

## The pollen atlas of some important plant species of Turkey

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**Abstract:** The plant diversity of Turkey is quite large with approximately 12,000 different plant taxa. In this study, a total of 88 taxa were selected from plant species that differ in pollen morphology from this rich flora, and their microscopic photographs were taken to reveal morphological characteristics of pollen. The aim of the study is to make a pollen atlas of these 88 taxa of Turkey. 16 gymnosperms and 72 angiosperms (44 arboreal and 28 non-arboreal) were studied under the light microscope. The Gymnospermae taxa studied are *Abies nordmanniana* subsp. *nordmanniana*, *Abies nordmanniana* subsp. *bornmulleriana*, *Cedrus libani*, *Picea orientalis*, *Pinus nigra* subsp. *pallasiana*, *Pinus brutia*, *Pinus halepensis*, *Pinus pinea*, *Pinus sylvestris*, *Juniperus oxycedrus*, *Juniperus excelsa*, *Juniperus communis*, *Juniperus foetidissima*, *Juniperus drupacea*, *Cupressus sempervirens* and *Taxus baccata*. The Angiospermae taxa are (arboreal ones) *Carpinus betulus*, *Corylus avellana*, *Betula pubescens*, *Betula medwediewii*, *Alnus glutinosa*, *Castanea sativa*, *Fagus orientalis*, *Quercus ilex*, *Quercus coccifera*, *Quercus frainetto*, *Quercus robur*, *Quercus petraea*, *Acer monspessulanum*, *Acer campestre*, *Acer sempervirens*, *Acer tataricum*, *Acer cappadocicum*, *Acer trautvetteri*, *Acer platanoides*, *Acer hyrcanum*, *Hedera helix*, *Buxus sempervirens*, *Laurus nobilis*, *Fraxinus excelsior*, *Fraxinus ornus*, *Ligustrum vulgare*, *Olea europa*, *Osmanthus* sp., *Phillyrea latifolia*, *Juglans regia*, *Platanus* sp., *Prunus spinosa*, *Crataegus monogyna*, *Laurocerasus officinalis*, *Ulmus minor*, *Ulmus glabra*, *Celtis australis*, *Erica arborea*, *Arbutus unedo*, *Rhododendron ponticum*, *Populus alba*, *Populus tremula*, *Populus euphratica* and *Salix* sp. and (non-arboreal ones) are *Carlina vulgaris*, *Cirsium* sp., *Cichorium intybus*, *Senecio* sp., *Pulicaria dysenterica*, *Carduus nutans*, *Tanacetum balsamita*, *Centaurea* sp., *Galium palustre*, *Rubia peregrina*, *Echium plantagineum*, *Symphytum tuberosum*, *Trachystemon orientalis*, *Anchusa* sp., *Epimedium pubigerum*, *Campanula persicifolia*, *Dianthus* sp., *Mesembryanthemum* sp., *Stellaria* sp., *Chenopodium* sp., *Calystegia sepium*, *Convolvulus arvensis*, *Potentilla reptans*, *Geranium asphodeloides*, *Geranium dissectum*, *Poa pratensis*, *Zea mays* and *Malva sylvestris* were taken in the light microscope. The features of the pollen studied are type of apertures, shape and numbers of colpus, porus and colporus, and surface characteristics (ornamentation). These features are showed in the microphotographs for each taxon.

**Keywords:** Pollen atlas, Pollen morphology, Angiospermae, Gymnospermae