

Ulmus rubra Muhl.

Standardized Common Name: Slippery Elm

Family: Ulmaceae

Taxonomy: *Ulmus* includes about 45 species of trees, widely distributed in North and Central America and Eurasia. *Ulmus rubra* is native to North America. It is genetically and morphologically distinct from the other New World species, but hybridizes with *U. pumila* L., a cultivated and probably naturalized Asian species. A commonly encountered synonym for *U. rubra* is *U. flava* Michx.

Description: Tree to 35 m high, with spreading branches and open flat crown; trunk to 75 (rarely 100) cm in diameter, sometimes dividing near base; bark dark brown to reddish, longitudinally furrowed; young twigs pubescent; buds red-scaled, pubescent with reddish hairs. Leaves alternate, ovate to elliptical or obovate, 7–16(–20) cm long; base conspicuously oblique; apex acute to acuminate; margins serrate in basal portions, biserrate in apical portions, more or less ciliate; upper surface pubescent with short stiff hairs, rough-textured; lower surface softly pubescent. Flowers small, inconspicuous, in dense clusters <2.5 cm long; calyx 5–9-lobed, pubescent with reddish hairs; corolla absent; anthers 5–9, reddish; styles 2-lobed, pinkish. Fruit a winged achene (samara) with a papery, broadly elliptical to sub-orbicular wing, 12–18 mm long.

Parts in Commerce: Older inner bark, with outer corky layers removed

Identification:

- Flattened pieces, often 50–100 cm long
- 1–4 mm thick
- Outer surface reddish-yellow, longitudinally striated, with occasional reddish or dark brown patches consisting of remains of cork
- Inner surface yellow to yellowish-white, longitudinally striated
- Fracture tough and fibrous
- Odor characteristic, resembling fenugreek
- Taste mucilaginous
- Produces mucilage when moistened

In cross-section (transverse rather than vertical), narrow parenchyma rays alternate with broader phloem rays that contain alternating bands of fibers and mucilage cells, giving a checkered appearance. If a thin cross-section of the bark is moistened for a few minutes, the large, clear mucilage-containing cells swell and may be observable using a dissecting microscope at high magnification. Powdered

slippery elm bark swells and produces mucilage (in much the same way as does *Psyllium*).

References:

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