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Identification of pollen grains, for the taxonomic purposes and documentation is an important aspect of pollen studies. It is also a useful research tool for reconstruction of past flora and their evolutionary relationships. Pollen grains possess various morphological features such as, exine characters - variation in the form and sculpture pattern, size, shape and position of the aperture, which can be used in palynological studies.

The main objective of this study was to investigate the morphological features of pollen grains of common genera of the Family Fabaceae (Leguminosae) in Sri Lanka representing the 3 sub families.

Fresh floral buds were taken from 13 different genera belonging to the Family Fabaceae. Pollen samples were acetolysed by treating with sulphuric acid : acetic anhydride (1:9) reagent. Ten pollen grains taken from each of 3 floral buds of different genera were examined for their morphological features, under a light microscope (12x100). Further, microslides and microphotographs of the pollen grains of 15 different genera were documented. Polar length and equatorial diameter were measured and variance between the genera were compared using Scheffe's test ($p \leq 0.05$).

Polyads were observed in genera of Sub-family Mimosoideae. Circular shaped symmetrically arranged polyads were found in genera *Mimosa* (4 grains) *Samanea* (32 grains) and *Acacia* (16 grains) while in *Albizia* (8 grains) ovate shaped polyads were recorded. Tricolpate monads were found in the genus *Leucaena*. Exines were smooth in the genera of Mimosoideae. Tricolpate and tricolporate types of monads were observed in Sub-families Papilionoideae and Caesalpinoideae. Triporate type was found only in the genus *Vigna*. Exines were rough in many genera except in *Gliricidia* and *Tephrosia*. Spines or outgrowths were not observed in any of them.

The comparison of the variance of mean polar length between genera revealed that most of them were significantly different from each other while the mean equatorial diameter was significantly different only between 9% of genera.

Based on the findings of this study, an inventory of the palynology of the family was prepared.
