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Pollen Flora of Pakistan - VIII Leguminosae (Subfamily: Papilionoideae)

of

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Abstract: The pollen morphology of 157 species, representing 37 genera, of the subfamily Papilionoideae from Pakistan have been examined using light and scanning electron microscopy. Papilionoideae is a eurypalynous subfamily. The pollen grains are generally free, radially symmetrical, isopolar, mostly tricolporate, rarely colpate or porate. The shape is commonly prolate to sub-prolate, or prolate-spheroidal, less commonly to oblate-spheroidal or sub-oblate, often perprolate. The ora is commonly la-longate or circular, rarely lolongate. Colpal membrane is psilate to sub-psilate or granulated, often scabrate. The sexine is thicker than or as thick as the nexine. A reticulate tectum type is the most common. However, other tectum types i.e., rugulate, foveolate, striate and areolate tectum, are also found in a considerable number of taxa. The delimitation of genera on the basis of pollen characteristics is difficult. However, shape, apertural types and surface ornamentation were found to be more significant pollen characters. On the basis of these characters 10 distinct pollen types were recognized, namely, *Alysicarpus monilifer*-type, *Astragalus affghanus* - type, *Colutea armata* - type, *Dumasia villosa* - type, *Ebenus stellata* - type, *Onobrychis stewartii* - type, *Rhychosia minima* - type, *Securigera securidaca* - type, *Taverniera lappacea* - type and *Vigna trilobata* - type. These palynological findings correlate quite well with tribal classification, and most of the tribes were easily recognized palynologically.

Key Words: Pollen morphology, Leguminosae: Papilionoideae, Pakistan.

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