

ANATOMY OF THE XYLEM OF *SCIADOPITYS*

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ABSTRACT

This investigation was undertaken with the intention of presenting a complete anatomical study of *Sciadopitys*, from which it is hoped new light may be thrown on its phylogenetic affinities. The anatomy is revealed as being quite simple, with but two notable exceptions: the absence of a resinous system is paralleled only in five species of *Abies*, and the absence of end-wall pitting in ray cells is not known in other conifers. The presence of resin canals and resin cells in tissues of the cone axis other than xylem suggests interesting corroboration of Jeffrey's theory concerning the evolution of these organs. Extremely primitive manifestations are found together with others equally advanced. Taking a phylogenetic view of the sum of anatomical characters, it is assumed that *Sciadopitys* is not closely related to any known conifers. Its evolution apparently involves somewhat remotely both the Abietineae and Taxodineae, but not the heterogeneous Cupressineae.