

A close-up photograph of tree bark, showing a complex, cracked, and layered texture. The colors range from light grey to dark brown, with some areas appearing smoother and others more rugged. The lighting creates deep shadows in the cracks, emphasizing the three-dimensional quality of the surface.

**KAH-NE-DO  
TREE  
REPORT**

March 29, 2006  
Mr. Bob Harvey  
100 Honeysuckle Cres.  
London, On  
N5Y 4P4

Dear Mr Harvey

I wish to take this opportunity to thank you for the very interesting - if somewhat cool tour of Camp Kah-ne-do

I have attached notes I took from the tour together with our invoice. Without a proper aerial photograph I do not know the size of the property nor the areas of each of the vegetation Units.

I am advising the ABCA by copy of this letter as I was asked to perform this visit on their behalf.

Camp Kah-Ne-Do  
Forest Management Notes  
lucyn5w@yahoo.ca  
March 29, 2006  
Donald Craig RPF

This property was inspected by the Author and Mr Bob Harvey on Friday March 17<sup>th</sup>, 2006. The stated purpose of the visit were two fold:

- What if anything should be done to manage the vegetation for its good health and
- How can the vegetation units be used to benefit of the girl guide program at the camp.

## General

This is a very interesting property from a vegetation point of view. The majority of the property was cleared at one time for agriculture and all of it was grazed. The catalpa and large walnut near the front entrance indicate there was once a homestead there. There is also a fence and what appears to be an old lane on the side of the plantations opposite the current access lane. The result of the agriculture history of the property is that there is very little pit and mound topography to be found anywhere. Following the agricultural era most of the cleared agricultural areas of the property was planted to trees. There are several plantations of primarily single species conifers as well as two small deciduous plantations planted after 1970 by Mr. Fred Von Althon of the CFS.

## General Recommendations:

- 1) Diversity is good - do not remove the last specimen of any tree in the woodlot other than exotics.
- 2) Grape and other vines add to the diversity and therefore the overall health of the woodlot and should be left unless they are growing in one of the selected "Crop Trees".
- 3) Trees containing active stick nests should be left to promote the species of wildlife, which will use them and thus promote diversity and forest health.
- 4) Lay out roadways as straight as possible and do the layout during the early spring so it is easy to take advantage of the driest areas.
- 5) Take pruners, a short hand saw and flagging tape any time you go to the bush. Anything which cannot be fixed with the pruners or saw can be flagged. When you have enough flags to justify taking the chainsaw the flags will help reduce the time and distance of carting it around.
- 6) After a harvest leaving tops on the ground is good for the overall health of the forest. In areas where the trails need to be cleared the tops can be cut up but do not need to be carted away or piled. If you have a use for the firewood or can sell it to someone who will cut it up where it is lying and remove it with small equipment it may make economic sense to do so. **Otherwise let it decay** it is of benefit to the health of the forest and the damage caused by its removal with large skidders usually out weighs the \$ value in the tops.
- 7) Time and energy are valuable - do not waste either removing trees, vines, tops etc just to make an area "Look nice".
- 8) Whenever you plan to remove trees to "IMPROVE" the forest you must first select the "CROP" trees. These are the individuals with the most potential to meet your goals. If your goal is cavity nesting wildlife a crop tree could be a tree with a suitable cavity or any tree which supplies nuts. If the goal is cash return crop trees will be those with the most potential on any particular site. Crop trees should be spaced about 20 feet apart. Use flagging to identify the crop trees so changes can be made - if necessary. Once crop trees have been selected remove those trees with crowns which are touching its crown.
- 9) In order to compare species values one needs to know the value of the species per unit (\$per fbm) and the specie's rate of growth. The easiest way to determine the latter is to count the last 10 full year growth rings on any freshly cut stump, measure the width of the ten rings and multiply by 2 to get 10 year growth increment. Divide this number by 10 to determine average annual growth increment for the last 10 years. This information should be recorded by species for each type of site (wet /dry ) the species grows on in the forest. To determine the potential of the site for the particular species select the best ten years for a dominant tree.
- 10) When removing trees to improve the forest or increase the growth rate remember that dead trees are no longer competing but are valuable for the health of the forest.
- 11) When determining whether a tree should be given more space to grow (release) use the live crown ratio. This is the ratio of live crown to the total tree height. If live crown is between 1/3 and 1/2 of the total tree height it does not need release. Step well back from the tree you are measuring (at least 50-75 feet). Hold a stick 1-3 feet long in

one hand. With the top of the stick at the highest point of the highest branch pull your hand down the stick until the top of your thumb is at the bottom of the lowest live branch. The length of stick above your hand now represents the live crown. Now drop the tip of the stick to where your thumb was and repeat until your thumb is at ground level. # of live crown lengths below the live crown. 1 length = 1/2 crown; 2 lengths = 1/3 live crown; 3 lengths = 1/4 live crown; etc.

- 12) Epicormic branches are normally indicators that something is wrong with the tree. It could be too much sun, too much wind, or something more serious that is causing the tree to die. Bur and swamp white oak, which are suppressed, seem to have lots in order to collect more light to stay alive. All oaks and most other forest trees if exposed to too much light too quickly will produce epicormic branches. Some will recover and some will not. On the other hand species like soft maple and ash, which produce epicormic shoots while shaded are definitely in trouble and probably won't live long.
- 13) Although trees along edges interfere with farming operations they are important to the management of the woodlot. The outside limbs and the leaves they carry as well as the small trees and shrubs reduce the harmful effects of wind and sun in the woodlot. They also reduce the spread of weed species such as purging buckthorn and wind borne diseases and insect infestations.

## Vegetation Management Units.

- 1) Old field Natural Walnut
- 2) Sugar maple plantation
- 3) Hardwood arboretum
- 4) Pine plantation
- 5) Hydro right of way
- 6) Scots pine plantation around main building.
- 7) Natural deciduous forest.
- 8) White cedar plantations South of creek
- 9) Scrub along North side of the creek.

### 1. Old-field Natural Walnut

This area will gradually become thicker forest species other than walnut. The reason the berry

canes are doing so well is the combination of light shade and the fact that the cane berry family is triazine resistant and the natural toxin produced by walnuts (juglone) is a triazine similar to atrazine. At present there is walnut canker on some of the stems and it should be removed to prevent spreading the infection to other trees.

### 2. Sugar Maple Plantation

Probably planted in early to mid 1970s by the Canadian Forestry Service - CFS

The South end of the plantation appears to be planted to cherry which is not doing as well.

The maple trees are generally tall and slender with small crowns indicating that they are over crowded. To thin, first select crop trees at about 20 foot centres by putting flagging tape on the trees. When you are satisfied with the selection put a small spot of paint on the south side where it will not be very visible from the access lane. The paint is used to mark the crop trees so everyone will know which trees are staying and which will eventually be cut. Remove 1 tree beside each crop tree and do the same thing every 2 years until the crop tree has room on all four sides.

### 3. Hardwood Arboretum

This most certainly is a CFS planting. Species: Kentucky Coffee tree, hackberry, bitter hickory, shagbark hickory, honey locust, Manitoba maple, basswood, red oak

Some of the Kentucky coffee trees are producing seed. Kentucky coffee tree is a very rare species with only 29 or 30 known sites of natural trees occurring between Petrolia and Windsor. It is therefore worth while keeping and managing them. They should be observed until the female trees have fruit (pods) on them and then remove some of the male trees. In the mean time they can be given additional growing space by removing the Manitoba maple. The other species also need some thinning for release.

### 4. Pine Plantation

This is one of the larger units on the property. It is the only one where much active management is required in order to maintain a healthy stand of trees. Planted pine in general and red pine in particular have very little genetic diversity and therefore have very little ability to differentiate into crown classes. The result is usually a very thick stand which develops smaller and smaller crowns until they all tip over in a wind storm or all die. This

plantation is primarily white pine with some Scots pine and red pine.

The normal method of release is to first select the crop tree rows -every 4<sup>th</sup> row- and then every 4<sup>th</sup> tree. This will result in a spacing of 20 ft x 20 ft between crop trees. Once those trees have been selected the row on one side of the crop tree row is removed along with a few of the other trees in the remaining rows. It is a lot of work unless you can find someone to do it commercially.

I recommend that you talk to the ABCA and find out if they have anyone thinning any of their plantations near this property. If they do you might talk to the contractor and see if he is interested in doing your property and how much he is willing to pay.

The machines they use today cause very little disturbance to the soil and drive over the tops so the limbs are broken and lay flat on the ground.

#### **5. Power line right of way**

The best way to keep trees from growing up under the lines is to mow the right of way every 2 weeks. The second best way is to grow shrubs under the wires and periodically remove any tree species observed growing in the shrubs. If they are deciduous species the stump should be treated with roundup following cutting.

There are some trees in the right of way and adjacent to the right of way, which could cause power interruption unless they are removed. Any person removing trees taller than the wires should have sufficient experience and equipment to remove the trees without hitting the wires. Even if such a person can be found it would still be a good idea to have the power disconnected at the road before working around the wires.

See the section on exotic species - autumn olive.

#### **6. Scots Pine Around The Main Building**

This section is different because the grass is mowed. However the trees still need to maintain 1/3 live crown so some will have to be removed.

#### **7. Natural Deciduous Forest**

Species hard maple ( sugar and black), red oak, black cherry, black walnut , domestic cherry, American beech, white ash, tulip, American blue-beech, Ironwood, bitternut hickory,

##### **Shrubs and vines**

Grape, witch hazel, red osier dogwood, spice bush, cane berries (spp)

This is a very diverse forest because of the mixture

of soils, slope aspect and position on high low and sloped ground. Although some trees could be harvested commercially there is no need to do so at he moment. However some trees should be removed to allow others to grow larger. There are also some trees which are or will be hazards and should be removed for that reason. Still others have disease or insect problems and should be removed to reduce future infection of other trees.

Of particular interest is the medium walnut near the east end of the pine plantation.

There is one pine grove on the north side of the gully through which a main trail passes. It is gradually being replaced by deciduous trees. If the pine woods atmosphere is to be preserved here some of the smaller pines and many of the hardwoods should be removed to provide growing space for the remaining pines.

In some locations the shrubs and vines and blue-beech and ironwood are retarding the establishment of trees which will grow taller and provide a clearer view through the forest. ON the other hand their presence results in more habitat diversity.

#### **8. Cedar plantations.**

These trees are planted even closer than the pines and do require thinning before they all tip over. They should be felled by row similar to the pines. They can then be used for board walk or bridges (as long as the bark is removed) Ironwood poles make good rails under the board walk because they are very rot resistant. However all nailing must be done while Ironwood is still “green” because dry ironwood is very hard.

#### **9. Shrub Area Along The Slope Between the Cedar and Pine Plantations**

Much of the area is dominated by gray dogwood with an understory of skunk cabbage indicating a moist organic soil beneath. If a trail is to cross this area it will likely need to be boardwalk. There are a few willows and green ash beginning to shade out some of the shrubs

## **Invasive and Undesirable Species**

**Buckthorn** this shrub/ tree tends to crowd out native species of trees and shrubs. Because it is in low numbers it should be eradicated now and removed whenever a new plant is found. It is easiest to identify in November when all other trees and shrubs have lost their leaves and this species is still green. The small plants can be sprayed with roundup or the plant can be cut and the stump painted with Roundup within 5 minutes of cutting.

### **Autumn Olive**

This species was a very common wildlife shrub planted throughout the late 1960s to well into the 1990s. It is an aggressive plant and considered invasive because birds spread it everywhere. It was planted here and seems to be dying out except where there is sufficient sunlight along the lane under the hydro wires. Although it is not spreading on this property at present it may spread into the plantations when they are thinned or into the deciduous forest. It is also keeping the trees from growing beneath the hydro wires.

### **Domestic cherry**

It is also called bird cherry because of its attractiveness to birds. It is also the reason it is considered invasive although not nearly as so as buckthorn.

### **Manitoba Maple (Box Elder)**

It is weak wooded, prone to disease and extremely poor form and is considered by most foresters and farmers as a “weed” tree. There is an insect which lives on this tree called the box elder bug *Leptocoris trivittatus*. It is not a threat to humans but it has the annoying habit of congregating in houses in the fall and then coming out of the walls all winter and spring. It has an odour which is even more objectionable when it is crushed. Although it is a native tree it probably should be removed to promote any other trees in the vicinity.