

A close-up photograph of tree bark, showing a rough, textured surface with vertical ridges and deep grooves. The bark is a warm, golden-brown color, and the lighting creates strong shadows that emphasize its rugged texture.

Barking up the Right Tree

Sharon Wander

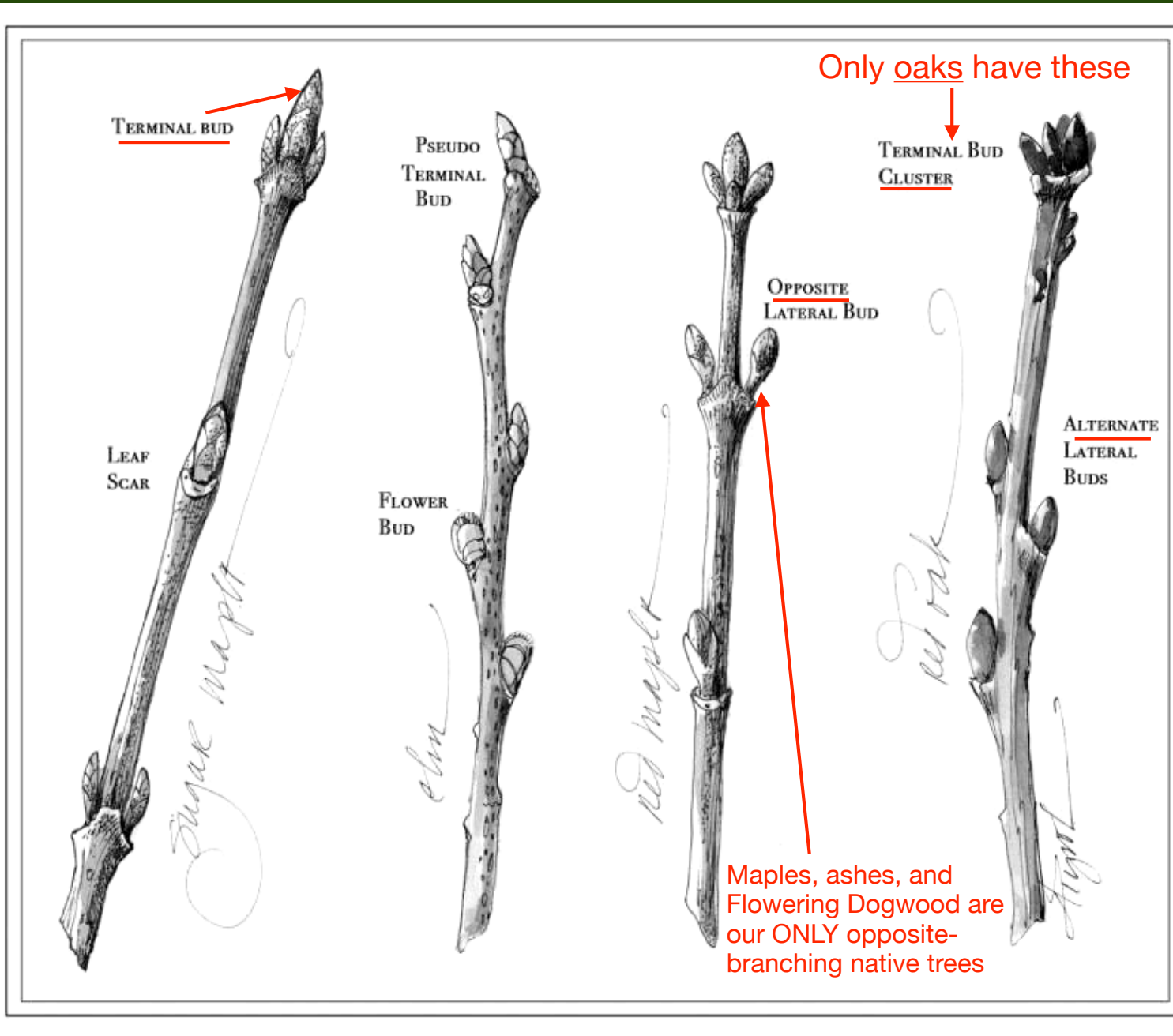


A view of the forest at Kittatinny Valley State Park—Can you ID the trees using bark alone?

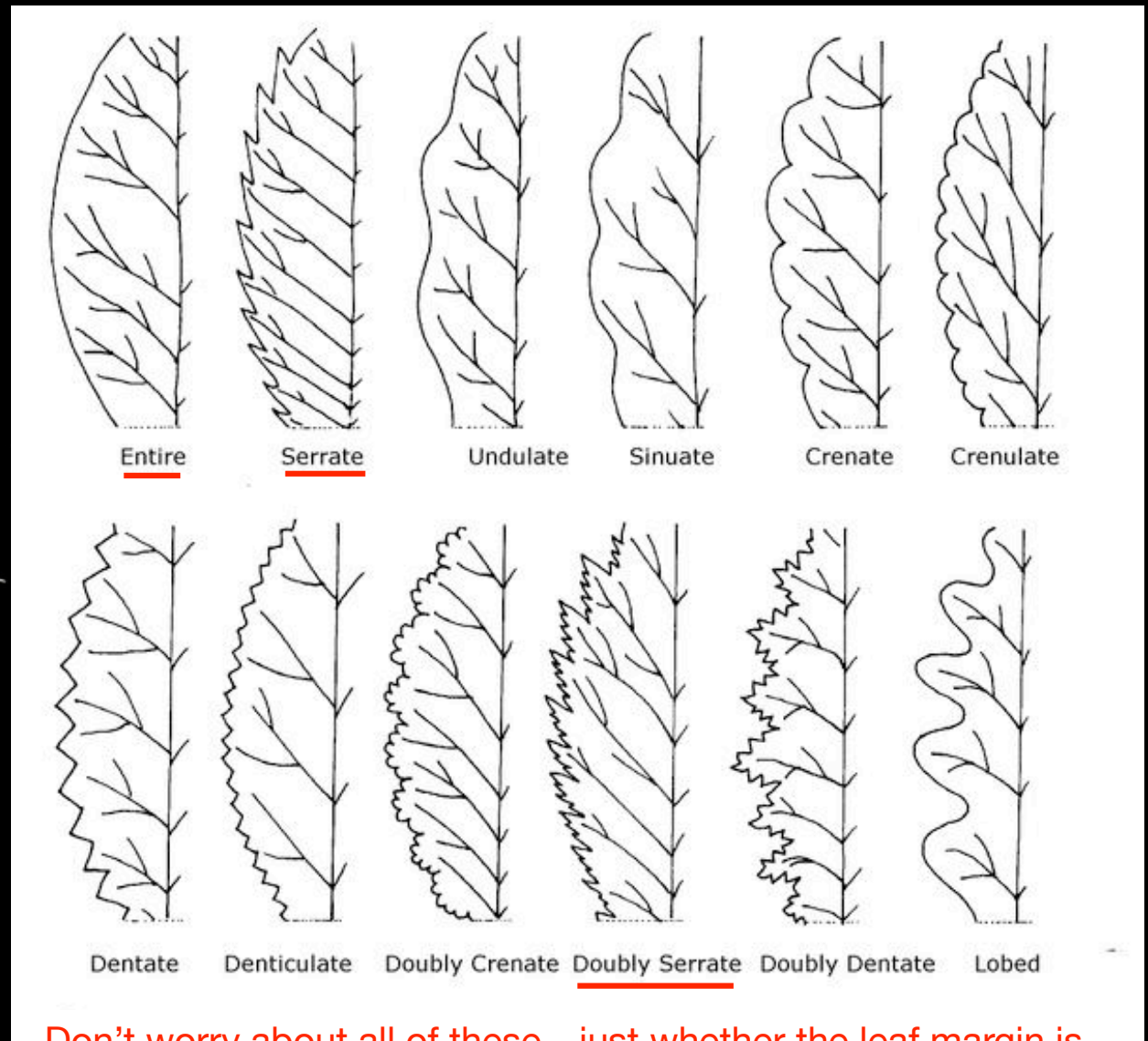
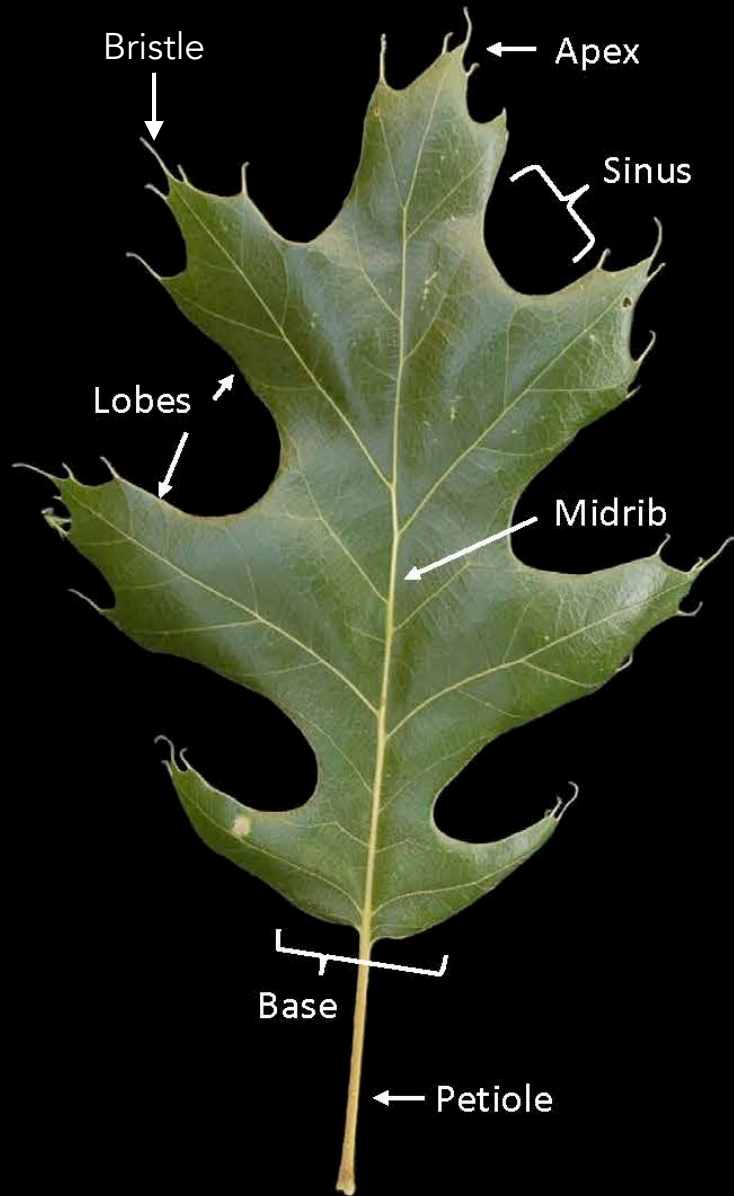
Twig Anatomy

A few helpful terms to help with tree ID.

It's always best to look for *additional* ID characteristics to confirm your bark ID!



Leaf Anatomy



Don't worry about all of these—just whether the leaf margin is entire, serrate (toothed) or doubly serrate

Red Oak Group vs. White Oak Group

- Leaves have pointed lobes tipped with bristles, or if unlobed, a bristle at the tip.
 - Acorns are bitter, take two growing seasons to mature, and germinate in the spring.
- Leaves have rounded lobes with no bristles.
 - Acorns are less bitter, mature in a single growing season, and germinate in the fall.

Oak species native to New Jersey (species in red are covered here)



- Northern Red
- Black
- Pin
- Scarlet
- Scrub

South Jersey only:

- Southern Red
- Blackjack
- Willow



- White
- Swamp White
- Chestnut
- Chinquapin
- Dwarf Chinquapin

South Jersey only:

- Swamp Chestnut
- Post
- Water



White Oak

Quercus alba

- Bark very light grayish-tan, ranging from scaly to blocky
- Leaves with rounded lobes lacking bristle tips; often bluish-green; sinuses variably medium to deep
- Acorns oblong, up to 1", with slightly warty cap covering less than 1/4 of the nut
- Galls may also be evident on twigs in winter
- Very common in mesic forests





Red Oak

Quercus rubra

- Bark shows distinctive “ski trails” —parallel or intertwining dark and light strips on trunk and larger branches
- Large, rounded acorns with flat, saucerlike caps
- Leaves thin, with bristle-tipped lobes, medium-deep sinuses; hairless beneath
- Very common in mesic forests



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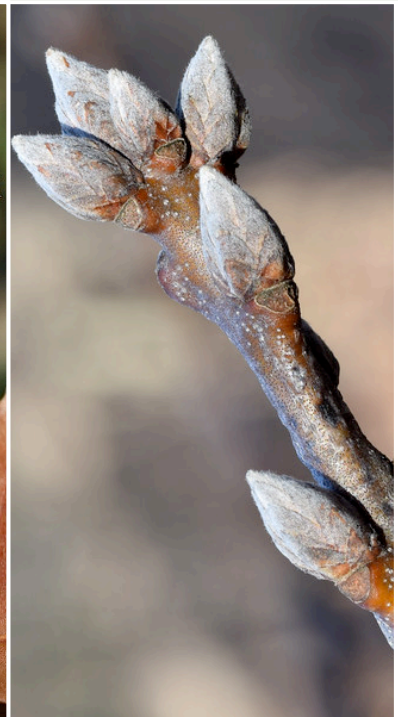




Black Oak

Quercus velutina

- Bark dark gray to blackish, with deeply cut “blocky” pattern over entire trunk
- Acorns oval, to 3/4”; caps with loose, pubescent scales
- Leaves shiny, leathery, with bristle-tipped lobes, shallow sinuses; velvety below
- Buds large, silvery-hairy, angled
- Grows on mesic to dry sites





Swamp White Oak

Quercus bicolor

- Bark light brown, deeply furrowed, with flat ridges and many horizontal breaks; becomes flaky on branches and branchlets
- Leaves with variable, rounded lobes; whitened and velvety beneath
- Acorns long-stalked, to 1 1/4", caps hairy-looking, with fine, grayish-green scales
- Grows in and near wetlands



Chestnut Oak

Quercus montana

- Bark gray, with deep furrows divided by thick, flat-topped ridges.
- Leaves long-oval with shallow, rounded teeth, hairless below
- Acorn long-oval, to 1-1/2"; thin, finely warty cap is usually perched like a beanie
- Grows mainly in dry, rocky habitats



Shagbark Hickory

Carya ovata

- Bark gray, with numerous loose, vertical strips upturned from the bottom
- Nuts with thick husks
- Compound leaves with 5-7 leaflets that have serrate (toothed) edges



Sugar Maple

Acer saccharum

OPPOSITE BRANCHING

- Light gray, “platy” bark, with solid vertical strips upturned at the edges; smoother when young
- 5-lobed leaves with few teeth
- Pointed buds
- Very common in mesic forests



Red Maple

Acer rubrum

- Light gray bark, texture extremely variable— from smooth to patchy to very rough
- Leaves 3- or 5-lobed, small teeth along margin
- Buds rounded, red
- Flowers early
- Wet to dry habitats, but especially abundant in wetlands





White Ash

Fraxinus americana

OPPOSITE BRANCHING

- Bark gray-brown, with narrow, interlocking furrows and ridges, often forming diamond patterns; now often scaled off by woodpeckers
- Leaves compound, with 5-9 stalked leaflets
- Twigs stout, shiny, with leaf scars indented by buds
- Grows mainly in upland habitats



Black Birch

Betula lenta

- Bark smooth bronzy-black with many narrow lenticels when young; at 40-50yrs begins to crack into many irregular patches
- Leaves oval, pointed, with finely serrated edges, forked ends to leaf veins
- Broken twigs have strong wintergreen aroma and taste
- Often occurs in single-species stands that have established on soil exposed by disturbance such as fire; colonizes light gaps in forest
- Prefers mesic conditions





Yellow Birch

Betula alleghaniensis

- Bark golden-bronze, with large lenticels and conspicuous horizontal peeling into papery curls, even when young
- Leaves oval, pointed, doubly serrated; teeth coarser than Black Birch
- Broken twigs have mild wintergreen aroma
- Grows mainly in and near wetlands





River Birch

Betula nigra

- Bark peeling in large flakes when young, becoming rough-scaly with age; pinkish to salmon-colored underbark shows beneath peels and splits
- Leaves somewhat triangular, pointed, with shallowly V-shaped base; large, coarse teeth have double serrations
- Broken twigs have no wintergreen aroma
- Grows in and near wetlands, riverbanks, floodplains; commonly used as a landscape specimen





Tuliptree

Liriodendron tulipifera

- Bark smooth and purplish when very young, with whitened cracks; becomes increasingly furrowed with age, often retaining the white, and widely furrowed when mature
- Leaves with 4-6 pointed lobes, smooth edges; suggests a tulip shape
- Seedheads retained on tree, slowly shedding seeds through winter
- Arching branch pattern



American Beech

Fagus grandifolia

- Bark light gray and very smooth, even on older trees
- Leaves long-oval, pointed, with shallow, widely spaced, single teeth; leaves often retained in winter, especially on younger trees
- Long, sharply-pointed, chestnut-colored buds are distinctive
- Fruit is a four-part, soft-spined husk containing 2-3 small, triangular nuts
- Often produces many root sprouts. Prefers well-drained soils

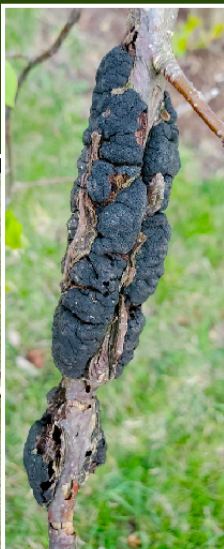




Black Cherry

Prunus serotina

- Bark smooth, reddish-brown with lenticels for ~first 10 years; then becoming dark brown, with hard, raised “scales” that resemble burned potato chips
- Leaves long-oval, pointed, with very small teeth; fuzzy hairs along midrib below
- Broken twigs have a distinctive sharp taste and odor
- Trunks, branches, and twigs often disfigured with “black knot,” a fungal infection; very obvious in winter



Black Gum

Nyssa sylvatica

- Bark “alligator-like,” with many small, irregular blocks separated by narrow cracks; very rugged and blocky when older
- Leaves shiny, smooth-edged, widest beyond the middle, short-pointed; brilliant red in fall
- Branches parallel to ground, with numerous thin twigs at right angles
- Grows in and near wetlands



Fall color



Hackberry

Celtis occidentalis

- Bark gray, with many narrow, irregular, corky ridges; ridges become more pronounced with age
- Leaves oval, with asymmetric base and short point; wrinkly, netlike veining pattern; distinctively yellow-green in fall
- May retain some small, blue fruits in winter; small saplings often have numerous galls



Psyllid Galls



Now that you're learning to ID the trees, you can enjoy your trip to the forest even more!