

**JUGLANDACEAE WALNUT FAMILY**

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Monoecious, rarely dioecious, trees or occasionally shrubs. STEMS with solid or chambered pith, leaf scars large, with three groups of bundle scars. LEAVES alternate, rarely opposite or whorled, pinnate, deciduous or evergreen, estipulate, often aromatic. FLOWERS wind-pollinated, bracteate; staminate and pistillate flowers in separate erect or pendant catkins or spikes, or in androgynous panicles; sepals 0-4; petals 0; stamens 3-105, sessile; anthers oblong, longitudinally dehiscent; pistil with 2(-4) carpels; ovary inferior, 1-ovulate but often with partial internal partitions and appearing 2-4-loculate in section; ovule 1, erect; style (0-)1, with 2-4 stigmatic branches. FRUIT a drupe-like nut, with a fibrous, slightly fleshy husk derived from the involucre and calyx; husk dehiscent or indehiscent. SEED solitary, 2-lobed, with large, fleshy, oily cotyledons, lacking endosperm at maturity.  $x = 16$ . --7 genera and ca. 60 spp. of the North Temperate Zone and the Andes.

**Juglans L. Walnut**

Monoecious trees or large shrubs; pith chambered. LEAVES deciduous, odd-pinnate, alternate, aromatic, leaflets serrate or entire, glandular-dotted beneath. FLOWERS: staminate catkins lateral, axillary, pendant, on old wood; pistillate spike 1-25 flowered, terminal on new leafy growth; staminate and pistillate flowers with 2-6 bracts and 4 sepals; carpels 2(3-4), with 2 elongate recurved style branches; stigmas plumose. FRUITS: husk indehiscent. Ca. 20 spp. in the Americas and Eurasia. (Classical Latin name for the walnut). Manning, W. E. 1957. *J. Arnold Arbor.* 38:121-150.

**Juglans major** (Torr.) Heller (greater). Arizona Walnut. --Trees up to 15 m tall and 1.2 m in trunk diameter, sometimes with several trunks. STEMS when young dark to light brown, finely whitish glandular pubescent or puberulent, with prominent lenticels. LEAVES 15-43 cm long; rachis finely whitish glandular-puberulent, rarely glabrous; leaflets 9-15(-17), serrate, opposite or alternate, sessile or short-stalked, oblong-lanceolate to ovate, (0.6-)2-3.5 cm wide and (2-)6-11.5(-13) cm long, the bases tapering and oblique, the apices acuminate; terminal leaflet usually smaller than lateral ones. FLOWERS: staminate catkins 7-17 cm long, slender, individual floral bracts small, whitish-tomentose; stamens 30-50; pistillate flowers 1-few, glandular-pubescent. FRUITS globose to oval, (1.9-)2.3-3.0 cm in diameter; husk thin, glandular-pubescent, inconspicuously verrucose; nut 1.8-2.8 cm in diameter, subglobose, slightly compressed, longitudinally striate, sometimes deeply so. [*J. rupestris* Engelm. ex Torr. var *major* Torr.; *J. microcarpa* Berl. var *major* (Torr.) L. D. Benson; *J. elaeopyren* Dode]. Seeds often consumed as food. --Along mountain streams: all counties except Apache; 750-2150 m (2500-7000 ft); NM, TX; s to Gro., Mex.