

Robinia zirkelli (black locust)

Family: Fabaceae

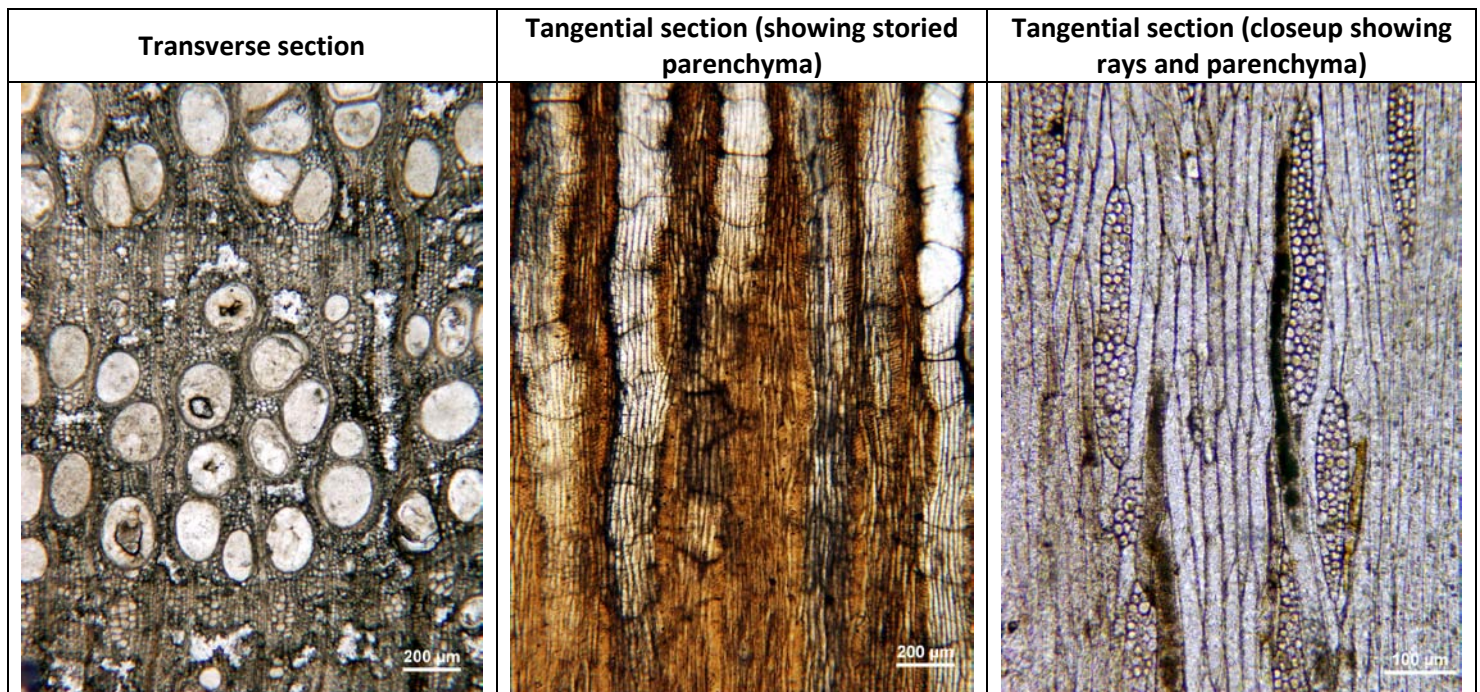
Synonyms: *Robinioxylon breweri* (Prakash, Barghoorn & Scott) Müller-Stoll & Mädel 1967

Naming reference: Matten, L.C., R.A. Gastaldo, & M.R. Lee. 1977. Fossil *Robinia* from the western United States: Review of Palaeobotany and Palynology, v. 24, p. 195-208.

Other references: Müller-Stoll, W.R. & E. Mädel. 1967. Die fossilen Leguminosen-Hölzer. Eine Revision der mit Leguminosen verglichenen fossilen Hölzer und Beschreibung älterer und neuer Arten. Palaeontographica 119B: 95-174.

Prakash, U. 1968. Miocene fossil woods from the Columbia Basalts of central Washington, III. Palaeontographica Bd. 122, 183-200.

Wheeler, E.A. & T.A. Dillhoff. 2009. The Middle Miocene wood flora of Vantage, Washington, USA. IAWA Journal, Supplement 7. 101p.



Photos courtesy Dr. E.A. Wheeler

Diagnostic features: Growth rings present, ring porous vessel arrangement. Earlywood zone 3-4 cells wide, vessels circular in outline. Abundant tyloses in earlywood vessels. Latewood vessels mostly in clusters, intermixed with axial parenchyma. Perforation plates simple, narrowest latewood vessel elements have spiral thickenings. Rays 1-5 seriate, mostly 3-4, homocellular. Axial parenchyma paratracheal and mixed with latewood vessel clusters – fusiform cells and strands with 2-4 chambers, storied arrangement.

Discussion: This is another member of the legume family, and is similar in appearance to *Gleditsioxylon*. In cross section, *R. zirkelli* has larger diameter earlywood vessels and abundant tyloses (although tyloses were not preserved in all samples studied). In tangential section, the presence of storied parenchyma helps to distinguish it from *Gleditsioxylon*.

Robinia type wood is relatively rare in the Columbia River Basalt wood localities. Beck reports it as being most common in the Vantage area with some reports from Yakima Canyon. Modern *Robinia* is only found in North America – mostly in the eastern part, although there are some species native as far west as Colorado and New Mexico.