

***Gleditsioxylon columbianum* (honey locust, Kentucky coffeetree)**

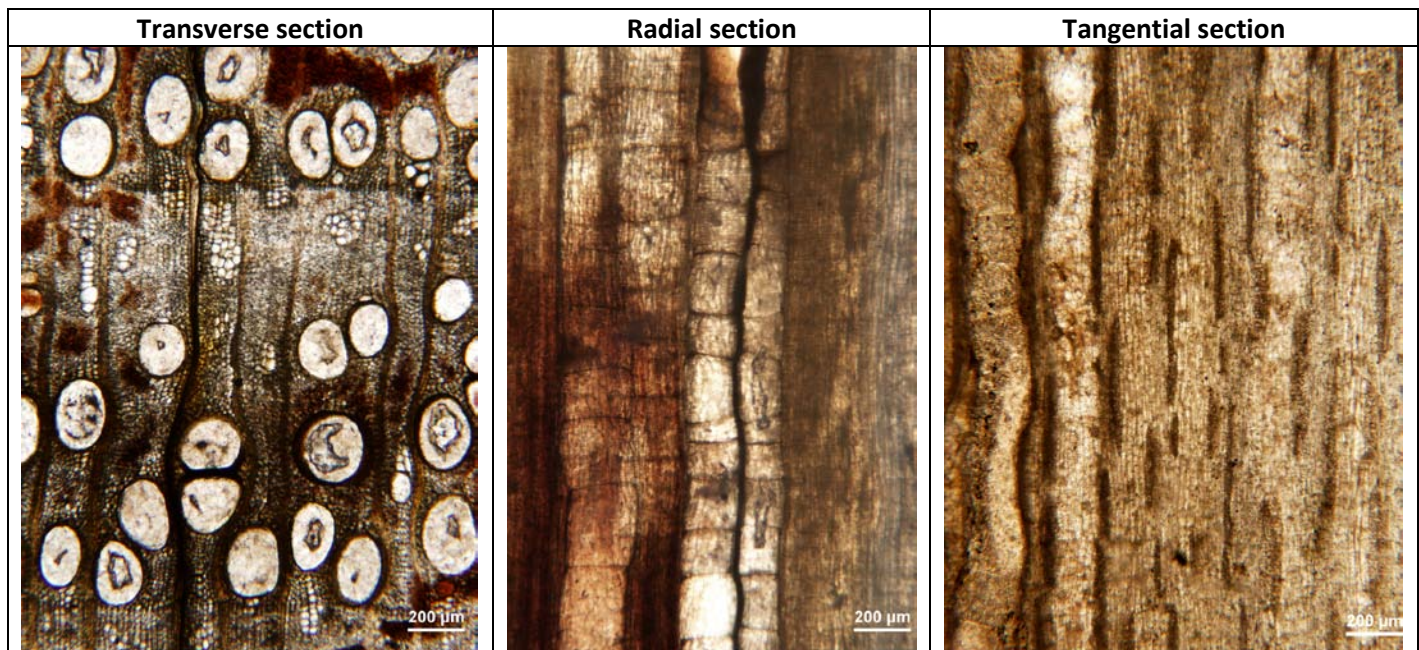
Family: Fabaceae

Synonym: *Gleditsia columbiana* Prakash & Barghoorn

Naming reference: 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.

Other references: Prakash, U. & E.S. Barghoorn. 1961. Miocene fossil woods from the Columbia basalts of central Washington, I. *Journal of the Arnold Arboretum* XLII, 165-199

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 ring boundaries distinct, ring porous vessel distribution. Broad earlywood zone, mostly solitary vessels with occasional radial multiples. Latewood vessels small, mostly in clusters. Tyloses lacking, but some vessels may contain gum-like deposits. Vessel elements have simple perforation plates, and helical thickenings are present in some of the narrowest latewood vessels. Rays 1-5 seriate (mostly 3-5), homocellular. Axial parenchyma vasicentric, aliform to lozenge, confluent most common in latewood.

Discussion: Prakash & Barghoorn originally assigned this wood to the genus *Gleditsia*, but when Müller-Stoll & Mädel reexamined it later in the 1960's they concluded that it also showed features of the closely related genus *Gymnocladus*. Because of this, they assigned the Vantage wood to the form genus *Gleditsioxylon* to show that the wood did not precisely fit either of the modern genera.

This wood is similar to another taxon at Vantage, *Robinia zirkelli*. *Gleditsioxylon* has a wider earlywood zone and lacks the abundant thin-walled tyloses which are found in *Robinia*. Occasionally this wood is also confused with the elms, especially *Ulmus baileyana*.

Beck (1945) lists *Gleditsia* type wood as common from Vantage, rare from Squaw Creek, and absent from other localities. Subsequent to Beck's work, this author has also recognized the wood type from the Horse Heaven Hills of southern Washington and from the west end of Yakima Ridge. Modern *Gleditsia* is relatively widespread with species native to eastern North America, northern South America, eastern Asia and western Asia. *Gymnocladus* has one species native to eastern North America, as well as several east Asian species.