4. **Morus L.** (mulberry)

Plants trees to 20 m tall (shrubs elsewhere), unarmed, with milky sap. Bark shallowly grooved longitudinally, light to dark brown, sometimes yellowish- to reddish-tinged. Twigs slender to stout, not or only slightly zigzag, reddishbrown to greenish brown, usually with circular to elongate, light or dark brown lenticels, minutely hairy or nearly glabrous, the winter buds 3–7 mm long, ovoid, bluntly to sharply pointed at the tip, with several overlapping scales, glabrous or hairy, especially along the margins, sometimes shiny. Leaves alternate, the petiole 2–5 cm long, minutely hairy or nearly glabrous. Leaf blades ovate, unlobed or shallowly to deeply (2)3–5-lobed and with 3 or 5 main veins from the base, the margins otherwise toothed, the upper surface bright green, roughened or smooth and glabrous to sparsely hairy, the undersurface lighter green, sparsely to densely pubescent with short, nonwoolly hairs. Inflorescences entirely staminate or pistillate, dense catkins, the calyces, deeply 4-lobed (occasionally 5-lobed in *M. alba*), 1–2 mm long, the lobes ovate to broadly elliptic-ovate and somewhat concave, hairy, often reddish-tinged. Staminate inflorescences solitary in the leaf axils. Pistillate inflorescences solitary in the leaf axils (but sometimes appearing clustered on short shoots), the style 2-branched, the stigmas linear. Fruits consisting of crowded, ovoid to short-cylindric clusters of ovoid achenes, these covered by the fleshy, white, red, purple, or black calyces, each aggregate shed as a unit. About 10 species, North America, Europe, Asia.

The mulberry fruit superficially resembles a blackberry, but its structure is totally different. The mulberry consists of tightly clustered fruits of many adjacent flowers, and the fruitlets are not true drupes; the juicy part develops from the calyx and the true fruit is an achene, the dry, so-called stone inside it. In contrast, a blackberry consists of numerous ripened ovaries on an expanded receptacle within a single flower and the individual fruitlets are true drupes.

Mulberries are hardy, fast-growing small trees that produce sweet fruit in very high yield from a young age. The fruit is attractive to many species of birds and mammals. Both of our species are eaten by humans, but they are considered much inferior in flavor to those of the black mulberry (*Morus nigra* L.), an Old World species. Mulberries can become aggressive and weedy in gardens.

Quickly growingsaplings or root sprouts sometimes produce relatively large leaves that are deeply and irregularly palmately 5-lobed, with the relatively slender lobes bluntly and irregularly lobed, scalloped, and/or bluntly toothed. These sometimes are mistaken by gardeners for ornamental figs (but *Ficus* L. species generally are not winter-hardy in Missouri) or young maples (but *Acer* species have opposite leaves). Lobed leaves are seen relatively commonly in *M. alba*, but are far less frequently encountered in *M. rubra*. 