

Gramineae = Poaceae

The true grasses are monocotyledonous plants (Class Liliopsida) in the Family Poaceae, also known as Gramineae. There are about 600 genera and between 9,000-10,000 species of grasses (Kew Index of World Grass Species). It is estimated that grasslands comprise 20% of the vegetation cover of the earth. This family is the most important of all plant families to human economies, including lawn and forage grasses, the staple food grains grown around the world, and bamboo, widely used for construction throughout Asia.



Herbs, or shrubs, or 'arborescent', or lianas. Annual, or biennial, or perennial; with a basal aggregation of leaves, or with neither basal nor terminal aggregations of leaves.

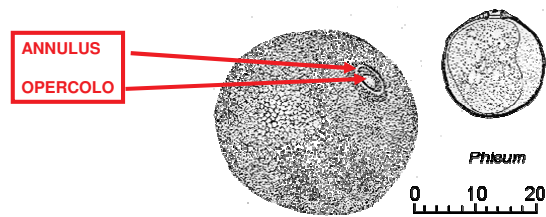
Young stems breaking easily at the nodes, or not breaking easily at the nodes (in bamboos). (0.003–)0.01–30(–40) m high; when perennial, rhizomatous, or tuberous (rarely). Leaves evergreen, or deciduous; minute to large; alternate; nearly always initially distichous; flat, or folded, or rolled; 'herbaceous' (usually), or leathery, or membranous (rarely); sessile, or petiolate; sheathing.

Plants hermaphrodite, or monoecious, or andromonoecious, or gynomonoecious, or dioecious, or androdioecious, or gynodioecious, or polygamomonoecious; viviparous or not viviparous (occasionally),. pollination anemophilous.

Flowers aggregated in 'inflorescences' (these consisting of at least one 'spikelet'); The terminal inflorescence unit spikelet cymose (e.g. Panicoideae), or racemose (e.g. Pooideae).

Inflorescences terminal, or axillary; with 1–50 florets and vestiges grouped into characteristic 'spikelets' in association with specialised bracts termed 'glumes', 'lemmas' and 'paleas', the spikelets variously gathered into simple or compound panicles, racemes, spikes, heads or fascicles

Pollen grains aperturate; 1 aperturate; ulcerate. The ulcus operculate; with an annulus.



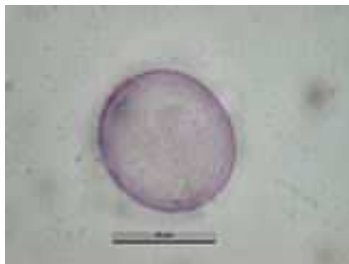
Size: 22 - >50 μm

Shape: spheroidal to ovoidal, monoporate with annulus, covered by **operculum**

Exine is thin, granulate or scabrate, sculpting finely reticulated, intine thickens under pores

Bloom: some in spring other up to early summer

Allergenicity: severely allergenic



OLEACEAE

Oleaceae, the olive family, is a plant family containing 24 extant genera (and one extinct) of woody plants, including shrubs, trees and vines. It is characterised by opposite leaves that may be simple or pinnately-compound. The calyx and corolla are four-lobed.

Many members of the family are economically important. The olive, *Olea europaea*, is extremely important for its fruit and the oil extracted from it.

The ashes, genus *Fraxinus*, are valued for their tough wood, and forsythia, lilacs, jasmines, privets, and fringetrees are all valued as landscaping plants.

Habit and leaf form. Trees and shrubs, or lianas (sometimes) with Leaves deciduous (often), or evergreen; opposite (nearly always), or alternate; in *Jasminum*, spiral; petiolate; non-sheathing; simple, or compound; when compound ternate, or pinnate.

Lamina margins entire, or serrate, or dentate. Vegetative buds scaly.

Plants hermaphrodite, flowers solitary, or aggregated in 'inflorescences'. The terminal inflorescence unit cymose. Inflorescences racemes, panicles or fascicles. Flowers often fragrant; regular; usually 2–6 merous; tricyclic, or tetracyclic

Fruit fleshy, or non-fleshy; dehiscent, or indehiscent, or a schizocarp: a capsule, or a berry, or a drupe or a samaroid. Fruit 1–4 seeded. Endosperm oily.

Fraxinus excelsior

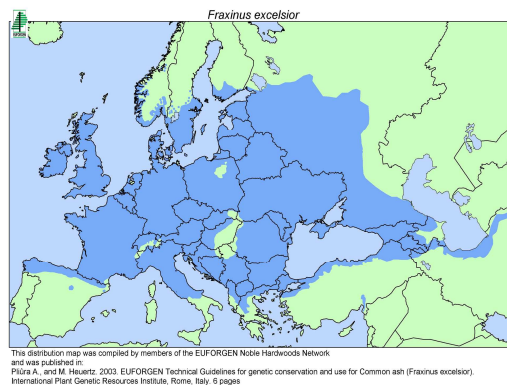
Deciduous tree, high up to 40 m. In deciduous woods in wet zone.

Opposite leaves, imparipinnate without stipules; each leaf ovate-lanceolate, acuminate.

Little flowers 1 or 2 sexual. Stamen with red anthers. Fruit is a samara.

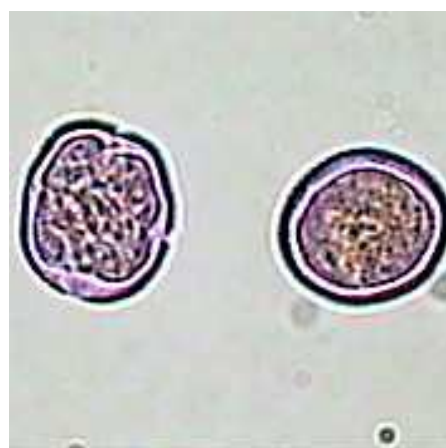
It blooms since the end of February to March

Entomophylous and anemophylous

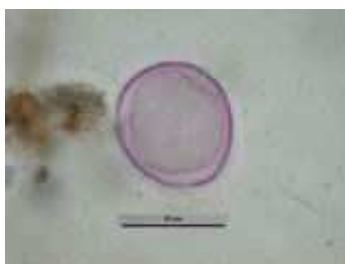
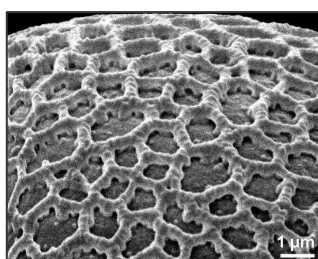


Fraxinus ornus

Deciduous tree, high up to 20 m. In deciduous oak woods in mediterranean zone.
Opposite leaves, imparipinnate without stipules; each leaf ovate-lanceolate, acuminate.
White flowers in panicle. Fruit is a samara.
It blooms since April to May, Entomophylous and anemophylous



Pollen 3-(4) zonocolpate, isopolar, suboblate, diameter of 18-27 μm .
Colpi long and narrow, inrolled except to equator. Exine reticulate, lumina uniform in all surface, from mesocolpium to edge of colpus.
Intine thin creating onci under the pori.
Pollen: grains are small- medium 18-24 μm
Three colpi fusiform (spindle-shaped) with acuminate apex.
Reticulum decreases near colpi: in lumina's width and in high of muri



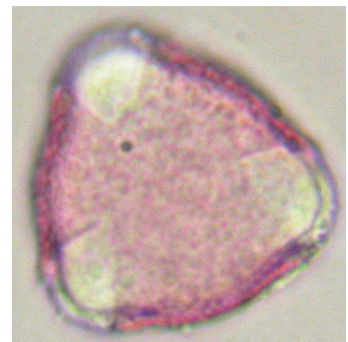
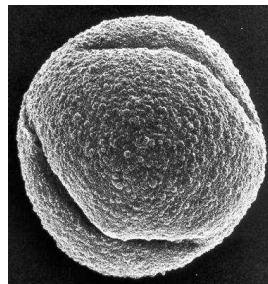
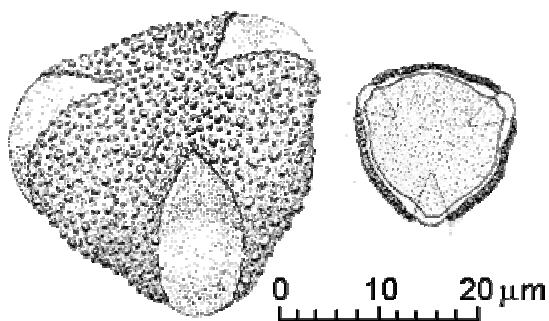
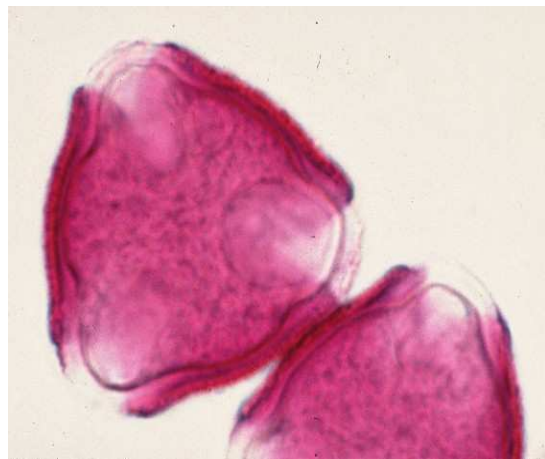
F. excelsior 4 colpi



QUERCUS

Pollen: trizono colpate, isopolar, oblate or oblate spheroidal; Small-medium pollen :20-30µm Colpi with protruding membrane. Polar area on average wide
In polar view subtriangular with large **sulci** with acute apex, more or less protruding
Sexine consists of scabrae and **verrucae**

Quercus





Quercus frainetto

