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The Assessment of Phylogenetic Relationships in Fabaceae Family with Reference to Anatomical Characterization of Some Genera

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Abstract: *Phylogeny is the study of relationships among different groups of organisms and their evolutionary development. Phylogeny attempts to trace the evolutionary history of all life on the planet. It is based on the phylogenetic hypothesis that all living organisms share a common ancestry. In this study relationships are determined by anatomical similarities. Anatomy is tightly correlated, as cell and tissue structure has changed with respect to the evolution as novel functional mechanisms. So, it can provide valuable characteristics in phylogenetic analyses, but these are less frequently acquired today than in the past. Therefore, anatomical features used directly to generate a Phylogeny tree or cladistics or a cladogram. Finally, it is concluded that Anatomical characters of vegetative parts of flowering plants have been successfully employed to solve taxonomic problems and for the elucidation of phylogenetic relationships.*

Keywords: Anatomy, Cladogram, Fabaceae, Phylogeny, Tissue

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