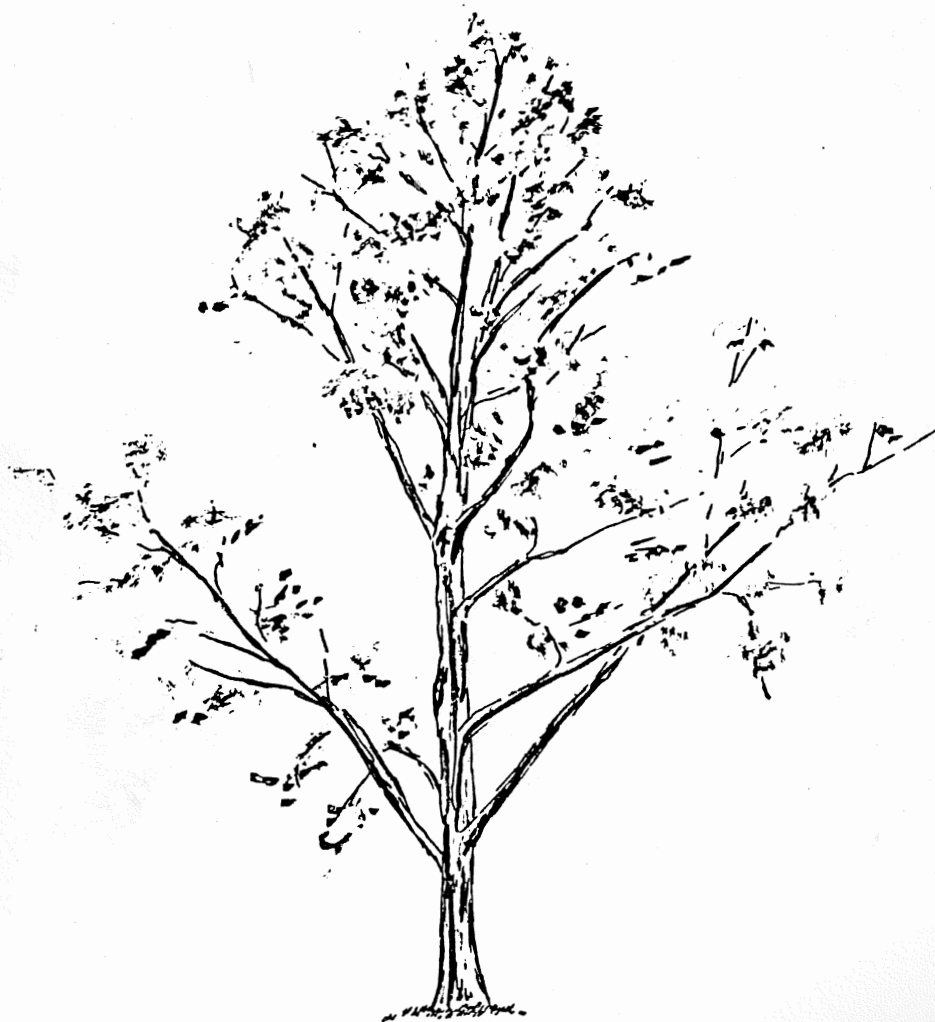


THE  
BERT MILLER  
ARBORETUM



NIAGARA PENINSULA CONSERVATION AUTHORITY

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## The Bert Miller Arboretum

### Introduction

An arboretum can be defined as a place in which specimens of trees and shrubs are cultivated. The trees and shrubs can be native to the particular site or can be species that have been introduced from other parts of the world but will thrive under the local soil and climatic conditions. An arboretum usually has a park-like appearance with mown grass, walkways and interpretive facilities of one type or another.

The development of a plan for an arboretum can be approached in many different ways. A grid system of placement with one or more specimens of each species can be planted; clusters of various species can be randomly placed; planting to obtain certain effects with respect to the physical characteristics of the site is yet another technique. Of course, different planting plans will provide a different character to the arboretum.

Arboreta are planted primarily for educational and aesthetic purposes. A collection of identified trees and shrubs of this type allows for the visitor to compare the various species with respect to shape, overall appearance, leaf shape, size, type and colour, branching, etc. The values of a particular species for blossoms, fall colours or fruit types is also more evident. Such plantings are of great value to students, conservationists, botanists and the general public as a whole. Many times, the home gardener asks himself, what the tree he is planting will look like after ten or twenty years.

### Description of the Site

The site chosen by the Niagara Peninsula Conservation Authority for its arboretum is at the scenic Ball's Falls Conservation Area near Vineland. It is approximately four acres in size and overlooks the deep valley of Twenty Mile Creek where the watercourse carves its path through the Niagara Escarpment. Two man-made ponds are located on the site: one is created by an earth dam across a deep gully which cuts through the eastern third of the area; a second dugout pond lies toward the western extremity. The Area Superintendent's home, surrounded by hedges and a fence, is located in the southwest corner. Natural woodlot touches the site on the west and north sides. The soil is an Oneida loam with good to imperfect drainage.

In recognition of one of the best known botanist of the Niagara Peninsula and, indeed, a lover of all trees, the Conservation Authority has fittingly named the area The Bert Miller Arboretum.

### The Arboretum Plan

Considerable research and site investigation has been carried out to date. Existing arboreta in Niagara Falls, Hamilton, Guelph and Cambridge have been visited to draw together ideas as to the methods and routines involved in Arboretum work. Soil samples of the site have been analyzed by the University of Guelph and a fertilizer recommendation received. A survey of existing shrub and tree species on the top of the slopes surrounding the site was carried out. A list of native tree species of the Niagara Peninsula was compiled. At the direction of the Authority and due to the limited size of the site, only native and near native species

are being considered. From this list a total of 78 selected trees and shrubs were chosen. This choice was based upon vigour, thriftiness, effectiveness and attractiveness (Table 1). Special consideration was given to those with the greatest potential for use in the domestic environment. The selected trees and shrubs were then positioned considering the growth requirements for each individual. The plan was based upon the effective placement of species to compliment each other and provide year round interest with special attention on fall colouring. The smaller dugout pond was used as a focal point.

#### Details of the Proposed Plan

The various items described below are illustrated on the accompanying map (Figure 1):

a) Entrance - It is proposed to establish the main entrance to the Arboretum in the north-west corner behind the Superintendent's house. It would be reached by climbing a set of stairs up the escarpment face from the vicinity of the Blacksmith Shop. It is felt that an access from Regional Road 75 would be dangerous due to the presence of the hills and that an additional parking area at the east end of the site would be utilized by persons seeking recreational pursuits elsewhere in the Conservation Area. By utilizing the main existing parking lot for arboretum parking and erecting a large routed map at the corner of the parking lot it should be possible to easily direct visitors to the base of the stairs. A clearly labelled sign at the base of the steps would further direct people up to the arboretum. Once the visitors have climbed the steps, an arch-type of entrance (Figure 2) covered in vines such as virginia creeper, wild grape or Boston Ivy would welcome them to the Bert Miller Arboretum. Inside the arch it is proposed to locate a dedication plaque

(Figure 3) in recognition of Mr. Miller, perhaps backed by a Kentucky Coffee Tree - a favorite tree of Mr. Miller.

For senior citizens or the handicapped, allowance would be made for access to the arboretum from the Superintendent's driveway from a small parking area.

b) Trail - It is recommended that a trail of fine gravel screenings be provided early in the development to encourage people to follow the route desired and to lead them on a circular tour back to the stairs. A small foot bridge will be required across the stream into the easterly pond.

c) Specimen Planting - Since an arboretum is a show place of quality trees and shrubs it is recommended that quality specimen stock or grafted stock be obtained from a recognized source of quality stock such as Sheridan Nurseries. This stock would ensure proper shape and quality. Where possible, three individuals of each selected tree or shrub should be purchased. Over a period of years, the number should be reduced until after approximately 15 years only the best specimen will remain for each type of tree or shrub. The specimen trees should be planted with great care to ensure good growth.

d) Labelling - Each planted group should be labelled with both common and latin names. The name plate could be mounted at or near ground level with an unremovable concrete type of base (Figure 4).

e) Pond - The shallower of the two ponds would provide an excellent focal point for the arboretum and could serve as a backdrop for photographs (especially for wedding parties using the church). In order for it to be utilized to its fullest, arrangements should be made to improve the clarity of the water. Perhaps addition of allum or bank and bottom lining would accomplish this goal.

- f) Benches - It is proposed to locate 4 benches at the points shown for rest stops.
- g) Fencing - Lengths of rail or pole fencing along the Superintendent's driveway would help to enclose the site. A passageway should be left to allow for access by senior citizens, etc.
- h) Maintenance - Continual maintenance of the site will be required. The turf should be well managed. Mulch should be placed around each tree to maintain soil moisture and protect the trees during mowing. Any dead trees should be replaced as soon as possible and all plants should be watered regularly during dry weather, and selective pruning carried out annually.

#### Financing

The greatest single cost incurred for the development of the arboretum will be the actual purchase of the specimen trees themselves. An estimated 200 trees and shrubs would be required. Because of this large cost and the type of project involved, it is proposed to request the Authority Foundation to raise the required funds. By a series of press releases, and notices to various persons and organizations, donations could be received by the Foundation to be put toward the purchase of planting stock. Acknowledgement of donors could be made on the back panel of a brochure.

The estimated cost for the arboretum project would be \$15,000. Of this total it is estimated that \$12,000 would be spent in the purchase of specimen trees, planting, and labelling. The remaining \$3,000 would be required for turf improvement, trail construction, stairs and signs.

This total does include annual maintenance costs and is based upon development during 1977.

Brochures

It is proposed to develop a brochure for public distribution, especially to visitors at the site. This document would contain a picture and biography of Bert Miller, a species list of the trees and shrubs in the arboretum, a map of the site, and a list of the donors who assisted with the project.

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# FIGURE 1

## ARBORETUM PLAN

See Table 1 for species

