

OLD-GROWTH FOREST INDICATORS

SIGNS THAT SUGGEST A FOREST STAND COULD BE OLD-GROWTH

OLD-GROWTH FOREST DEFINITION

- An Old-Growth (OG) forest stand in Nova Scotia has **20% of its basal area exceeding 100-140 years**, depending on the forest type
- According to the NS Forest Ecosystem Classification system, **only certain forest types are able to reach old growth stage** due to their species composition (see FEC table on right)
- The province recognizes OG stands that are **minimum 1 hectare** in size
- FFN buffers smaller OG pockets down to 0.1 hectares
- MTRI provides private landowners with small incentives to protect patches of OG within a stand
- While the **precise age of a tree can only be determined by taking a core sample** and counting the number of growth rings, **many other forest characteristics can indicate that a stand may be old-growth**

FEC 2022 OLD-GROWTH FOREST DEFINITIONS		
OGR AGE	CATEGORY	
	A	B
140	TH1, TH2, TH3, TH4, TH5, TH6, TH7, TH8, TH9; SH1, SH2,	HL3, HL4
125	SH3, SH4, SH5, SH7; MW1, MW2, MW3, MW4, MW5, MW11, MW13; SP4, SP5, SP7, SP8; CA1, FP1, FP2, FP3; KA1, KA2, KA3	
115	WD3, WD4, WM1, WM2	
100	WC1, WC2, WC5, WC8, WC10	HL1, HL2, HL6; CB1, CB3, WB1, WB2, WB3

TREE SPECIES AND SIZE

- Stands **dominated by late-successional species** like red spruce, eastern hemlock, white pine, yellow birch, and sugar maple
- **Increased frequency of large diameter trees** with the following DBH ranges:

>40cm FOR SOFTWOODS **>50cm** FOR WHITE PINE **~50cm** FOR HARDWOODS



STRUCTURAL DIVERSITY

- **Multi-layered** understory and canopy
- Trees in **multiple age classes**
- Messy appearance with **canopy gaps** among patches of larger trees, created by windfall or other natural disturbance and **filled with dense sapling growth**
- Hardwood OG can be harder to recognize due to abundant smaller trees found amongst scattered large, older trees

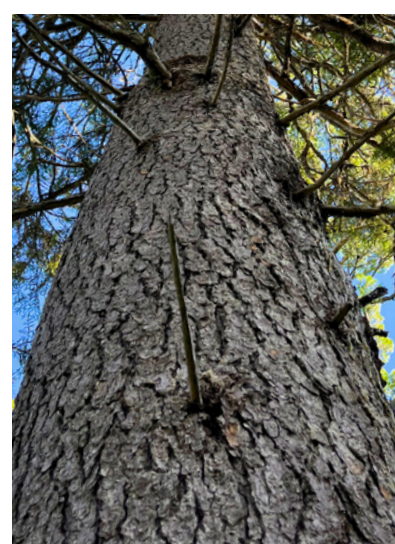


TREE BARK

- The appearance of tree bark on large DBH trees can be an OG indicator



- Yellow birch bark can darken to "black birch"



- Red spruce bark becomes a lighter grey



- Hemlock bark develops a red/orange tinge



- White pine and hemlock bark may have broad strips with deep furrows

OTHER INDICATORS

- Some indicators are not specifically signs of OG when found alone, but can be indicators when found together and/or in higher frequency



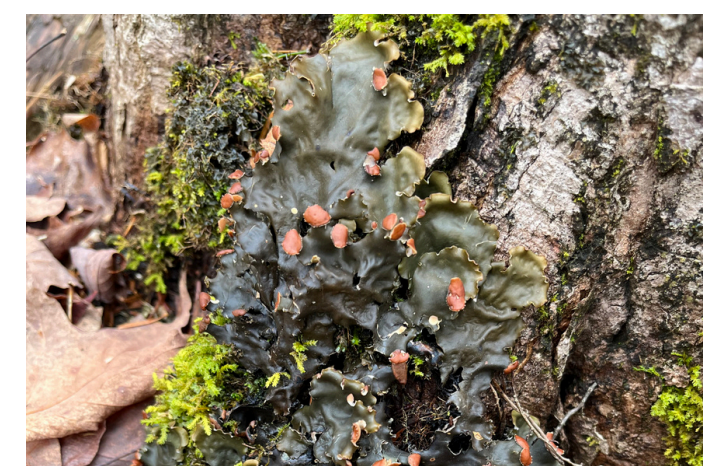
- Deep carpets of moss with pit and mound topography



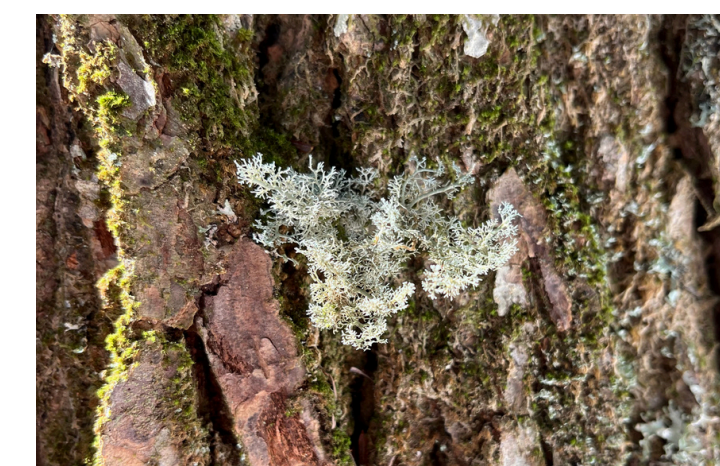
- Thick mosses on tree boles (especially shingle moss)

DEADWOOD AND SNAGS

- **Numerous standing large diameter snags** (especially abundant in hardwood OG stands)
- **Large downed woody material** from late-successional species in varying stages of decay
- **Pit and mound topography**, indicating large trees have been blown down and uprooted, and were left to decay on the forest floor over a long period of time
- Lack of pit and mound topography may indicate forest was logged or land was plowed



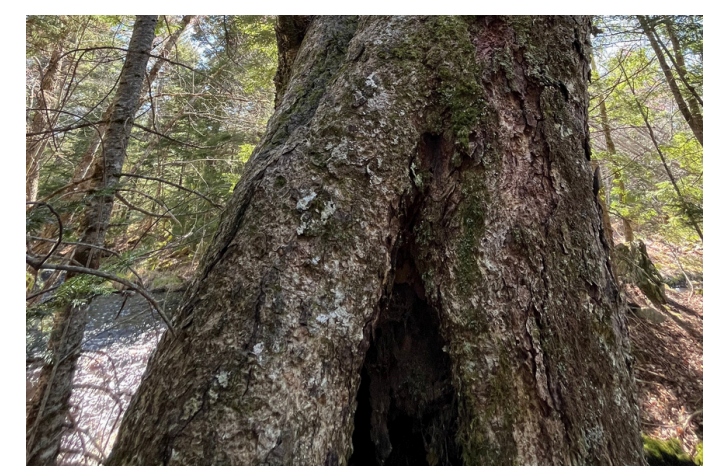
- Pelt lichens at the base of hardwood trees



- Coral lichen on hemlock trees

LACK OF HUMAN DISTURBANCE

- **Cut stumps**, old roads, or structures
- A forest only reaches old-growth if it is left **mostly undisturbed for hundreds of years**



- Hollowed out live yellow birch



- White pine with bayonet crown