

American Hazelnut *Corylus americana*

Betulaceae—Birch family

by Tom Reaume © 2011 Nature Manitoba

Grant: 

A deciduous shrub 1–5 m tall by 1–2 m wide, singly or in small clusters; along edges of forests, fence rows, hillsides and moist thickets; **monoecious**.

● **REPRODUCTIVE PARTS** greenish brown to reddish, active March–May, usually finished before the leaves appear; **inflorescence** of unisexual catkins, male ones more obvious and numerous than the smaller female catkins; **male peduncles** 2–6 mm long by c. 1 mm wide, reflexed at base, hanging, tan, hairy or not, hairs whitish, appressed and disheveled; **male catkins** tan, 13–53 mm long by 4–6 mm wide when active, hanging from hairy reddish-brown twigs, falling in spring, new ones developing in late summer, often 1–5 per node and occupying 1–7 nodes along branch tips, pale green, 7–20 mm long by 3–4 mm wide, overwintering, expanding early the next spring; **scales** 3 per floret, fringed with white hairs, united near base, tan, greenish and smooth inside, the central scale reddish brown outside, spirally arranged with 12 or 13 per spiral; **male florets** c. 2 mm long, including the short downward pointing dark hairy tip, by 1.9–2.2 mm wide by c. 2 mm deep, tapered to the rachis, 6 florets in a circle around the 1 mm wide rachis; **pollen** yellow; **stamens** 8, subsessile, 0.5–0.7 mm long; **filaments** c. 0.1 mm long, obvious when anthers are open and spent, attached to the base of an anther; **anthers** 8, each 2-lobed, yellowish green before opening, c. 0.6 mm long by 0.4 mm wide by 0.2 mm thick, with 1–3 clear straight hairs 0.1–0.3 mm long at apices; **female catkins** bud-like, 1–5 near the male catkins, c. 5.5 mm long by 4 mm wide, oval, terminal or lateral; **peduncles** 3–6 mm long by 1.3–3 mm wide, to c. 2 cm long with fruit, dark reddish brown, with tiny white hairs below the 1 mm long gland-tipped hairs; **scales** numerous, 1.5–3.2 mm long by 1.2–3 mm wide, reduced above, lower ones sterile, imbricate, margins hairy, upper scales more hairy and crowded at the top around the bases of the stigmas; **stigmas** thin, reddish purple, 8–10 pairs, each 2–2.5 mm long by c. 0.2 mm wide at the base, tapered toward the tip, exserted, together c. 3 mm wide, hairless, crowded and arched outward at the top of the catkin; **ovary** green, hairy, c. 1 mm long by c. 0.6 mm wide; **involucral bracts** 2, unequal in length, toothed, veined, enclosing fruit, apices spreading with ripe fruit inside, overlapping along one side, some hairs gland-tipped, the whole structure 2–4 cm long and wide by c. 1.5 cm thick, usually hidden below the leaves.

● **FRUIT** a nut, 1-seeded, shiny reddish brown, oval, rough on base, 12–15 mm long by 10–18 mm wide by c. 10 mm thick.

● **LEAVES** alternate, simple, teeth irregular and hairy, shallow and numerous; **blades** 5–16 cm long by 4–12 cm wide, pointed, reddish to coppery green when young, turning reddish orange in the fall, more hairy above, some hairs with reddish to whitish glands, a few gland-tipped hairs below, especially near the petiole and hairs ascending along the raised veins; **petioles** 4–23 mm long with spreading gland-tipped hairs; **stipules** paired, light green, entire, 5–6 mm long with short glandular hairs, ascending, remain on twig when leaf is removed.

● **STEM** gray, erect, bark smooth to slightly rough; **branches** alternate, ascending to horizontal, base of stem 1–3.5 cm thick; **twigs** reddish brown when new, dull, alternate, usually with spreading reddish purple gland-tipped hairs and shorter white hairs; **buds** usually alternate, sometimes opposite, terminal ones 2–4 mm long by c. 2 mm wide, with several scales.

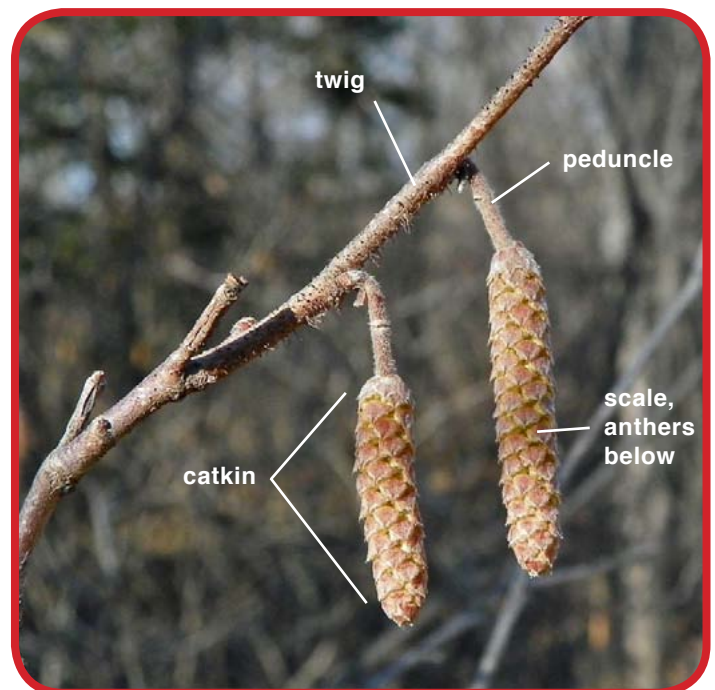
● **RANGE:** (CAN) SK, MB, ON; (USA) 36 eastern states except Florida; a **native**.



American Hazelnut shrub 3.5 m tall along the south shore of the Assiniboine River, which flows eastward along Assiniboine Park in Winnipeg, Manitoba



Leaves dark green, alternate, finely toothed, dull; upper branch from below



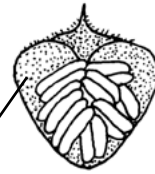
Two male catkins, each hanging from a hairy twig and peduncle in late April; enlarging and becoming active



Terminal bud 5 mm long on twig of American Hazelnut in spring



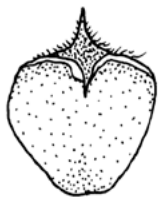
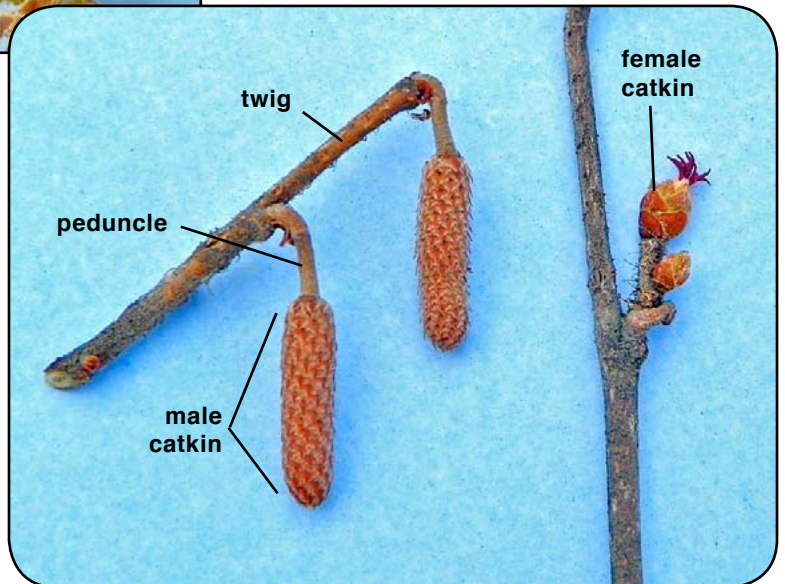
Catkin after blooming; each floret with a pointed outer scale c. 2 mm long and wide



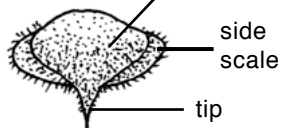
8 anthers x10, underside the central scale of a male floret



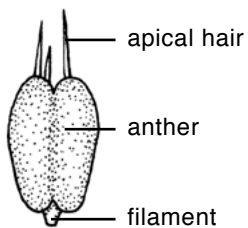
Lower stem 1.5 cm wide in Winnipeg, Manitoba



Male scale x10, inside, anthers removed



Male scales x10, outer face



Stamen x30



Apex of unripe fruit 1.8 cm wide; bracts removed

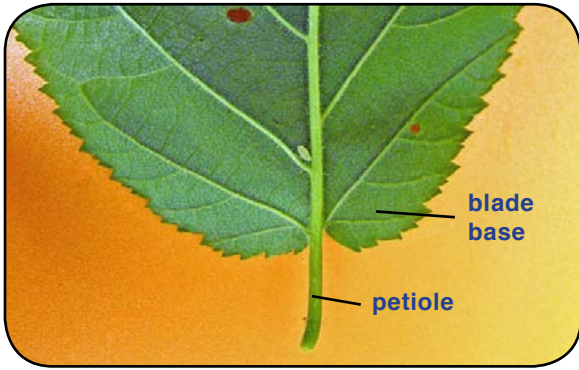


Paired green fruit in bracts; total width 6.8 cm; below leaves near end of a new twig



Female and male catkins in the spring; female catkin with a cluster of purplish stigmas exserted; male catkins c. 5 mm wide, not yet open to release their yellow pollen

Female catkin is bud-like with several pairs of purplish pink stigmas c. 2 mm long projecting from its tip when active



American Hazelnut leaf blade 6.5 cm wide; base toothed to petiole; dorsal side



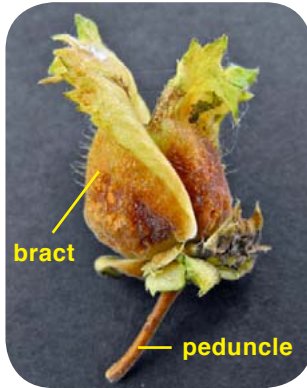
Unripe fruit in green bracts 4 cm long by 2 cm wide; thick view



Leaf blade margin and pointed tip with shallow lobes and numerous small teeth; ventral side



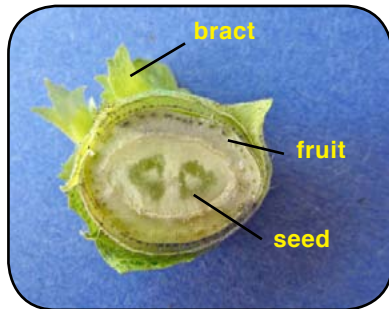
Early reddish-green leaves expanding as the male catkins are open in Winnipeg, Manitoba



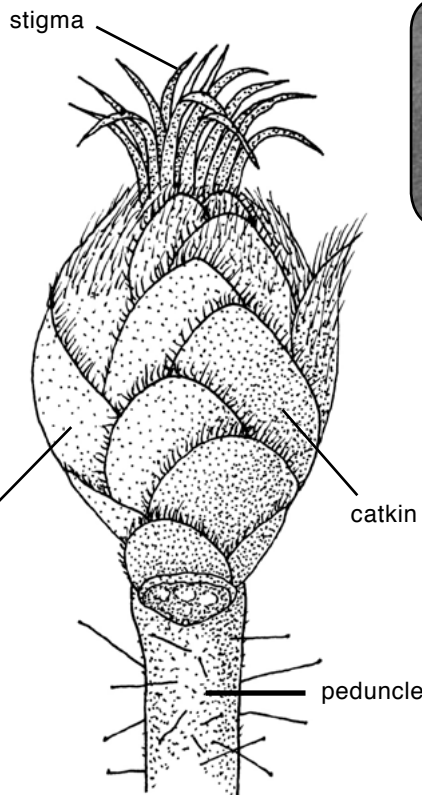
Bracts 3.5 cm long with ripe fruit inside; thick view



Reddish orange leaf 6 cm wide in fall



Cross-section through an unripe fruit 1.8 cm wide resting on base



Female catkin x10, side



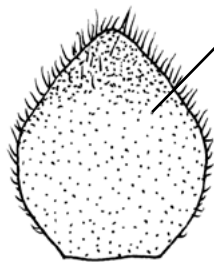
Nut, 1-seeded, 1.5 cm wide; apical view



side



Inner female scale x10, at top of catkin



Outer female scale x10, near base of catkin



Immature male catkin in August will overwinter; total length 16 mm; 1-5 per node