

CUTICULAR ANALYSIS OF THE EXTINCT GENUS DRYOPHYLLUM OF THE FAGACEAE

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The genus Dryophyllum is an abundant leaf form found in the Eocene clays of western Tennessee. Dryophyllum is the genus used to indicate relationship with the Fagaceae when no modern generic designation can be made. Two species of the seven proposed by E. W. Berry (1916, 1924, and 1930) are being studied in detail. An effort is being made in order to elucidate the true affinities of the possibly artificial genus Dryophyllum and to correctly speciate some members of this group. The fossils are found as leaf compressions and good cuticle and some mesophyll remains are still preserved. Gross morphological characters and leaf epidermal characters, evident in cuticular preparations, have been studied. The morphological characters proposed by Berry, especially venation, are consistent in discerning the two species studied from one another. However, many other gross morphological characters are quite similar between the two leaf types. Cuticular characters are also not totally partisan. Differences in and the lack of epidermal hairs seem to be a consistent speciating character. The stomatal apparatus has also been studied, but has yielded no conclusive discerning evidence. Currently, comparisons are being made with extant members of the Fagaceae.

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