

## Red maple - green leaves and flying samaras in the spring, color in autumn

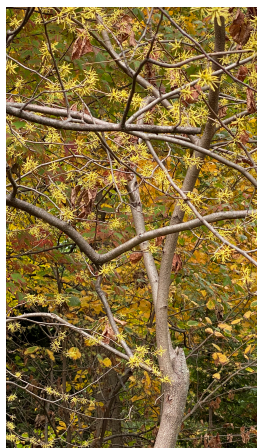


**Show time.** leaves of the **Red maple** (*Acer rubrum*) emerge green in the springtime and turn brilliant red or sometimes yellow in autumn. The following spring, a different kind of show . . . each bud unfolds tiny red blossoms then a shower of whirling helicopters around your head!

The red maple tree produces a dry, not fleshy, fruit (samaras) which varies in color from light brown to reddish brown. Its structure allows it to move through the air while spinning, like a helicopter. Eventually they find their way to the ground; seeds germinate inside its casing and break free as the plant grows.



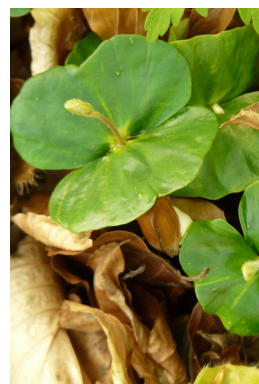
## Witch hazel - Watch flowers bloom after the leaves fall



**Did you know that many North American trees have flowers?** You may have noticed obvious ones, such as on dogwood or apple trees in the springtime. But many others are elusive unless you know such flowers exist and when and what to look for. After an **American witch hazel** (*Hamamelis virginiana*) loses its leaves you may be surprised to see small yellow leaves starting to sprout. Take a close look and you will see that rather than having new leaves, it has flowers. So profuse that they could trick you into thinking the tree was a forsythia bush that got confused, blooming at the wrong time!

The witch hazel is the latest of the North American trees to flower; it doesn't bloom until after it has lost its leaves in the fall. Witch hazel is monoecious; meaning it has both male (produces pollen) and female (produces fruit) blossoms.

## American beech - a stately tree with attractive grasping roots



**Are those seedlings actually trees?** A massive trunk, smooth grey bark and a wide spread canopy are easy to see on a mature **American beech** (*Fagus grandifolia*). In the fall, its leaves turn bronze and eventually brown. But, beech trees have marcescent leaves which are leaves that remain well into winter. Yet, the first leaves to appear from seeds are unique. Take a close look on the ground and you may find a seedling with a pair of thick, fan-shaped, seed leaves (cotyledons); nothing like all of the tree's thin, green, leaves that follow.

## Borough of Alpine

### Alpine Up Close *Deciduously*

Black walnut

Nature is all around us. Whether taking a walk or a drive through our streets or a stroll through woodlands, trees are beckoning us to observe more closely, to appreciate details you may ordinarily overlook. *Deciduous trees grow new leaves in the spring, drop their leaves seasonally, and have interesting traits before, during and after.* All the trees pictured were taken in Alpine. Some may be familiar to you. Take some time to stop and appreciate the beauty of trees that are just outside our doors.



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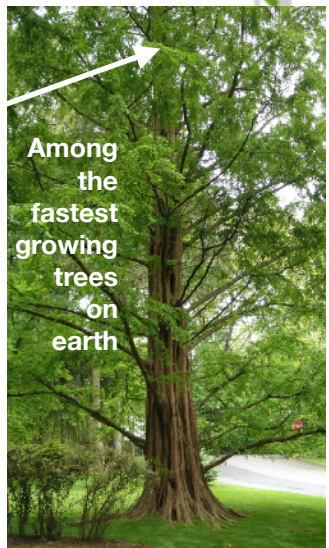


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## Leaves show their true colors in autumn

**How does a leaf show its colors?** Leaves that start out as green are filled with chlorophyll which absorbs most wavelengths but reflects green back to our eye. Chlorophyll is a pigment inside leaves that plays a primary role in photosynthesis; a process that uses sunlight to chemically generate energy from carbon dioxide and water and to generate oxygen as a byproduct.

In autumn, changes in weather and light cause chlorophyll to no longer be dominant and for the tree to start conserving energy. As a result other pigments in the leaves known as xanthophyll (yellow), carotenoids (orange) and anthocyanin (red/purple) are able to show their properties and take center stage until the leaves are eventually pushed from the branches. New leaves will grow in the spring as the process repeats itself.

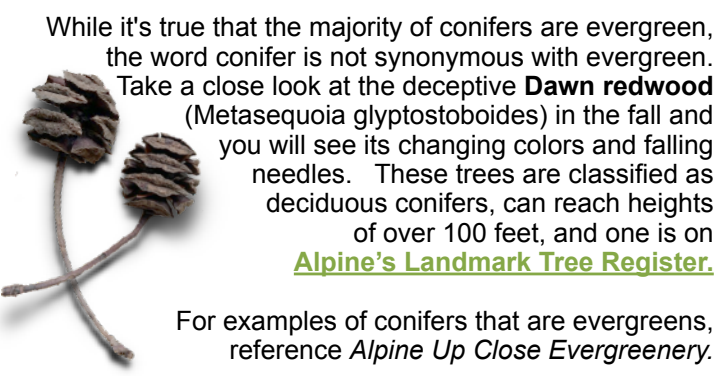


Among the fastest growing trees on earth



## Dawn redwood - A deciduous conifer

All cone bearing trees are not evergreens. Evergreens have needles/leaves that stay on the tree for several years, only falling off because of old age, and then replenished. Deciduous trees shed their leaves to adapt to a cold or dry/wet season.



While it's true that the majority of conifers are evergreen, the word conifer is not synonymous with evergreen. Take a close look at the deceptive **Dawn redwood** (*Metasequoia glyptostoboides*) in the fall and you will see its changing colors and falling needles. These trees are classified as deciduous conifers, can reach heights of over 100 feet, and one is on [Alpine's Landmark Tree Register](#).

For examples of conifers that are evergreens, reference *Alpine Up Close Evergreenery*.

## River Birch - An ornamental tree for all seasons

When it comes to ornamentals, it is easy to understand why they are classified as such given that they have pleasing characteristics such as showy flowers, an interesting shape, unusual bark, color in the fall, or some other attractive feature.

The **River Birch** (*Betula nigra*) is special in that its showy exfoliating bark can be seen in all four seasons. The trunk and older branches have curly peeling sheets in shades of gray, brown, salmon, peach, orange, and lavender depending on the trees age. In spring and summer there is an added bonus; the graceful canopy shimmers when the leaves flutter in the wind due to the upper surface of the leaves being a shiny, medium green and the underside a slightly paler, more silvery color. In autumn the leaves turn golden and the tree is leafless during winter. Pendulent male flowers (catkins) form in the fall and later release pollen after maturing in spring. Female catkins form on the same tree and are inconspicuous.

