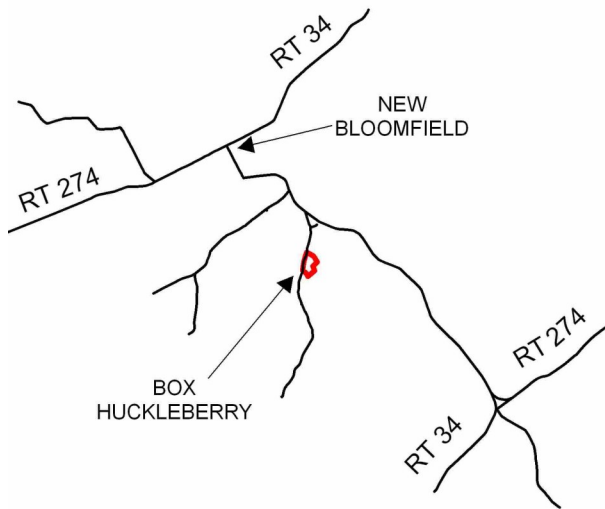


Directions



TO REACH THE NATURAL AREA, DRIVE 1.5 MILES SOUTHEAST FROM NEW BLOOMFIELD, PERRY COUNTY, ON PA 274 AND 34. TURN RIGHT AT THE INTERPRETATIVE TRAIL SIGN AT HUCKLEBERRY ROAD. TRAVEL 1/2 MILE TO A SMALL TURN-OFF WHERE THE ENTRANCE SIGN IS LOCATED.



**Pennsylvania
Bureau of Forestry**

Commonwealth of Pennsylvania
Tom Wolf, *Governor*
Department of Conservation and Natural
Resources
Cindy Adams Dunn *Secretary*
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Bureau of Forestry

BOX HUCKLEBERRY NATURAL AREA



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2009

HOVERTER & SHOLL BOX HUCKLEBERRY NATURAL AREA

Welcome to part of the Tuscarora State Forest. One of the objectives of the State Forest System is to preserve areas of unique ecological value where natural biological succession will be allowed to occur in a relatively undisturbed manner. These are known as Natural Areas.

Introduction to the Box Huckleberry

This colony of the rare native shrub is estimated to be about 1,300 years old. In 1845, Professor S. F. Baird of Dickinson College, Carlisle, discovered this colony which spreads over nearly nine acres of woodland. Professor Baird's discovery did not arouse attention until 1948, when Dr. F. V. Corville of the U. S. Department of Agriculture, after extensive studies, announced that the entire colony consisted of a single plant at least 1,200 years old. There is a possibility that it might be even older since cultivation and road building may have destroyed parts of the colony.

The plants grow on a slope facing west and the loam soil of acid reaction is typical of a large portion of the oak forest region. The colony spreads by means of runners whose average growth is about six inches per year. This, coupled with the area occupied, is the means of determining the age of the plant. Botanists have been unsuccessful in growing this plant from seed, however Dr. Wherry from the U.S.D.A., has produced the shrub by cross-pollination with other colonies.

In July 1920, H. A. Ward discovered another colony of this rare plant along the Northeast bank of the Juniata River between Newport and Duncannon. This colony, covering an area of about 100 acres, was estimated to be 13,000 years old, which would make it the oldest living thing in the world. Unfortunately, extensive areas of this large colony were destroyed by the rebuilding of U.S. 22-322.

A few isolated plots of this shrub have since been found in six other states: Delaware, Kentucky, Maryland, Virginia, West Virginia and Tennessee.

1. **The Box Huckleberry** (*Gaylussacia brachycera*) forms a dark green mat only a few inches high on the acid soil in which it grows. In May and June, white or pink flowers stand out against the foliage. These flowers are followed by fruit, a light blue berry, in July and August. The berries often lose their interior parts, becoming nothing but hollow shells. Ruffed grouse eat the berries, which are locally called "Bibleberry" or "Jerusalem Huckleberry".

The plant has creeping, spreading angled branches which bear the oval 1/2 - 1 inch long evergreen leaves. The leaves resemble those of boxwood and are responsible for the common name Box Huckleberry. In late fall and winter the leaves acquire a bronzy hue, lending a bit of color to the winter woodland.



2. **The Witch Hazel** (*Hamamelis virginiana*) is a winter flowering shrub or small tree with wavy toothed, uneven-based leaves. It is commonly found on moist slopes. The yellow flowers appear from September to November. The fruits have two cells, in each of which there is a little nut, which is shot out several feet, when the fruits explode in autumn. Ruffed grouse and squirrels eat these fruits. Witch Hazel lotion is obtained by distilling the bark and twigs. Water diviners favor branches of this tree.



3. **The Eastern Hemlock** (*Tsuga canadensis*) is the official state tree of Pennsylvania. The short flat evergreen needles are dark above and silver lined below. Hemlock groves are favorite nesting places for several species of birds. A stand of ancient hemlocks known as the Hemlock Natural Area is located in the Tuscarora State Forest in Western Perry County.



4. **Oaks** are the most important group of broad-leaf timber trees in the U.S. Acorns are near the top of the wildlife food list and the wood has many uses. The foliage of the oaks (especially white oak) is the favorite food of the harmful gypsy moth caterpillar. The three types of oaks shown at this station are black oak, white oak and red oak.

THE BLACK OAK (*Quercus velutina*) is found directly behind the post for this station. The leaves have 5-7 bristle-tipped lobes. The wood is used for furniture, flooring, railroad ties and construction lumber.



THE WHITE OAK (*Quercus alba*) is found behind the black oaks and has light colored bark. The leaves have 5-9 rounded lobes. The wood is used for liquid containers such as whiskey barrels.



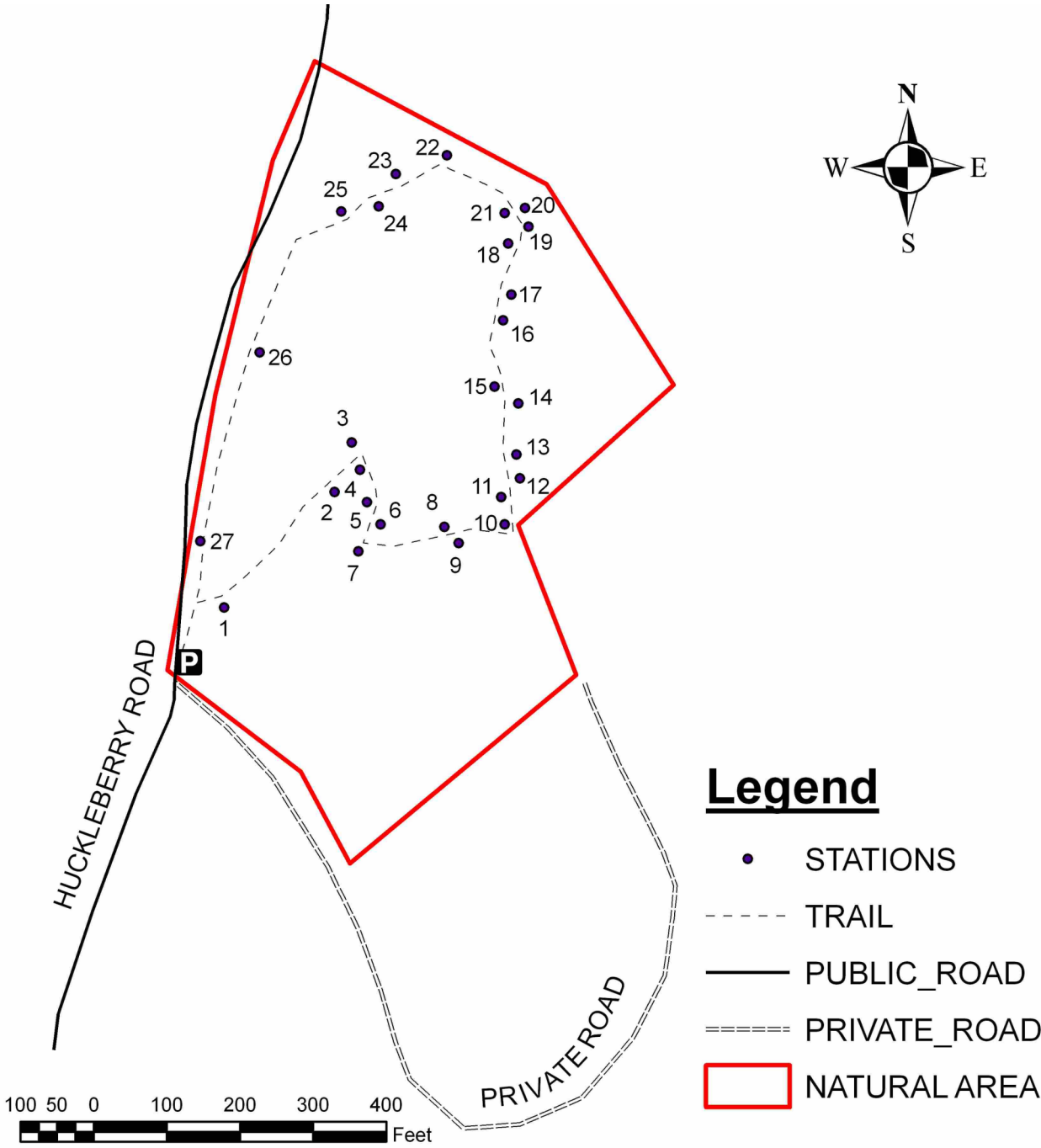
THE RED OAK (*Quercus rubra*) has leaves with 7-11 bristle tipped lobes. It is located directly to the left of this post and across the trail. Its wood is used for the same purposes as black oak.



5. **Brambles** (Several *Rubus* species & Hybrids) provide important summer food for a long list of birds and wildlife. Deer and rabbits browse the leaves and stems. Thorny brambles also provide secure cover and are often the site of songbird nests. Blackberries have angled stalks and broad-based, hooked prickles. The fruits ripen in July and August and break off behind the receptacle so the core remains in the fruit. Raspberries have round stems with a white, waxy coating and thinner prickles. The black or red fruits separate from their receptacle when picked, leaving a hollow cup-shaped fruit in the hand.



6. **Poison Ivy** (*Toxicodendron radicans*) can be seen all around the post for this station. Across the trail is a plant often confused with poison ivy, Virginia Creeper (*Parthenocissus quinquefolia*). Poison ivy has three leaflets with the end one having a longer stalk than the side ones. All parts of the plant contain a dangerous skin irritant. It grows as an erect shrub, a trailing vine or a climber. In the spring, the plant contains small, yellowish flowers. Small, smooth, white clusters of fruit are found from August to November. These fruits are favorite foods for over 60 species of birds. Many seeds pass undamaged through their digestive systems and thus birds aid with the distribution of poison ivy.



22. On the trail ahead Mosses form a natural carpet. Mosses are pioneers. They are one of the first plants to cover the earth and rocks. All Mosses lack roots and true stems.



23. **Chestnut Oak** (*Quercus montana*) is a medium sized tree found on the poorer soils of hillsides and rock ridges. The leaves are broadly oval with large rounded teeth decreasing in size toward the leaf tips. It is also known as “rock oak”. The bark was used in tanning. At one time, Perry County was among the leading counties of the state in the tanning industry.



24. **White Pine** (*Pinus strobus*) is an important timber tree. The needles of this pine are in bundles of fives. The tree produces one whorl of 3-7 side branches each year. This is useful in determining the age of



25. The decaying log at this station illustrates the natural end of a tree’s life cycle. After it died, but before it fell to the ground, this tree provided many years of service as a Den tree to shelter many species of wildlife. Even now it still has value as the growing medium for plants, food for insects (and the animals and birds that prey on them) and in returning organic material to the soil. Because the Box Huckleberry is designated a Natural Area, mature, dying and dead trees are not removed (except occasionally for safety reasons). Instead, nature is allowed to run its course.

26. The **Mountain Laurel** (*Kalmia latifolia*) is the state flower of Pennsylvania. It is a woody shrub, which often forms impenetrable thickets. In some regions the species is called “Calico Bush”, perhaps from the spotted buds and blossoms.



27. **Trails End** We hope this walk through the forest and field has added to your appreciation of the world around you. Nature is a never-ending source of enjoyment. Please return often.



We are always looking for volunteers for our state forest. For more information contact us at the address or telephone number on the front of this pamphlet.

7. **Mockernut Hickory Trees** (*Carya tomentosa*) have feather compound leaves with pointed, toothed leaflets. The nuts fall in September and October and are eaten by wild turkeys and squirrels. Hickory wood is strong, heavy and elastic, but decays upon contact with moisture and is subject to insect attacks. The wood is used for tool handles, skis, wagons and baskets. It is also valuable as a source of fuel and for smoking meat.



8. **The Sassafras** (*Sassafras albidum*) leaves take on three different forms, 3 fingered, a thumb and a mitten outline, or a smooth egg shape. The durable course lumber was used for barrels, fuel and fence posts.



9. This station shows an example of succession. The field is slowly being changed into forest. The pioneer trees, those that come into an area first, found in this area are sumac, locust, white pine, Virginia pine, and cherry. In years to come bigger trees such as oak and maple will take over.

10. The small shrubs at this station are **Smooth Sumac** (*Rhus glabra*) Smooth sumac grows in open fields and spreads rapidly. The Indians used the red fruits for food. Indian lemonade can be made by dunking the fresh red seeds in cold water. This shrub is often mistaken for Poison Sumac (*Rhus vernix*) which is not common in Pennsylvania and grows only in very wet areas such as wooded swamps. The fruit of poison sumac is white instead of red.



11. The pines around this station with the twisted needles in clusters of twos are **Virginia Pines** (*Pinus virginiana*). These pines are often called scrub pines. The wood is used chiefly for paper pulp, and mine props.



12. The organisms growing on the trunk of the red oak tree are **Lichens**. There are many varieties of lichens found on rocks, tree trunks, logs and bare soil. Lichens are formed of a fungus and algae that live together for mutual benefit. The algae manufactures food from sunlight and the fungus gathers water and minerals.



13.The vines growing at this station are **Fox Grapes** (*Vitis labrusca*). They need sunlight and will reach far to get it, sometimes harming the plants they climb over. They are ancestors of the concord grape and are a good source of food for wildlife. Also growing at this station are Raspberries (*Rubus occidentalis*) Which were discussed at Station 5. Note the white coating on the round stem of the raspberries.



14.The two ferns found 8 to 10 feet behind this station are abundant in this area. The tall hardy fern is the **Christmas Fern** (*Polystichum acrostichoides*). The small more fragile fern is Ebony Spleenwort (*Asplenium platyneuron*).



15.**Ebony Spleenwort** has long stiff, non-evergreen, ladder-like fertile leaves. The leaflets of this fern are narrow and have a small ear at the base where they attach to the dark-colored axis.



15.The leaf of the **Scarlet Oak** (*Quercus coccinea*) is thin and delicate with 7-10 narrow bristle-tipped lobes. These leaves turn a brilliant scarlet red in autumn. The wood of the scarlet oak is inferior to that of red oak, but is often sold under the same name.



16.The **Red Maple** (*Acer rubrum*) is well named. From the red blossoms in April, the Red Maple seed in May, the crimson stems, the young buds, to the final glory of fall color, the red maple is a thing of beauty from spring until frost. It is often called “soft” maple. The wood is used in making furniture and flooring.



17. **Shadbushes** (*Amelanchier arborea*) are from the rose family. They are also known as service berries and juneberries. They derive their name from the time of blossoming in the early spring when shad go up rivers to spawn. The fruits are high on the wildlife food list.



18.The **Black Cherry** (*Prunus serotina*). The mature trunk has a rough dark outer bark, which often exposes the red-brown under bark. The wood is hard and close grained. It is used for furniture and interior finishing. The cherries are bitter, but are used for jelly. The bark has been used as flavoring. Many animals eat the fruit.



19. The **Spicebush** (*Lindera benzoin*) is a spicy scented shrub with elliptical leaves. If you lean close you easily smell the spicy scent. Early land surveyors regarded this as an indicator of good farm land. These strongly aromatic twigs and leaves have been used as a spice. The reddish fruits containing a single large seed, are relished by thrushes, but are eaten only sparingly by other birds.



20. The **Big Toothed Aspen** (*Populus grandidentata*) similar to Quaking Aspen but its leaves have large teeth. Because the leaf stems are long and flat, the leaves flutter in the slightest breeze. The Aspens are pioneer trees. The wildlife food value is fairly high.



21.The small shrubs growing at this station are **Tartarian Honeysuckle** (*Lonicera tatarica*). This shrub was originally introduced from Eurasia for wildlife habitat improvement. However, it escaped from cultivation and because of its aggressiveness in establishing itself, has become a problem to agriculture in some areas. The plant is easy to identify during the summer when it bears bright red berries. The berries are eaten by wildlife, however humans find the taste repulsive.

