

AN EOCENE DISCOVER OF DENDROPANAX

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Leaves of Liquidambar, Sterculia, Oreopanax, and Artocarpus were the only lobed forms reported from the Wilcox of Tennessee by Berry (1916, 1924, 1930). In addition to these forms, a form similar to Dendropanax (formerly placed in the form genus Aralia by Berry on the basis of a single specimen from Hardy Mills, Arks.) of the Araliaceae has been discovered. This form has the following characteristics: (1) three to five lobes; (2) shallow sinuses between the lobes; (3) size similarity between the main lobes; (4) entire margin; (5) acuminate to ovate lobes; (6) decurrent, truncate, or cordate base; (7) comptodrome secondary venation; and (9) papillate lower epidermis with randomly oriented anisocytic stomata. This form differs from Liquidambar which lacks an entire leaf margin, Artocarpus which lacks palmate venation, and Sterculia which lacks anisocytic stomata (fossil forms of Sterculia have anomocytic stomata) and reticulate tertiary venation. The distinction between Oreopanax and Dendropanax, both members of the Araliaceae, would be impossible if only the external morphological features of the leaves could be utilized. However a separation of these genera can be made by a study of the leaf cuticle. The lobed forms of Oreopanax have paracytic stomata while members of the genus Dendropanax have anisocytic stomata. Since the fossil form also has anisocytic stomata in addition to the external features associated with Dendropanax an assignment to the genus Dendropanax was possible. The assignment of the fossil form to a living species of Dendropanax cannot be made due to evolution that has taken place within the genus. Although modern forms are similar to the fossil in external and stomatal features, most living species differ in the possession of sinuous upper epidermal cells and lack of papillae on the lower epidermis.

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