MICROMORPHOLOGICAL STUDIES OF *LALLEMANTIA* L. (LAMIACEAE) SPECIES GROWING IN TURKEY

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Micromorphological features related to the pollen, nutlets and trichomes of *Lallemantia* species growing in Turkey were investigated mainly by scanning electron microscopy. *Lallemantia* pollen shares morphological features with subfamily Nepetoideae (tribe Mentheae, subtribe Nepetinae) pollen. However, the fine details are characteristic enough to differentiate the pollen between species. The exine is microreticulate in *L. peltata* and *L. iberica*, and reticulate-foveolate in *L. canescens*. Similarly, nutlet features are similar in general, but there are striking differences in surface details between species. Nutlets are black and oblong-triangular with V-shaped areoles. The surface is verrucate in *L. iberica* and *L. canescens*, and verrucate-rugulate in *L. peltata*. The warts are regular and separated in *L. peltata*, irregular and separated in *L. iberica*, and irregular and separated or sometimes associated in 2 to 4 groups in *L. canescens*. Two types of trichome, capitate and acicular, are present on the stems, leaves, calyx and bracts. The results suggest that although the distribution and micromorphology of trichomes has no taxonomic value, some pollen and nutlet micromorphological characters have the potential to serve as phylogenetic markers at the species level in the genus *Lallemantia*. However, pollen characteristics show no correlation with the nutlet characteristics.

Key words: Lamiaceae, *Lallemantia*, Mentheae, micromorphology, pollen, nutlet, trichomes, Nepetinae, taxonomy.