Hamamelis virginiana L.

Witch Hazel Bark

Cortex Hamamelidis

Hamamelidaceae

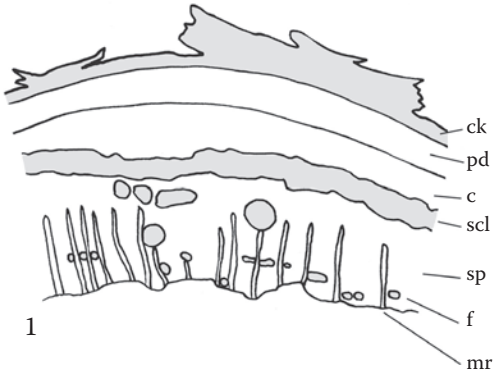
Witch hazel bark has been used for centuries as an astringent tonifer. It has been a common ingredient in cosmetics and facial washes and has not been associated with adulterations. Leaves as well as bark have been traded and are readily distiguishable from each other. When viewed microscopically, faint tangential striations in the bark can be observed (Youngken 1930).

Transverse section: Cork thick, composed of dark red-brown, tangentially elongated, narrow cells; phelloderm conspicuous, not sclerified, consisting of tangentially elongated cells with collenchyma-like wall thickenings; cortex parenchymatous, cells roundish or slightly tangentially elongated, tissue interrupted by a more or less continuous sclerenchymatous ring consisting mainly of sclereids; secondary phloem of roundish or irregularly shaped parenchyma cells, with groups of sclereids in the outer region and tangentially elongated groups of fibers in the inner region; medullary rays one cell broad, cells thin-walled; parenchyma and sclereids throughout the bark are often filled with reddish-brown tannins; calcium oxalate prisms up to 40 µm in length are scattered throughout the cortex and secondary phloem, forming sheaths around fiber bundles.

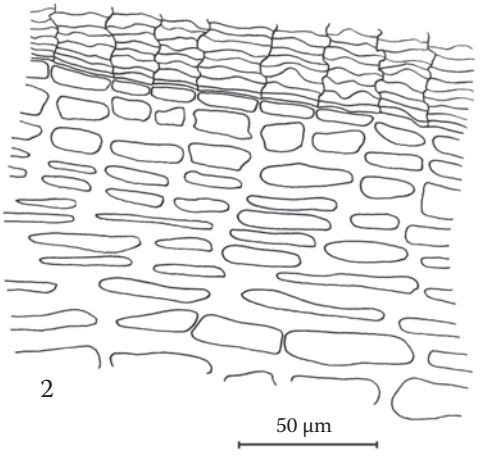
Longitudinal section: Fiber bundles surrounded by calcium oxalate prism sheaths.

Starch: Rare in parenchyma; granules simple, small, spherical.

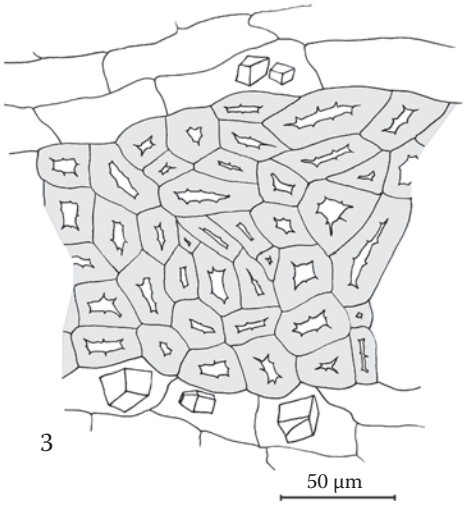
Powder: Fragments of colorless parenchyma (some with reddish-brown contents); fibers with calcium oxalate prism sheaths; sclereids abundant; cork; starch rare.



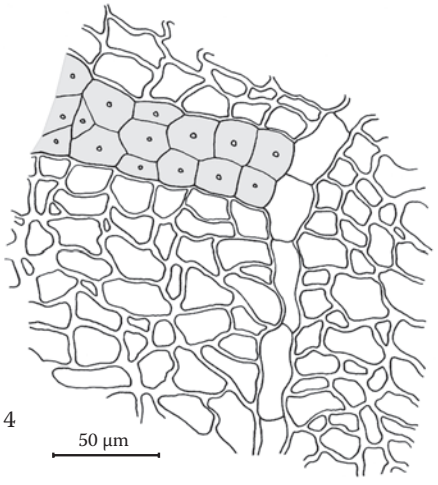
1



2



3



4