

## **CORNACEAE** (Dogwood Family)

Contributed by David J. Bogler

Plants trees or shrubs (rhizomatous herbs elsewhere), sometimes monoecious or dioecious, variously pubescent, often with branched hairs. Leaves opposite or alternate, simple, usually petiolate, lacking stipules, the blades with the margins entire or less commonly minutely wavy or with a few coarse teeth, the venation pinnate, the secondary veins often arching. Inflorescences terminal on the branches or axillary (in Nyssa), short, broad panicles, compound umbels, short racemes, dense or nearly umbellate clusters, heads, or of solitary flowers. Flowers perfect or imperfect, small, actinomorphic, epigynous. Calyxes actinomorphic, fused to the ovary, the tube not or only slightly extending past the ovary, the free portion with 4 or 5 minute, toothlike lobes or reduced to a minute rim. Petals 4–10, free (occasionally fused toward the base elsewhere), often relatively small. Stamens 4 or 5, in staminate flowers often 8–10, usually alternate with the petals, the filaments free, the anthers attached at the base or near the midpoint. Staminodes absent (rarely a few stamens nonfunctional in staminate flowers). Pistil 1 per flower (highly reduced and nonfunctional in staminate flowers), composed of usually 2 fused carpels (to 9 carpels elsewhere) but sometimes 1 of the carpels abortive and not apparent at maturity, the inferior ovary with a nectar disc at the tip (this also present in staminate flowers), the styles 1 or 2, the stigma(s) capitate. Ovules 1 per locule, the placentation apical or axile. Fruits drupes (rarely berries elsewhere), with 1 stone, this often with several longitudinal ridges and grooves. Seeds 1 or 2 (1 per locule). Ten to 14 genera, about 120 species, nearly worldwide, but most diverse in temperate portions of the Northern Hemisphere.

Within the Cornaceae there are 2 major groups: Nyssa and two related genera with mostly imperfect flowers having mostly 5-parted perianth whorls; and the remaining genera that are allied to Cornus with mostly perfect flowers having mostly 4-parted perianth whorls. Some botanists have treated Nyssa and its relatives as a separate family, Nyssaceae (Eyde, 1966; Ferguson, 1966b; Cronquist, 1981), but strong similarities in floral morphology, phytochemistry, and chromosome numbers argue for their inclusion in the Cornaceae. The broad circumscription of Cornaceae also is supported by molecular data (Xiang et al., 1998).

Both of the Missouri genera contain some species that are cultivated as ornamentals. A few of the other genera also occasionally are cultivated as hedges, ornamentals, or specimen plants, often in greenhouses and conservatories. These include the Asian genera Helwingia Willd., with the inflorescence appearing to originate from the middle of a foliage leaf, and Davidia Baill. (dove tree, ghost tree), with the inflorescences consisting of a small head subtended by a pair of large, showy petaloid bracts.