show differences in venation and the pattern of their stomatal apparatus. These findings are important because they show a greater diversity of palms in the flora of these middle Eocene sediments.

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