CONVOLVULACEAE (Morning Glory Family)

Plants annual or perennial herbs (shrubs and trees elsewhere), often climbing or scrambling but lacking tendrils, sometimes parasitic (in Cuscuta). Stems often twining, usually branched, sometimes with milky sap. Leaves alternate, well developed (reduced to small scales in Cuscuta). Stipules absent. Leaf blades simple (pinnately dissected and appearing compound in Ipomoea quamoclit), entire or lobed, the main venation pattern often palmate. Inflorescences axillary, sessile, of stalked clusters, sometimes appearing as small panicles, sometimes solitary flowers. Flowers actinomorphic, hypogynous, perfect, usually subtended by bracts. Calyces deeply (3–)5(6)-lobed or of (4)5 free sepals, often at fruiting. Corollas shallowly (3–)5(6)-lobed (deeply lobed in Dichondra), pleated and spirally twisted in bud (except in Cuscuta). Stamens (3–)5(6), alternating with the corolla lobes, the filaments attached in the corolla tube (each subtended by a small scale in Cuscuta), the anthers exerted or more commonly not exerted, often linear, attached toward their midpoints (or at least above the base), yellow. Pistil 1 per flower, of 2 fused carpels. Ovary superior, 2(3)-locular, sometimes incompletely so or appearing 4-locular, with usually 2 ovules per locule, the placentation axile or appearing more or less basal. Styles 1 or 2(3), if solitary then sometimes 2-lobed, sometimes persistent at fruiting, the stigmas 1 or 2, disk-shaped or capitate to linear, sometimes shallowly lobed. Fruits capsules, ovoid to globose or depressed-globose (2-lobed in Dichondra), variously dehiscent. Seeds 1–4 per locule. Fifty to 56 genera, about 1,600–2,000 species, nearly worldwide, most diverse in tropical and subtropical regions.

Two genera that occur in Missouri sometimes have been treated as separate families, but neither appear to warrant recognition (Wilson, 1960; Cronquist 1981, 1991; Stefanović et al., 2002). The genus Cuscuta is often segregated into the Cuscutaceae, but the group seems clearly derived from ancestors within the Convolvulaceae, and the differences between the genus and others in the family can mostly be attributed to structural modifications accompanying the shift to a parasitic habit. Dichondra, which is sometimes treated in the Dichordraceae, also appears to represent a mere specialization within the Convolvulaceae. Except for Cuscuta, an interesting feature shared by all Missouri genera of Convolvulaceae is the often deeply 2-lobed cotyledons of these seedlings.