Pollen Morphology of the Tribe Loteae (Leguminosae) by Light and Scanning Electron Microscopy*

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Pollen morphology was shown to refute some taxonomic decisions related to the classification of Old World Loteae and the genus Lotus. The analysis of data by numerical taxonomic techniques showed a clear taxonomic separation of many higher taxa based on the characters scored. Subgenera Syrmatium, Sympeteria and Acmispon were determined as being palynologically closely related, while subgenus Hosackia, palynologically is separate. Old World Lotus was determined to be stenopalynous while new world Lotus was eurypalynous. The various taxonomic treatments were assessed and relationships of Old World Loteae seem to be more clearly defined than the relationships between North American taxa. This is supported by the results of the palynological study. Further taxonomical and biosystematical studies are required to clarify the taxonomy of Tribe Loteae, the genus Lotus sensu lato in particular. Some taxa considered as Lotus sensu stricto may indeed require reclassification into other taxonomic groups in the Leguminosae.

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