

Pollen morphological studies of selected  
cultivated and wild species of Poaceae

by

Munasinghe Lekam Arachchige Mayuri Swarnamale Munasinghe

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# Pollen morphological studies of selected cultivated and wild species of Poaceae

M. L. A. M. S. Munasinghe

## Abstract

LM and SEM studies of pollen grains from 26 species of Poaceae growing in the vegetation of Sri Lanka show variation in morphological characters (pollen size, pore characters and exine patterns). All are 1-porate grains and size variations are very large (i.e. 25-135  $\mu\text{m}$  diameter). Suboblate, oblate and spheroidal shapes were found. Pore size variation (2-7  $\mu\text{m}$ ), annulus diameter (5-23  $\mu\text{m}$ ) and sexine ornaments are significant between cultivated and wild species. Thirteen (13) pollen types and eleven (11) sexine patterns were found. Scabrate, granulate and verrucate are the most common sexine ornaments. The most diversified sexine patterns occur in species of the Oryzeae tribe. *O. nivara* and *O. granulata* are the possible progenitors for *Oryza sativa*. Morphology of pollen grains among the *Eleusine coracana*, *Sporobolus fertilis* and *Eleusine indica* are similar. The Paniceae tribe has the highest number of pollen types. *Panicum miliaceum* and *Setaria italica* pollen can clearly be distinguished in size variations. Pollen key was constructed.