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# North Bluff Overlook

## Self-Guiding Nature Trail



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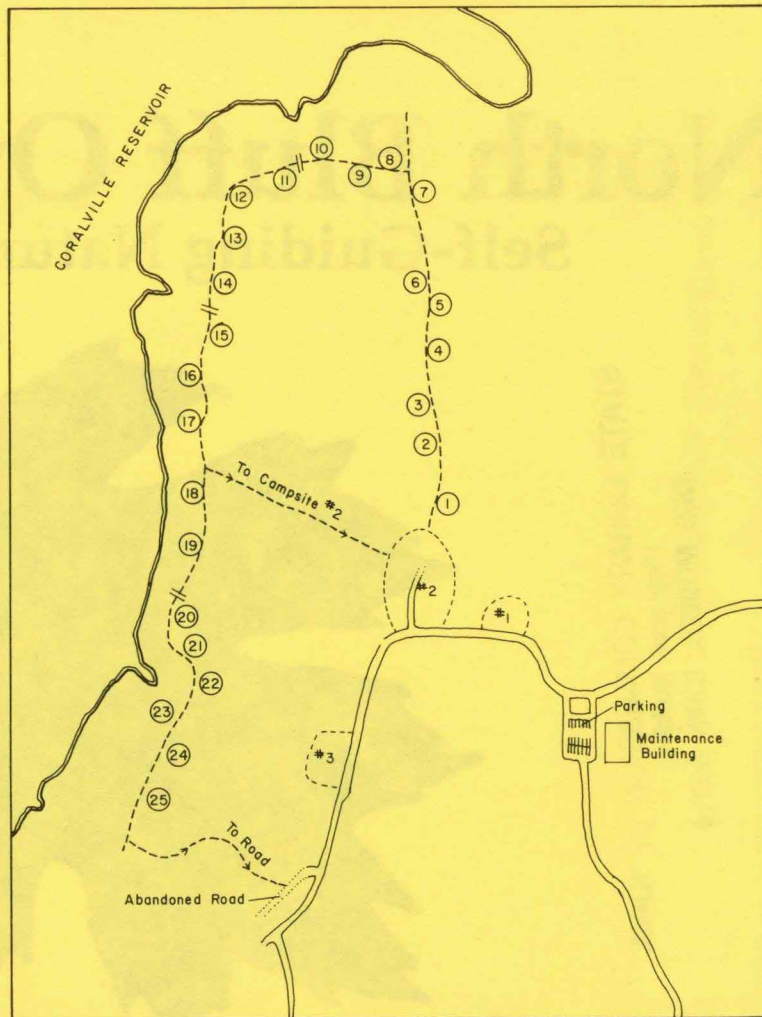
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The nature trail starts at Station 1, about 100 feet north of picnic area 2. There are 25 stations marked along the trail and the numbers on this guide sheet correspond to the numbers on the wooden markers along the trail.

The number and kind of plants you will see depend upon what time of year you walk this trail. For instance, not all of the herbaceous plants will be in flower at once and some may have died back even by the middle of the summer. However, no matter what season it is, you will find a vast array of plants and animals to observe.

The basic plan for this nature trail was done in 1965 by Al Bohling and Rich Gardner, students in landscape architecture at Iowa State University. Karen L. Schaffer, graduate student in botany at The University of Iowa, did more research, completed the trail and wrote the text for this guidebook in 1979. The illustrations are by Ann Chancellor, Graphics Unit, Audiovisual Center, The University of Iowa.

Published by The University of Iowa

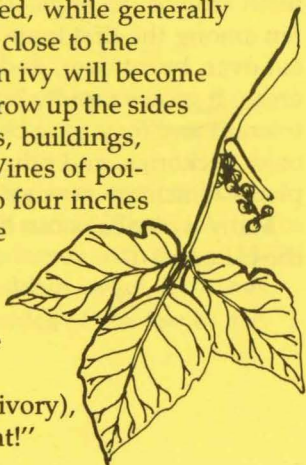




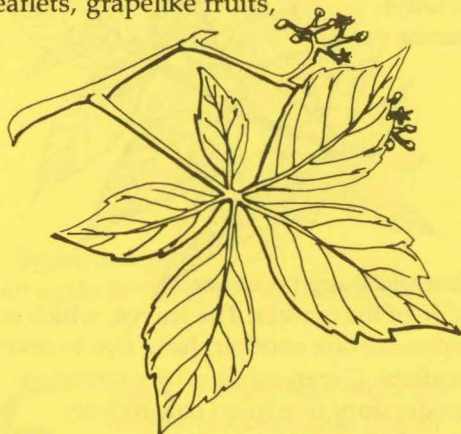
**1** This is the most important station in the nature trail. Surrounding the post and on the other side of the path are two very common plants which you should know, as one is poisonous while the other is harmless. Poison ivy (*Toxicodendron radicans*) has three leaflets and white fruits which persist into the winter. Usually actual contact with the plant is necessary to produce a reaction, however it is possible to get it from handling such articles as shoes, pieces of clothing, and so forth, which have crushed the leaves or other parts of the plant.

Do not be fooled, while generally growing fairly close to the ground, poison ivy will become vine like and grow up the sides of trees, fences, buildings, and so forth. Vines of poison ivy, two to four inches in diameter are not uncommon.

"Leaflets three quickly flee.  
Berries white (ivory),  
poisonous sight!"

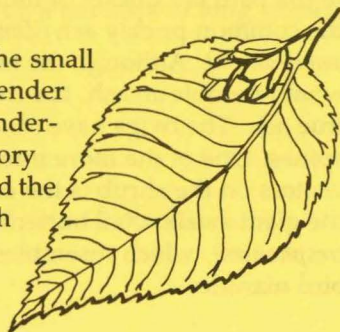


The other plant, Virginia creeper (*Parthenocissus quinquefolia*) is harmless and a member of the grape family. It has five leaflets, grapelike fruits,



and like poison ivy may grow close to the ground or climb trees, walls, and sides of buildings.

**2** The small slender understory trees around the marker with somewhat brownish



finely shredding bark, and thin finely toothed leaves is the American hop hornbeam (*Ostrya virginiana*). The hop hornbeam commonly occurs in association with white oaks. Because wood is extremely hard and tough the tree has been called ironwood. The buds are an important winter food for birds such as the bobwhite.

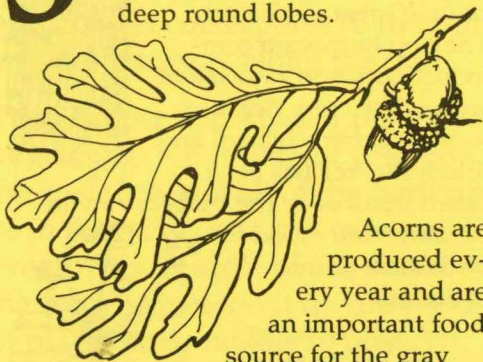
The low, creeping herbaceous plant with eight leaves attached at the same place on the stem is cleavers (*Galium aparine*), a member of the bedstraw family. It has a square stem which when touched is somewhat rough or sticky. The flowers are white and the fruits are tiny round balls with prickles that stick to your socks. The whole plant may die back in the summer.





# 3

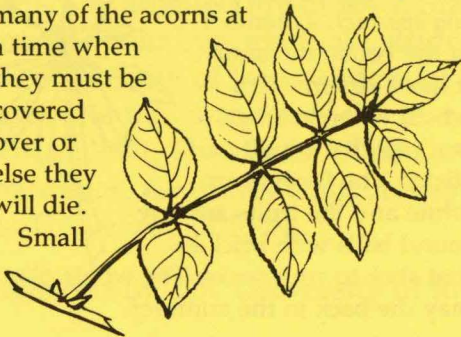
The two large trees with light gray bark are old white oaks (*Quercus alba*). The leaves have deep round lobes.



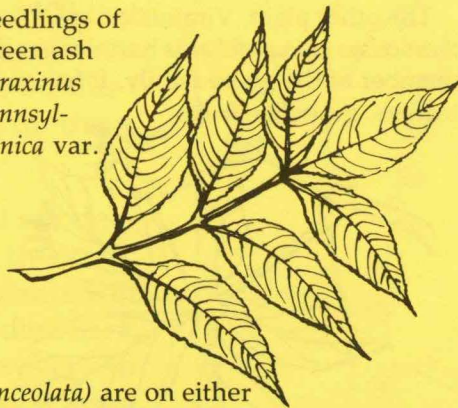
Acorns are produced every year and are an important food source for the gray

squirrel. The squirrel also serves an important function in establishing future oak forests because it "accidentally" plants many of the acorns at a time when they must be covered over or else they will die.

Small



seedlings of green ash (*Fraxinus pennsylvanica* var.

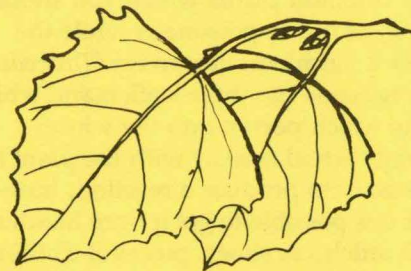


*lanceolata*) are on either side of the marker. The leaves, which are opposite one another, have five to seven leaflets. Green ash is a very common understory tree in an oak-hickory woods.

Opposite the marker on the other side of the path is a thicket of thorny shrubs, the common prickly ash (*Zanthoxylum americanum*). Although the leaves somewhat resemble an ash, the shrub is not a true ash. The twigs have sharp paired spines. One of the more interesting fall visitors on the shrub is the caterpillar of the giant swallowtail butterfly (*Papilio cresphontes*), which resembles a piece of bird manure.

# 4

The tall trees with light tan or cream-colored bark on the upper trunk are bigtooth aspens (*Populus grandidentata*). The

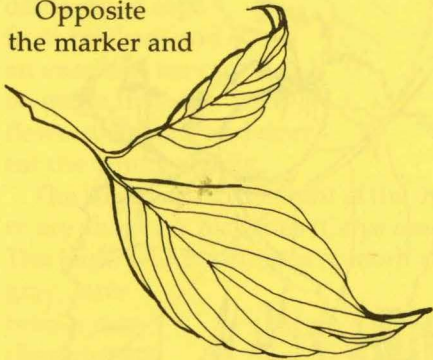


leaves are somewhat circular with large teeth around the edge. The aspen is often among the first trees to come up in cut over, burnt over, and abandoned areas. It grows rapidly but is not shade tolerant and may soon be overgrown by oaks, hickories, and other understory plants which are now young seedlings.

Many white oaks can be observed in the canopy.

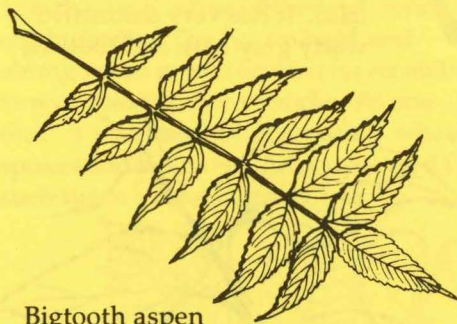
**5** To the left of the marker and directly opposite the marker on the other side of the path are five to six foot shrubs, the red-stemmed dogwood (*Cornus stolonifera*). As is evident from its name, the young twigs are red in color. As in all dogwoods, the veins in the leaves all curl up towards the tip of the leaf.

Opposite the marker and



to the right of the red-stemmed dogwood is smooth sumac (*Rhus glabra*). The large shrub has leaves with many (15-19) leaflets. The reddish twigs, branches, and the undersides of the leaves are

covered with a light bluish, powdery "bloom."



Bigtooth aspen can again be observed at this station.

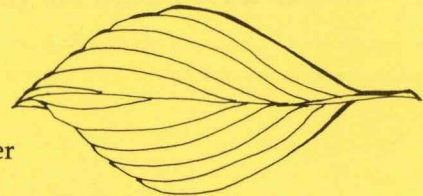
**6** About ten feet back from the marker is a butternut tree or white walnut (*Juglans cinerea* L.). The bark is light gray, and broken up by a network of long vertical

and diagonal fissures. The leaves have 11 to 17 leaflets. The fruits are oval nuts (sweet and edible) with the outer hull being somewhat fleshy and covered with sticky hairs. The pioneers used the husks to obtain a water soluble yellow dye for dyeing cloth. The wood is soft and weaker than that of black walnut. The butternut is of secondary value as a



timber tree.

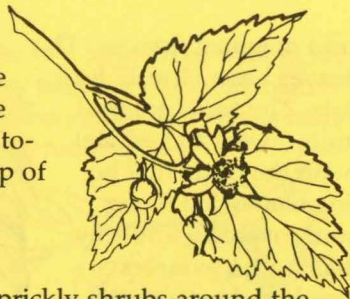
To the left of the marker are several alternate-leaved dogwoods (*Cornus alternifolia*). The twigs are greenish and the fruit is blue and furnishes food for birds.





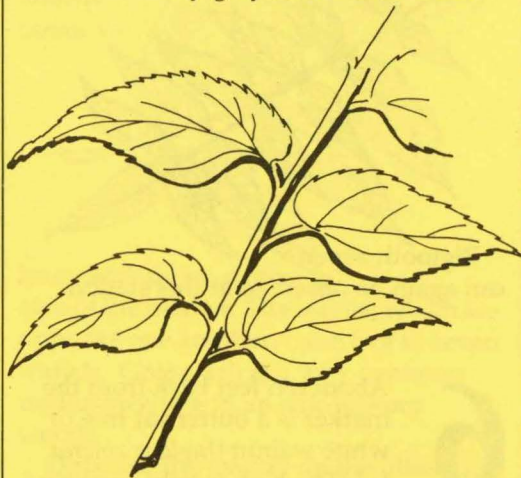
Again, notice that the veins in the leaves curl toward the tip of the leaves.

The low sprawling, thorny, or prickly shrubs around the marker are black raspberries (*Rubus occidentalis*). In the spring small clusters of white flowers appear, followed by pinkish red berries. The stems are covered by a whitish waxy bloom.

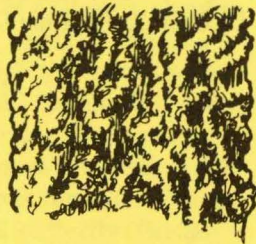


7

To the left of the marker is a hackberry tree (*Celtis occidentalis*). It has very distinctive warty gray bark and toothed



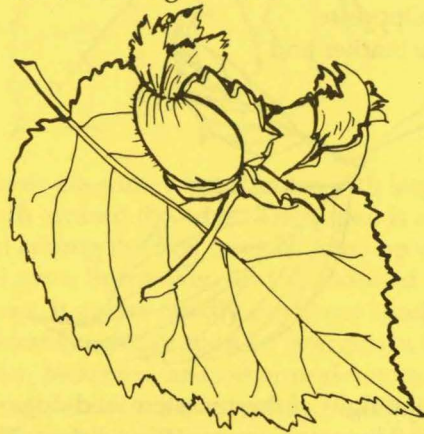
light green leaves. The fruits are cherrylike but bluish purple in color. Although the hackberry has little importance as a timber producer, the



fruits are eaten by many birds.

Virginia creeper is growing up the trunk of the hackberry.

The numerous small shrubs with the toothed leaves around the marker are American filberts (*Corylus americana*), in some localities called hazelnut. There are usually several nuts in a cluster, tightly enclosed in fringed "husks."



8

Directly in front of the marker is a basswood tree or American linden (*Tilia americana*). It has heart-shaped leaves which are

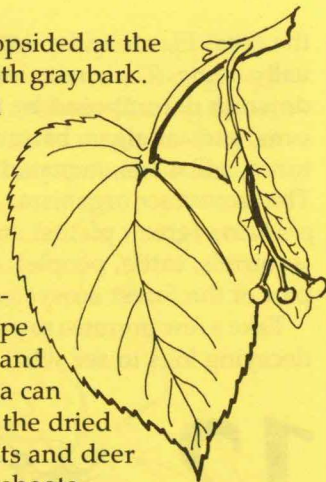
toothed and lopsided at the base and smooth gray bark.

The basswood is one of the most useful forest trees.

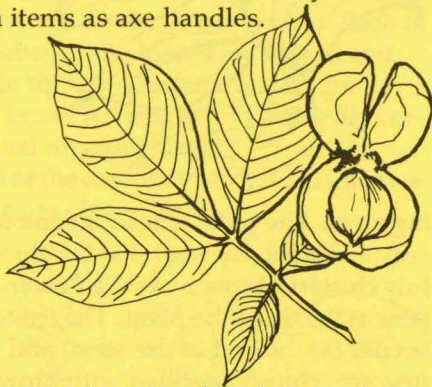
The soft wood is ideal for carving. Indians made rope from the bark and an excellent tea can be made from the dried flowers. Rabbits and deer eat the young shoots.

The large trees to the right of the marker are shagbark hickories (*Carya ovata*).

The bark, which at first is smooth and gray, later breaks into characteristic strips which curve away from the trunk. The leaves have five leaflets and the fruits



are nuts which are encased in a husk which splits cleanly to release the nut. The shagbark is one of the best commercial hickories. The heavy hard and strong wood is well known for its ability to withstand sudden shocks. At one time, it was used for automobile wheel spokes and is almost universally used for such items as axe handles.

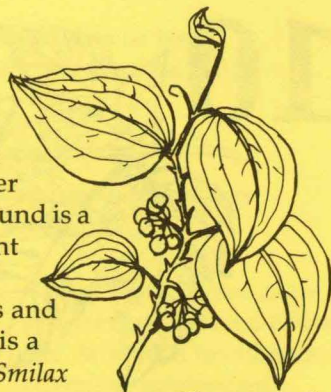


There is also a hop hornbeam between the shagbark hickories and the basswood. It is interesting to note that the bark patterns of the shagbark hickory, basswood, hop hornbeam, and hackberry (station 7) are all very characteristic for each species and can be thought of as tree "fingerprints."

# 9

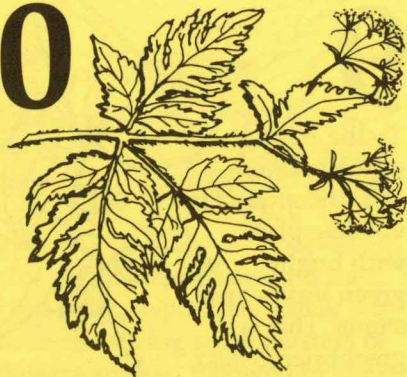
To the right of the marker near the ground is a vinelike plant with bright green leaves and stems. This is a greenbriar (*Smilax* sp.), and its stems are usually covered with thorns. The fruits of greenbriar are clusters of blue black grapelike berries.

Virginia creeper is growing up the hickory tree in front of the marker.





# 10



Facing the marker and to the left is a shagbark hickory. At the base of the tree are numerous soft hairy herbaceous plants with round stems and wide fern-like leaves. The plant is sweet cicely (*Osmorhiza claytoni*). The small clusters of white flowers appear in May through June.

Opposite the marker on the other side of the path are herbaceous plants with pointed leaves alternating along a reclin-



ing stem. The plant is false solomon's-seal (*Smilacina racemosa*). In May through July clusters of creamy white flowers appear at the tip of the plant. The fruits are berries (at the end of the stem) and at first are whitish speckled with brown and later turn ruby red.

# 11

The marker has been placed here to call your attention to a phenomenon, decomposition, which is going on *all over* the woods all

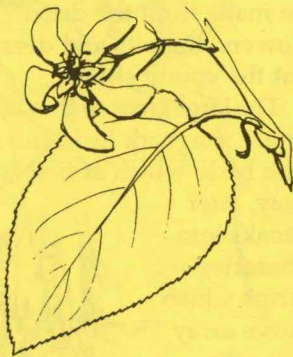
the time. Plants and animals are continually dying. Their remains are broken down or decomposed by many organisms, such as algae, bacteria, fungi, protozoa, soil mites, nematodes, and snails. The *decomposer* organisms, as well as the *producers* (green plants) and *consumers* (squirrels, cattle, people), are an integral part of the forest ecosystem.

Take a few minutes to poke around the decaying logs to see what you can find.

# 12

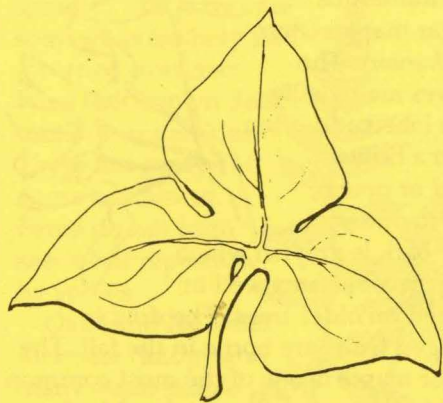
The small, graceful tree with smooth gray bark and slender branches is a serviceberry (*Amelanchier canadensis*).

The leaves are thin, finely toothed, and heart shaped at the base. Its showy white flowers appear early in the spring, before there are many leaves.





to hide them. The purplish applelike fruits are edible and are eaten by many birds and other animals. During the winter, the tree is easily recognized by its long, slender sharp pointed buds.

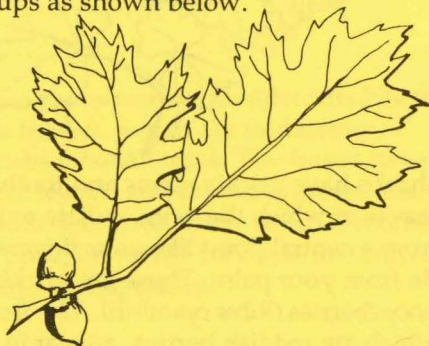


Very close to the ground surrounding the serviceberry are clumps of sharp-lobed hepatica (*Hepatica acutiloba*). The leaves have three sharp-pointed lobes. The flowers are pink to red and appear in the early spring, March through April.

**13** Stand facing the marker with your back to the dead tree in the middle of the path and look up.

Both of the trees in the canopy are oaks. One is a white oak with light gray bark and leaves with rounded lobes as described in station 3. The other oak is the northern red oak (*Quercus rubra*). Each of the lobes of the leaves are forked and bristle tipped. The bark is dark brown with broad flat ridges and is heavily corrugated on older trees.

All of the oaks may be divided into two groups as shown below.



#### WHITE OAK GROUP

*Examples:* White, Burr, Chestnut, Chin-kapin

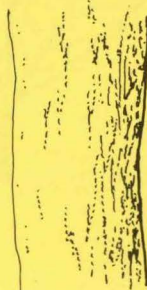
*Leaves:* Rounded lobes or teeth  
*Seed:* Relatively sweet and edible

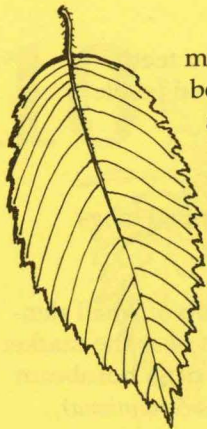
#### RED OAK GROUP

*Examples:* Red, Black, Pin  
*Leaves:* Bristle or hair-tipped lobes  
*Seed:* Bitter, NOT edible

**14** The group of small slender trees near the marker are American hornbeam (*Carpinus caroliniana*),

which resemble the hop-hornbeam except for their bark and seeds. The bark of the hornbeam is dark bluish gray and very smooth, rather than shredding like the hop-hornbeam. Because of the smooth bark, the tree has been commonly called

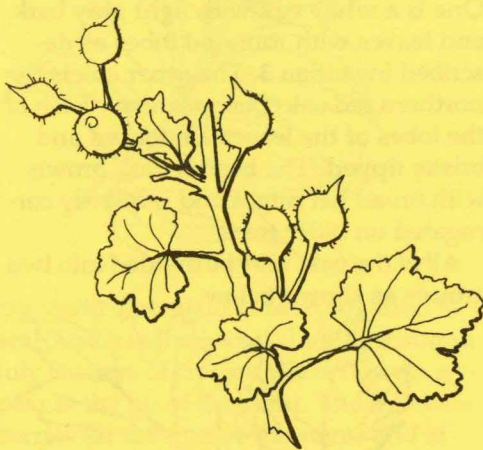




musclewood or blue-beech, although it is not a beech. The seeds of the hornbeam are small and winged, while those of the hop hornbeam are inside small hollow sacks or husks.

# 15

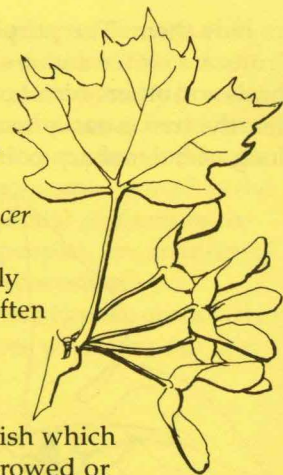
While standing on the bridge, facing the marker, look to your left and you will see on both banks and in the creek bed small shrubs. The



shrubs have prickly stems and toothed leaves in which the veins radiate out from a central point like your fingers do from your palm. These are prickly gooseberries (*Ribes cynosbati*). The fruits, which are reddish berries, appear in midsummer.

# 16

Along this slope are numerous sugar maples (*Acer saccharum*). The leaves are usually five lobed and often turn a brilliant gold or orange red in autumn.



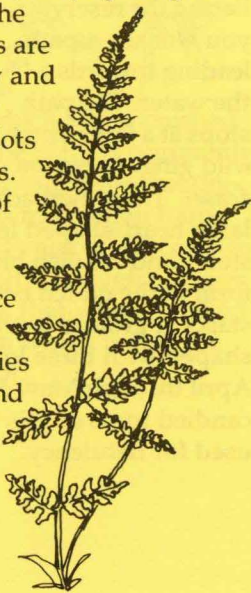
The bark is grayish which may become furrowed or ridged on older trees. The double winged fruits are borne in the fall. The sugar maple is one of the most common and important of the maples. Maple syrup and sugar is made from the spring sap and is an important industry in the northeastern states. The wood, which takes a beautiful polish, is hard and heavy and along with oak is often used as flooring for basketball courts.



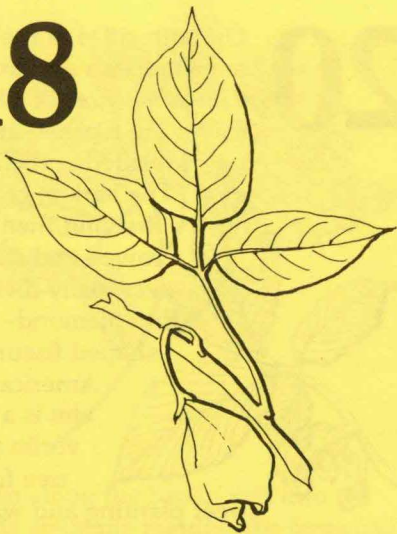
**17** Facing the marker looking towards the reservoir are numerous small ferns (*Cystopteris fragilis*) grow-

ing quite close to the ground. The leaves are somewhat feathery and if turned over may have little brown dots on their undersides. These are groups of spore containers. Ferns do not form seeds but reproduce by spores.

Oaks and hickories form the canopy and many sugar maple seedlings can be seen.



**18**

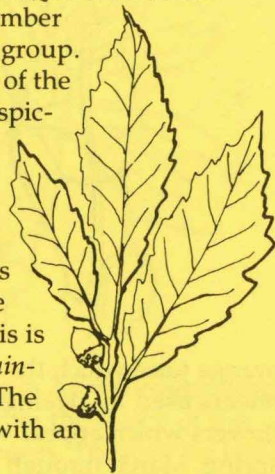


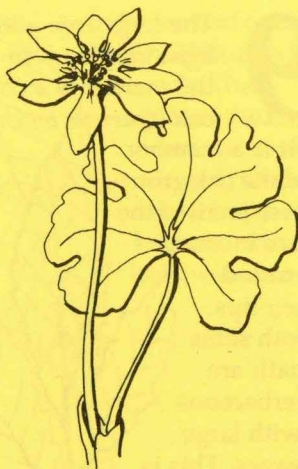
Here are numerous bladdernuts (*Staphylea trifolia*), which are understory shrubs or small trees. The leaves have three leaflets and the seeds are in hollow bladderlike pods, from which it receives its common name. Its stems are brown with white speckles.

**19** The large tree with the light gray bark in front of the marker is a chinkapin oak (*Quercus muehlen-*

*bergii*). It is a member of the white oak group. The coarse teeth of the leaves are inconspicuously rounded at their tips.

On both sides of the path are small herbaceous plants with large lobed leaves. This is bloodroot (*Sanguinaria canadensis*). The stems are filled with an





orange juice which the Indians and pioneers used for dyeing. It has white flowers which appear very early in the spring, March through May.

# 20

On both sides of the path are American elm trees (*Ulmus americana*). The leaves are toothed and lopsided at the base.

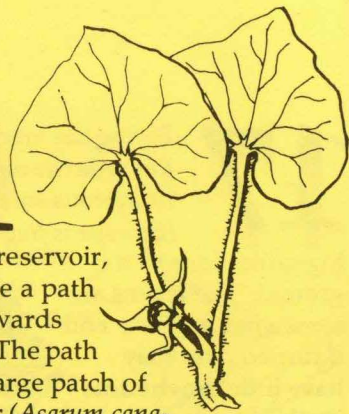


The bark is gray at first and then furrowed and ridged, eventually dividing into diamond-shaped fissures.

American elm is a favorite shade tree for

street planting and was one of the most widespread of our native trees. However, since the occurrence of Dutch elm disease (a fungus, carried by the Japanese beetle, which attacks the living wood) large numbers of elms have died and many are now infected and dying.

# 21

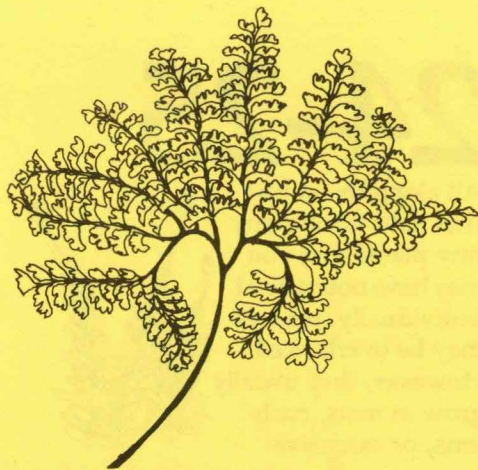
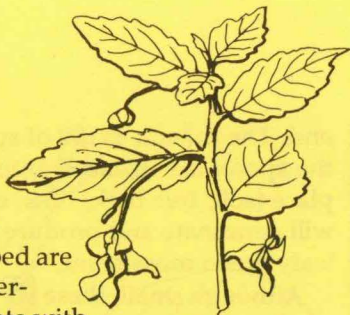


Facing the reservoir, you will see a path leading towards the water. The path stops at a large patch of wild ginger (*Asarum canadense*). These herbaceous plants have large heart-shaped leaves with hairy stems and reddish brown flowers which form in the crotch between the two leaf-stalks at ground level. The flower is cup shaped with three lobes and appears in April through May. Medicinally, the candied roots of this plant have been used for flatulency.



# 22

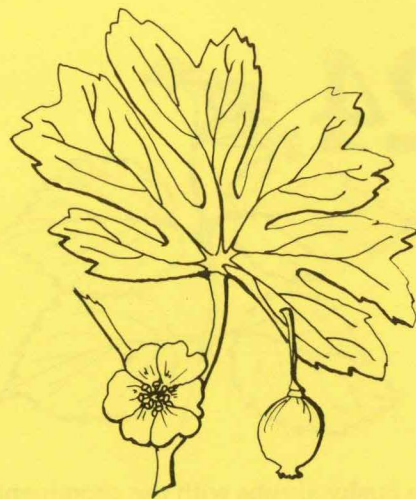
In the creek bed are numerous herbaceous plants with pale green stems which when crushed are quite watery. The plant is commonly called jewelweed or touch-me-not (*Impatiens biflora*) and is most often found growing in wet shady places. The orange flowers appear in July through October and form seed pods that when touched will pop open, from which it gets the name, touch-me-not.



Also along the banks and into the woods are some maidenhair ferns (*Adiantum pedatum*). The leaves come off the coal black shiny stems in such a way as to form a half-moon arrangement.

# 23

On both sides of the path are many characteristic woodland herbaceous plants, mayapples (*Podophyllum peltatum*). They have quite large deeply divided leaves and a single white



flower (appearing in April through June) which is attached in the crotch of the stem below the leaves. The fruit is a large yellow lemonlike berry, a favorite "dish" of raccoons.

To the right of the marker is a large hornbeam (musclewood) and 20 feet to the left of the marker is a large hop hornbeam (ironwood).

# 24



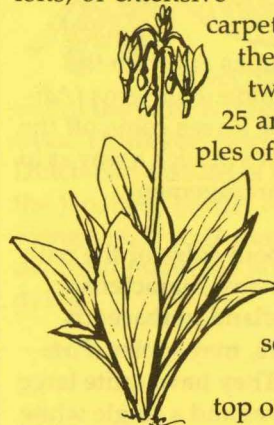
The bushy shrubs with the prominently toothed leaves to the right of the marker are viburnums (*Viburnum rafinesquianum affine*). Their numerous clusters of creamy white flowers appear in early summer and are followed by bluish black raisinlike fruits.

# 24-25

All along the nature trail have been many tiny plants that you may have not noticed. Individually, mosses may be overlooked. However, they usually grow in mats, cushions, or extensive



carpets. On the sides of the nature trail between station 24 and 25 are excellent examples of moss carpets. Although the mosses do not form flowers or fruits, if you look closely you will see a slender stalk coming off of the top of the moss which bears a small container or capsule at its



end. The capsule is full of spores. When the spores are released onto a suitable place (soil, tree bark, rock, etc.) they will germinate and produce another leafy green moss plant.

Although small, these very interesting plants will help to stop soil erosion, often growing on areas that are unsuitable to the flowering plants.

While walking towards marker 25, look to your left and back into the woods are many low growing plants which have their leaves arranged in a circle. These are shooting stars (*Dodecatheon meadia*). Pinkish white flowers will appear in April through June on top of a stalk coming from the center of the circle of leaves. The petals are swept back and the stamens (male parts producing pollen) join to form a pointed beak, hence the name, shooting star. By late July or early August, most of these plants will be gone.

However, there are many other herbaceous plants in this area, such as asters and orchids, which will be flowering on into the fall.



# 25



The small shrub with very slender, pliable stems or branches is leatherwood (*Dirca palustris*). The yellow flowers of leatherwood appear in March or April, before the smooth margined leaves. Its bark is very tough and is said to have been used as thongs by the Indians and early settlers.

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