

1. History

whenever a disturbance occurs, such as the creation of a sudden opening in the canopy when an old tree topples.

9. The Forest Floor

In the well developed soil of a mature forest, a great variety of wildflowers appear, especially during early spring before the leaves of the canopy close out the sunlight. These plants usually leaf out and die back between mid-April and mid-May, taking advantage of the sun's energy to store food products of photosynthesis in underground parts for next year. Spring woodland wildflowers include ill-scented trillium (*Trillium erectum*), cut-leaved toothwort (*Dentaria laciniata*), yellow mandarin (*Disporum lanuginosum*), wild geranium (*Geranium maculatum*), and bloodroot (*Sanguinaria canadensis*).

The forest floor also is inhabited by a multitude of insects, salamanders, reptiles, ground nesting birds, and mammals, including several species of mice and shrews.

10. Grape Vines

The vines of the wild grape (*Vitis vulpina*) form impenetrable tangles in their search for light. Using sturdier trees for mechanical support, these plants often shade out and kill the trees below, creating many forest openings.

On the beneficial side, grapes provide food for grouse, deer, rabbits, skunk, fox, mourning doves and cedar waxwings during their September to November fruiting period.

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growing pioneer species.

22. Farm Reservoir

The Wade family built an elaborate water supply system by developing ponds and constructing this 115,000 gallon reservoir, fed by numerous wells and pumping stations.

23. Witch-hazel

The witch-hazel is a relatively tall shrub that is common throughout the eastern U.S. Oil obtained from the leaves, twigs, and bark is used in the production of witch-hazel rubbing lotion. Buds are brown, somewhat flattened, and essentially naked with dense yellowish-brown hairs (“winged foot”). Conspicuous yellow flowers are borne in the fall and fruit matures the following year. The fruit is a short, 2-celled woody capsule from which shiny black wingless seeds are forcibly ejected. Empty fruit may persist for several years.

24. The Forest Understory

The vegetation of a forest may be divided into layers by height. The community is usually named from the trees present in the canopy. Below the canopy, in the subcanopy or understory, there may be a variety of smaller trees adapted for life in the shade such as sugar maples and American beech.

25. Cottonwood: A Wetland Tree

A common tree of wet woodlands, the eastern cottonwood (*Populus deltoides*) has a rapid rate of growth, making it a successful competitor for sunlight. The cottonwood is short-lived. At 75 years it is old, the heartwood probably already eaten away by decay. A tree 125 years old is rare. In compensation, though, it may grow at the rate of four to five feet in height each year and a 50 year-old tree might have a trunk two yards in diameter. The cottonwood is an early bloomer, bearing separate male and female flowers in catkins. In mid-spring, the seed pods burst, freeing the vast numbers of cottony, wind-borne seeds for which the tree is named.

26. Pond Habitat

This pond was formed by damming a small creek sometime prior to 1940. As on dry land, aquatic communities undergo successional stages. As the