

QUERCUS

Vessels medium sized (100-200 μ) to large (more than 200 μ) in diffuse-porous spp. typically solitary, but with some multiples in late wood of "white oak"; with well-marked oblique or dendritic pattern (fig. 313.L); mostly 2-9 per sq. mm. in diffuse-porous spp. Ring-porous in temperate spp. Perforation plates sometimes scalariform in evergreen spp.; typically simple in most spp, but occasional vestigial scalariform plates may occur. Intervascular pitting very rare owing to solitary vessels, probably usually alternate. Pits to ray and wood parenchyma typically large, elongated and simple, with long axes usually vertical. Mean member length 0.4-0.8 mm.

Parenchyma apotracheal, typically as scattered cells or regular uniseriate bands, the bands more regular and commonly 2 cells wide in some spp. e.g. *Q. lineata*. Strands usually of 8 cells.

Rays. In most spp. of *Quercus*, rays of 2 distinct sizes, uniseriate or many cells wide. In rare spp. rays may all be very fine, and in other spp. e.g. *Q. semecarpifolia* the "large" rays may be only aggregations of small ones; the large rays commonly 20 or more cells wide, and up to 80 cells in some specimens of *Q. ilex*, and very high (up to 10 cm.). In the woods with large rays there is usually abundant evidence of the aggregation of small rays or the dissection of large ones, and a complete series of types from aggregate to "compound" can be found within the genus (see diag. 313 A and E, *Lithocarpus*). In *Quercus* rays are commonly "aggregate" in evergreen spp. only, occasionally "aggregate" in other species of sub-genus *Erythrobalanus*, and "compound" in sub-genus *Lencobalanus*. Uniseriates moderately to very numerous, composed wholly of procumbent cells or of procumbent and square cells. Usually 8-16 rays per mm. Homogeneous (Kribs's Types I and III). Large rays completely lacking from first formed rings, except near leaf traces.

Fibres with rather few pits, which tend to be more abundant on radial than on tangential walls, pits having very small to distinct borders. Walls moderately thick to very thick. Mean length 0.75-1.75 mm. or perhaps 0.9-1.65 mm.

Quercus calliprinos Webb

Diffuse-porous. Pores in dendritic arrangement; solitary; pores medium sized, maximum tangential diameter 120 μ . Vessels with simple perforations; pits alternate, medium sized. Wood parenchyma diffuse, in irregular uniseriate bands, reticulate, crystaliferous. Rays homogeneous; 2 sized, narrow rays 1 to 2 seriate and less than 25 cells high, broad rays 25 or more cells wide and up to 1 cm. in height; ray-vessel pitting coarse, pit outline elongated. Fibres with distinctly bordered pits; cell walls thick. Vasicentric tracheids in association with vessels.
(Ilanoth Specimen No. 17)

Quercus infectoria Oliv.

Same description as for Q. calliprinos except semi-ring-porous; pores large, maximum tangential diameter 240 μ .
(Ilanoth Specimen No. 14)

Quercus ithaburensis Decne.

Same description as for Q. calliprinos except semi-ring-porous; pores large, maximum tangential diameter 215 μ .
(Ilanoth Specimen No. 16)