



# Ancient Forest Exploration & Research

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## SITE VISIT REPORT #7

An Old-growth Forest Assessment for the

### Catchacoma Forest

Peterborough County, Ontario

prepared January 9, 2020 and revised March 5, 2020 by Carling Dewar

#### Site Information

<b>Site name and location</b>	Catchacoma Old-Growth Forest (South and North) <a href="#">44.768259, -78.350542</a>
<b>Land designation(s)</b>	South: Crown and private land North: Crown land
<b>Surveyors</b>	Various (see “Dates visited and details” below).

#### Summary

The Catchacoma Old-Growth Forest is a large old-growth eastern hemlock forest in northern Peterborough County, Ontario. It is one of the most impressive examples of old growth that we have observed in the County, while still providing a variety of recreational and commercial activities. These activities differ between the south and north portions of this forest, so these areas will be assessed separately in this report. We found an exceptionally old tree estimated to be 349 years of age in the northern portion where historical human activity is lower than in the southern portions of the stand. Selection logging began at the time this report was completed.

#### Site Description

The Catchacoma Old-Growth Forest (OGF) is an eastern hemlock-dominated forest located approximately 60km north of the City of Peterborough. It is bordered by Kawartha Highlands Provincial Park to the east, County Road 507 to the west, Cedarwood Drive to the north and Baldwin Bay Road to the south. This forest is identified as a “mature and old-growth conifer stand” in a 2012 report published by the Bancroft Minden Forest Company (Clark & Nitschke 2012); mapping by AFER using the Ministry of Natural Resources and Forestry (MNRF) Forest Resources Inventory (FRI) data and ground-truthing by AFER later confirmed this. Although more recent (2007) data suggests that the “old-growth” portion of this forest is much smaller than the earlier FRI data (1987-2003) indicates (Figures 1 and 2), our reconnaissance and surveying efforts indicate that the 2007 data are likely inaccurate and severely underrepresent the size of this old-growth forest. As such, we based our assessment on FRI data collected between 1987 and 2003 by MNRF (Figure 1). According to these earlier data, the contiguous old-growth forest area is approximately 550 hectares (1,375 acres), which makes it the largest known eastern hemlock forest in Canada (Quinby 2019). Much of the forest is on Crown land although several cottages can be found in the southern portion of the forest bordering Catchacoma Lake (Figures 1-3).

As of October 2019, AFER staff explored approximately 20% of the forest east of County Road 507, between Baldwin Bay Road to the south and the snowmobile trail to the north (Figures 1-3) during several day trips. Of all the sites visited in Peterborough County since March 2019, the Catchacoma OGF is the most impressive.

**South Catchacoma Forest Site Description** (see Figure 3 for general boundaries): This portion of the Catchacoma OGF is adjacent to Baldwin Bay Road and within walking distance to several cottages. Two to three cars can park on the north side of the road after the second bend, where the road widens. A trail leads from this parking area to a lookout; several side trails branch off the main trail along the way. Along the valley near the start of the trail, there are several large white pines and eastern hemlocks; slopes are eastern hemlock-dominated, and the main hilltop (where the lookout is located) is characterized by eastern hemlock, red pine, and red oak. Many trees surrounding the trail system are marked with a band of orange paint (e.g., to be cut), which looks to be several years old. According to the 2019-2020 Bancroft Minden Forest Company (BMFC) Operations map (Figure 4), no harvest is scheduled here this winter.

To avoid hiking trails, most forest surveys were conducted to the west of this trail, centered around a neighboring hilltop. Very few trails were found on this side; those that were found were overgrown and likely created during tree marking/logging operations. Only AFER staff were involved in conducting surveys in this area.

Throughout these southern areas, AFER staff found little coarse woody debris (CWD; logs greater than 10cm in diameter). Considering the proximity and easy access to this area by cottagers, it is possible that much of the CWD in this area was taken for firewood.

**North Catchacoma Forest Site Description** (see Figure 3 for general boundaries): This portion of the Catchacoma OGF can be accessed via a snowmobile trail; a large parking lot is located at the trailhead just off County Road 507. Surveys were conducted by several groups of high school students during two day-trips. During the first trip, we conducted [protocol 2](#) on the west side of the stand; during the second trip we conducted [protocol 3](#) on the east side since few trees had met our minimum size requirement on the west side (Quinby 2020). Surveys in this portion of the OGF began 50m south of the snowmobile trail mid-way point (where the trail takes a sharp turn north) and continued east until we reached the north-south orientated Pencil Creek. Eastern hemlock and white pine were abundant; red oak was found occasionally. The largest and oldest eastern hemlock and white pine trees in the Catchacoma OGF were found in this area. More CWD was observed in the north relative to the south; continued data analyses will investigate whether the difference is significant.

Few side trails were found in this area, but we found evidence of hunting (e.g., signs for traplines and bait stations) and trees marked with a band of orange or yellow paint throughout the stand. In addition, some trees are marked with blue paint to indicate their intended survival (for retention) in the stand. The 2019-2020 BMFC Operations Map indicates that a selection harvest is scheduled for this stand this winter (Figure 4 and Table 1). This has been confirmed by AFER staff through correspondence with BMFC and field observations of logging operations, which started prior to the completion of this report.

The average tree age in this area based on tree core samples is 177 (41 years older than average tree age in the south) and one tree is estimated to be 349 years old (162 years older than the oldest tree aged in the south).

**Table 1.** 2019-2020 Bancroft Minden Forest Company Annual Work Schedule (MNRF 2018a; highlight added)

BLOCK #	TOWNSHIP	LICENSEE	JOBBER	Pre-harvest inspection/tree marking direction Complete	Tree Marking Status	Best Guess of Start-up	Carry over from 2018-19 AWS
17	Monteagle/Carlow	H.W. Robinson Haulage	H. Robinson	N/A (salvage)	N/A	ASAP	N
1001	Airy	Algonquin Firewood & Forestry	J. Chartrand	Y	N/A	spring	N
1052	Cardiff	G. Dillabough Forest Products Ltd	Dillabough	Y	Complete	summer	Y
1062	Dungannon	Freymond Logging Co. Ltd.	Freymond	Y	Complete	fall	Y
1066	Mayo	Freymond Logging Co. Ltd.	Young	Y	Complete	spring	Y
1069	Mayo	G.Dillabough Forest Products Ltd	Dillabough	Y	Complete	winter	Y
1074	Cashel	Freymond Logging Co. Ltd.	Freymond	Y	Complete	summer	Y
1078	Cashel	Neilson Lumber Ltd.	Snider	Y	Complete	winter	N
1086	Anstruther	Neilson Lumber Ltd.	Snider	Y	Complete	fall	Y
1090	Monmouth	Minden District Forestry Services	Young	Y	Not Started	summer	Y
1098	Cavendish	Minden District Forestry Services	Danilko	Y	Complete	winter	Y

## Dates visited and details (9 sampling trips):

### South:

- Reconnaissance:
  - Sunday January 27, 2019
    - Surveyors: George Quinby and Francis Quinby (volunteers)
  - Tuesday June 11, 2019
    - Surveyors: AFER staff (Dr. Peter Quinby and Carling Dewar)
- Lichen collection training:
  - Tuesday June 25, 2019
    - Surveyors: Mireille Martel (lichen technician) and AFER staff (Dr. Peter Quinby and Carling Dewar)
    - Three 5x5m plots sampled
- Forest surveys (Figure 6):
  - Monday July 22, 2019
    - Surveyors: AFER staff: Carling Dewar, Laura Collings, Hayley McGregor
    - 2 plots surveyed using protocol 3<sup>1</sup>
  - Tuesday July 23, 2019
    - Surveyors: AFER staff: Carling Dewar, Laura Collings, Hayley McGregor
    - 3 plots surveyed using protocol 3
  - Thursday August 1, 2019
    - Surveyors: AFER staff: Carling Dewar, Laura Collings, Hayley McGregor
    - 4 plots surveyed using protocol 3

### North:

- Reconnaissance:
  - Monday October 7, 2019
    - Surveyors: Carling Dewar (AFER) and Darren Smith (volunteer)
- Forest surveys:
  - Tuesday October 8, 2019
    - Surveyors: AFER staff (Dr. Peter Quinby, Carling Dewar) and YLS class
    - 10 plots surveyed using simplified protocol 2
  - Tuesday October 15, 2019 (Figure 6)
    - Surveyors: Carling Dewar (AFER) and YLS class
    - 6 plots surveyed using protocol 3

<sup>1</sup> For details on protocols visit [www.peterboroughgrowth.ca/our-protocols](http://www.peterboroughgrowth.ca/our-protocols)

## Old-growth features

### 1. Tree ages:

South: average age: 136; maximum age: 187 (18 trees cored)

North: average age: 177; maximum age: 349 (14 trees cored)

### 2. Tree species present:

Mid to late succession species: eastern hemlock, American beech, sugar maple, white pine, red pine, red oak, white oak, yellow birch

Early succession species: white ash, ironwood (1 observed), red maple, striped maple, white birch, largetooth aspen (1 observed)

### 3. Coarse woody debris and snags (*none, uncommon, common, abundant*):

South: uncommon

North: common

### 4. Super-canopy trees present? Yes

### 5. Pit and mound topography present? Not noted; terrain is very rocky with shallow soils which may falsely resemble this topography.

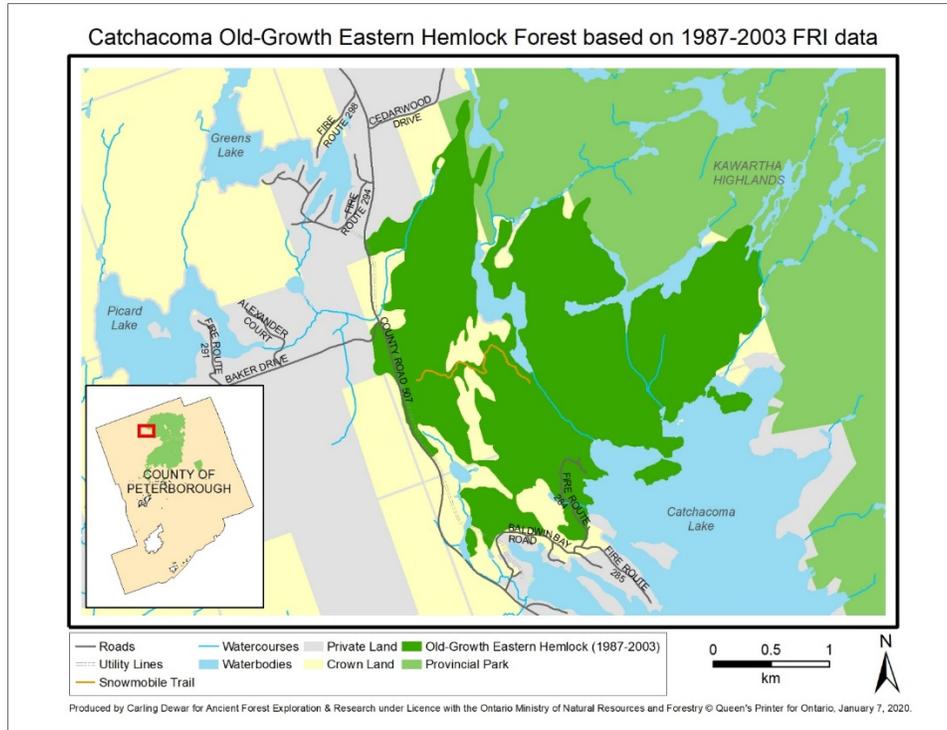
### 6. Evidence of human disturbance? Yes; disturbance from minor historical logging in the south and recreation (both areas) is evident. Impact from recreation in the south is higher, likely due to the close proximity of cottages.

### 7. Wildlife observations: Moose scat and den sites for medium-sized mammals were observed; moose observed from lookout during one reconnaissance trip. Several bird and amphibian species were heard/seen - see table below for more information.

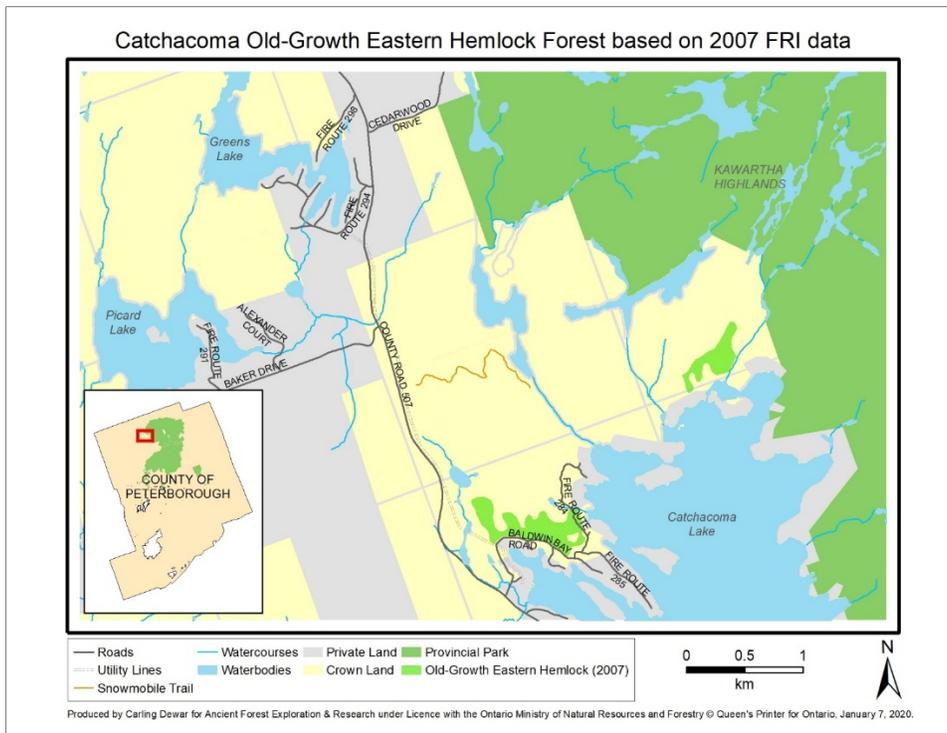
**Table 2.** Species observed at the Catchacoma Forest

Birds	Birds cont.	Mammals
Red-eyed vireo (heard)	Ovenbird (heard)	Moose seen from south lookout; scat found throughout
Hermit thrush (heard)	Hawk spp.	Red squirrel
Black-throated green warbler (heard)	Woodpecker spp. (heard)	Bear scat and claw marks
Broad-winged hawk (heard)	Pine warbler (heard)	Medium-sized dens observed at the base of trees
Yellow-bellied sapsucker holes observed on eastern hemlock	Amphibians	Chipmunk
Blue jay (heard)	American toad	Insects
Chickadee (heard)	Red-backed salamander	Damselfly

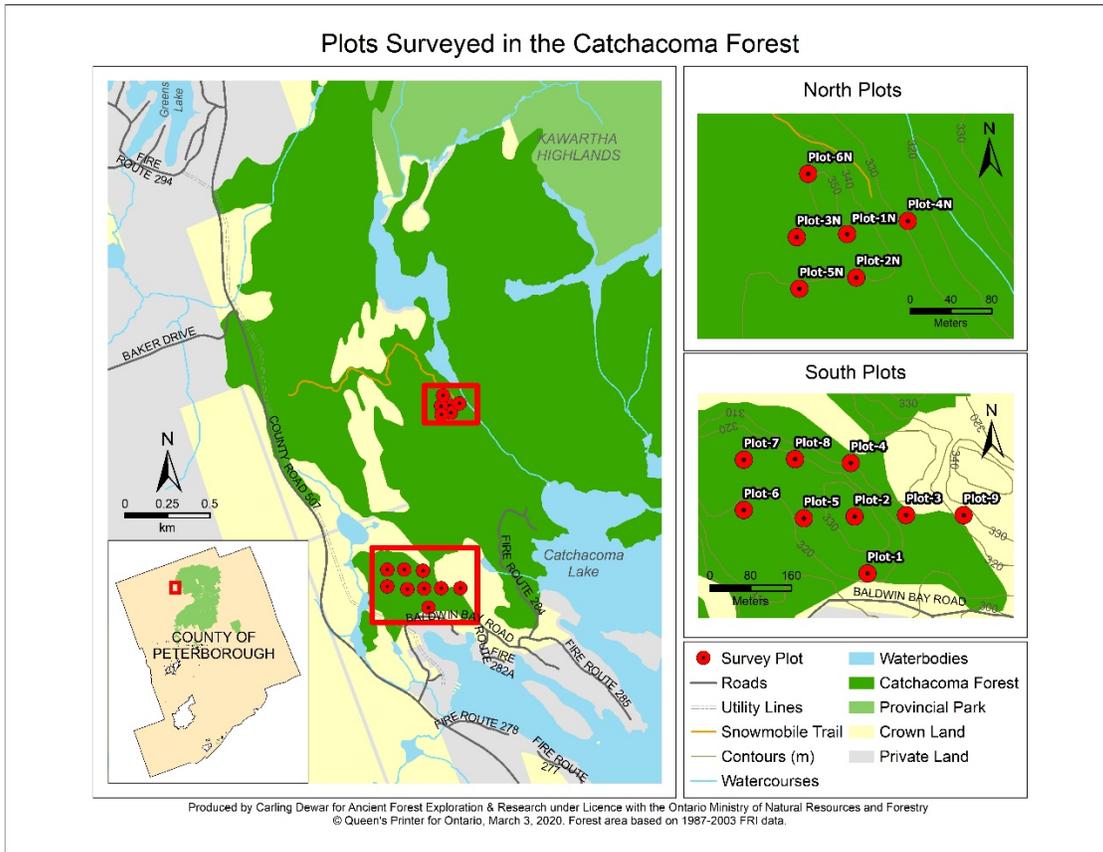
**Note:** Little data on wildlife observations was collected in the north, so observations from the north and south have been combined in this table.



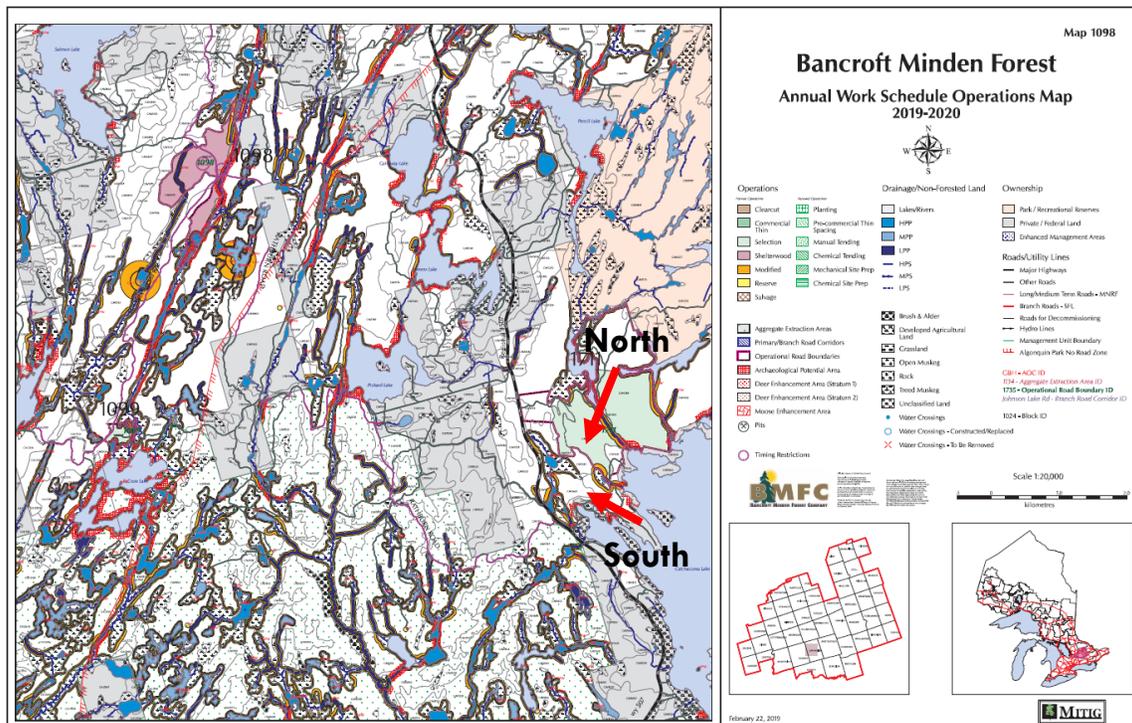
**Figure 1.** The Catchacoma Old-Growth Forest (dark green) based on 1987-2003 Forest Resources Inventory data.



**Figure 2.** The Catchacoma Old-Growth Forest (bright green) based on 2007 Forest Resources Inventory data.



**Figure 3.** Areas visited and plots surveyed in the Catchacoma Forest using protocol 3. South plots were surveyed in July-August 2019; north plots were surveyed on October 15, 2019. See “Dates visited and details” for details.



**Figure 4.** Bancroft Minden Forest Company Annual Work Schedule Operations Map (MNR 2018b). The northern portion of the Catchacoma Old-Growth Forest is found within light green-shaded area.

**Photos**

**South:**



Left: An AFER staff member navigates a steep hill on their way to a survey site. Right: view from the lookout.

**North:**



Left: YLS students in a valley Right: A 349-year-old eastern hemlock located in the valley (73cm DBH; notice that the tree is painted with a yellow ring, indicating that it should be cut).

## Forest designation(s)<sup>2</sup>

<b>South:</b>	<input type="checkbox"/> Young	<input checked="" type="checkbox"/> Mature	<input checked="" type="checkbox"/> Old	<input checked="" type="checkbox"/> Old-growth
<b>North:</b>	<input type="checkbox"/> Young	<input type="checkbox"/> Mature	<input type="checkbox"/> Old	<input checked="" type="checkbox"/> Old-growth

**Note:** The northern part of this forest was more intact/less disturbed than the southern part; thus, it received an “older” designation. Multiple designations indicate that some areas of the forest are older than others.

## References

- Clark, T. and Nitschke, P. 2012. [High Conservation Values in the Bancroft-Minden Forest Version 1.0](#). The Bancroft-Minden Forest. Bancroft Minden Forest Company Inc. 91 pp. Accessed December 6, 2019. [See page 56, figure 4 for map of mature and old-growth forests in this jurisdiction.]
- Ministry of Natural Resources and Forestry (MNRF). 2018a. [Bancroft Minden Forest: Annual Work Schedule Text: Text. Appendix 1: Monitoring – Inspection – Reporting](#). Accessed December 6, 2019.
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- Quinby, P. 2019. An Inventory of Documented Old-growth Eastern Hemlock Forests in Canada. Forest Landscape Baselines No. 35, Ancient Forest Exploration & Research. Powassan & Peterborough, Ontario. ([https://14b54489-f611-4cf7-9e23-d1b121227c63.filesusr.com/ugd/1eacbf\\_377b1df6016b40e68b9f5be240029fd2.pdf](https://14b54489-f611-4cf7-9e23-d1b121227c63.filesusr.com/ugd/1eacbf_377b1df6016b40e68b9f5be240029fd2.pdf))
- Quinby, P. 2020. Minimum Diameters for Old-growth Trees in Ontario’s Northern Temperate Forests. Forest Landscape Baselines No. 36, Ancient Forest Exploration & Research. Powassan & Peterborough, Ontario. ([https://14b54489-f611-4cf7-9e23-d1b121227c63.filesusr.com/ugd/1eacbf\\_d0fad9641f2a464986ae5d9b7478ed6a.pdf](https://14b54489-f611-4cf7-9e23-d1b121227c63.filesusr.com/ugd/1eacbf_d0fad9641f2a464986ae5d9b7478ed6a.pdf))

## Acknowledgements

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<sup>2</sup> Definitions for designations are in progress.