

HEMLOCK GROVE AT BOG #380

260-70

MILL BROOK ROAD

Soils with C.E.R.M. Crew Steve Parisio, Chuck Ver Straeten, Aaron Taddeo (intern), Olga (scs), Haley, Natasha 7/13/15

See pages 260-45 to 48 for 11/11/05 1st hike through this grove.

See Bog #380 file, notes of 4/5/06

Estimated hemlock ages [diameters measured with MK's homemade d-rope]

Lightning-struck tree SW of soil pit

57 119y in 6" of radius. Heart rot has removed 2" of radius. Full radius 8", diameter 16" broken off at about 35 ft above ground level. Full dbh 25". Lightning scar most of the way up the NE side of the standing trunk.

Estimated age

$$\text{Full radius at 35' up: } \frac{119y}{6"} = \frac{?y}{8"} \quad 119 \times \frac{8}{6} = 159y$$

* Add height growth to 35 ft = $\frac{420"}{5"} = 84y$ + 84y

243y

159 + 70 = 229y

58 75-year hemlock broken 1 ft. above ground 13" in diameter.

59 Broken-off hemlock NW of soil pit at about 45 ft. Full dbh is 35 1/2". Break is at 24" diameter and 105y.

* Add height growth to 45 ft = 540" = $\frac{540"}{5"} = 108y$ + 108y

213y

105 + 90 = 195y

60 Hemlock log on ground with twisted wood, SW of soil pit.

90 years in a 12" of diameter (?). 18" diameter broken 1 ft above ground.

Therefore $90 \times \frac{18}{12} = 90 \times 1.5 = 135$ year old tree.

Mean growth rate is about 2mm in radius/year - moderate for hemlock. This 4mm/y in diameter. A 12" tree at this rate would be 76y, a 24" tree 152y, and a 36" tree 228y. A 17" hemlock broken 5' up had 2mm/y radius near Bog #380 atlet.

With a 6"/y max. height growth rate: 305mm

Hemlock height growth rates on saplings & young trees, observed between 2 pit & Thom Road, 7/17/15: Maximum 8"/year. Many twigs 6". Mean might be about 5". Slower branches in shade & crown bottom 2' to 4'.

260-71

Diameters of hemlocks measured. Several around soil pit with US Forest Service circular metal tags, about 1" diameter.

- 26" (#3 USFS)
- 34" (#148 USFS)
- 30"
- 33 1/2"
- 35 1/2" (tree MK ③)
- 37" at far W end of grove

VERTICAL GROWTH RATES

Hemlock vertical growth rates from two downed crowns, tree #③ and #①, 2" to 3" /year average, ranging from 1" to 5", 6" max. Use ③ 1/y * as a mean. The crowns must have come down only a few years before because all needles are off, but fine twigs are on.

5" better slope

The hemlocks are variable in age from about 75 years to 200 to 250 years, but there is no reproduction at present.

Nearest tanneries were at Dunraven, 12 miles, operating from 1811 to 1880 both in 1856.

It seems unlikely that hemlocks so close to a road would not be touched, but the grove IS distant from a tannery. Site too flat to show bark roads. Pp. 260-45 to 48 of field notes indicate 10 forest above & to south of Bog #380 so maybe this grove is an extension of it. Any bark roads on this slope? Lot 11 of Great Lots 7 & 10, Darling's 1st Survey, acquired 1900-1905, well after tanning industry ceased.

Other species of trees

RM's large = 27" at W end of the narrow esker-like ridge banding Bog #380, on a ridge summit. 1 26" RM N of soil pit., 18" YB. Seedlings of RM, BC, B, YB, MO

SNY Acquisition: Great Lots 7 & 10, Darling's 1st Survey Lot 11, N side of road, between 1924 & 1938 Lot 22, S side of road, 1900 & 1905

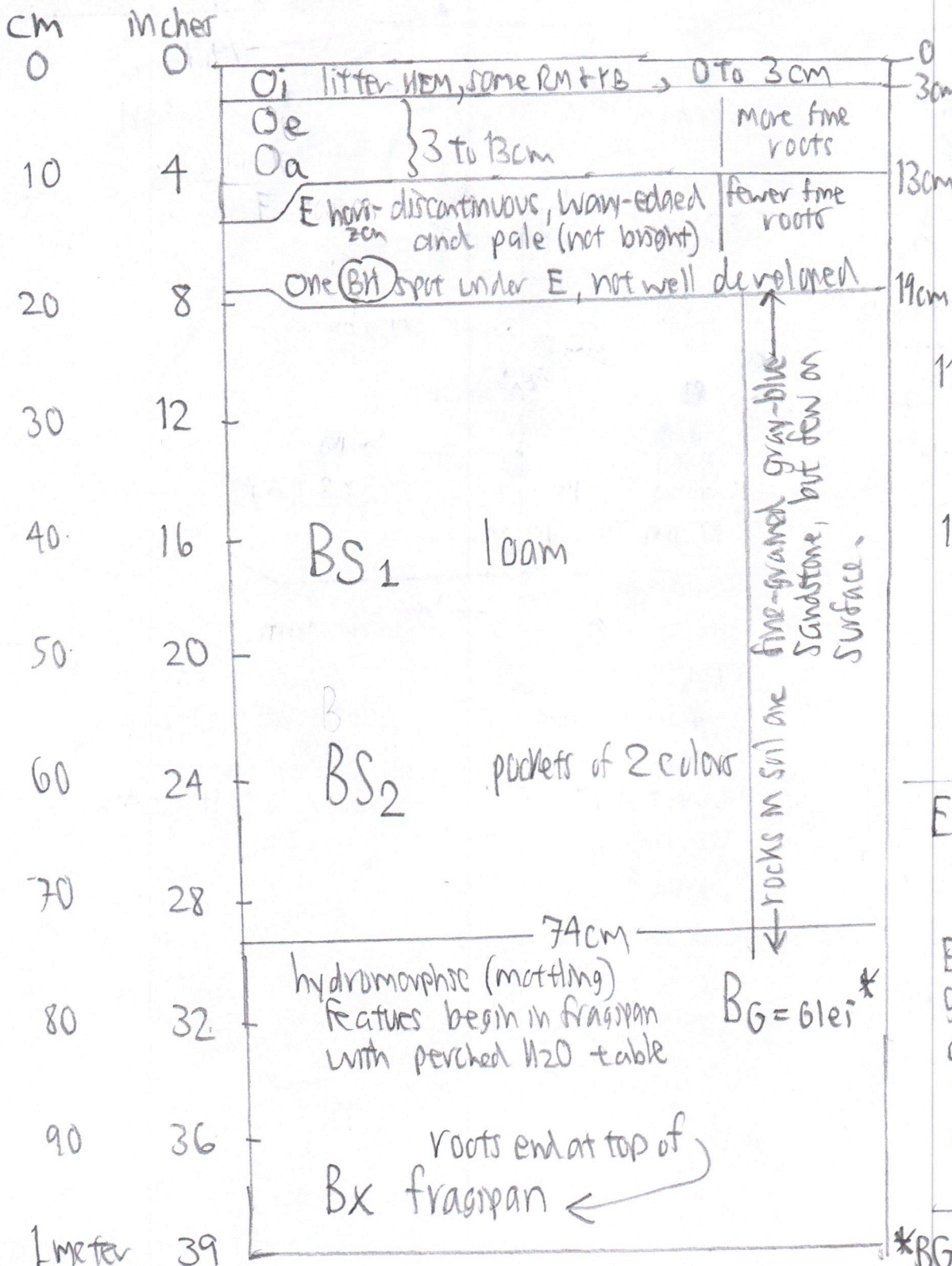
Ground Cover: OX - SINT commonest - LL - COPTIS - TU - VA small Also MEDEOLA, MITCH from hardwood stands nearby.

Poly Ohio, Bozz, Brutherella?

Steve's Soil Pit, 7/13/15

260-72

He had been at the hemlock grave on or about 7/7/15 and dug a previous soil pit ca-100ft east of this one.



SCS (NRCS) has added 2 new soil orders to the original 10 =

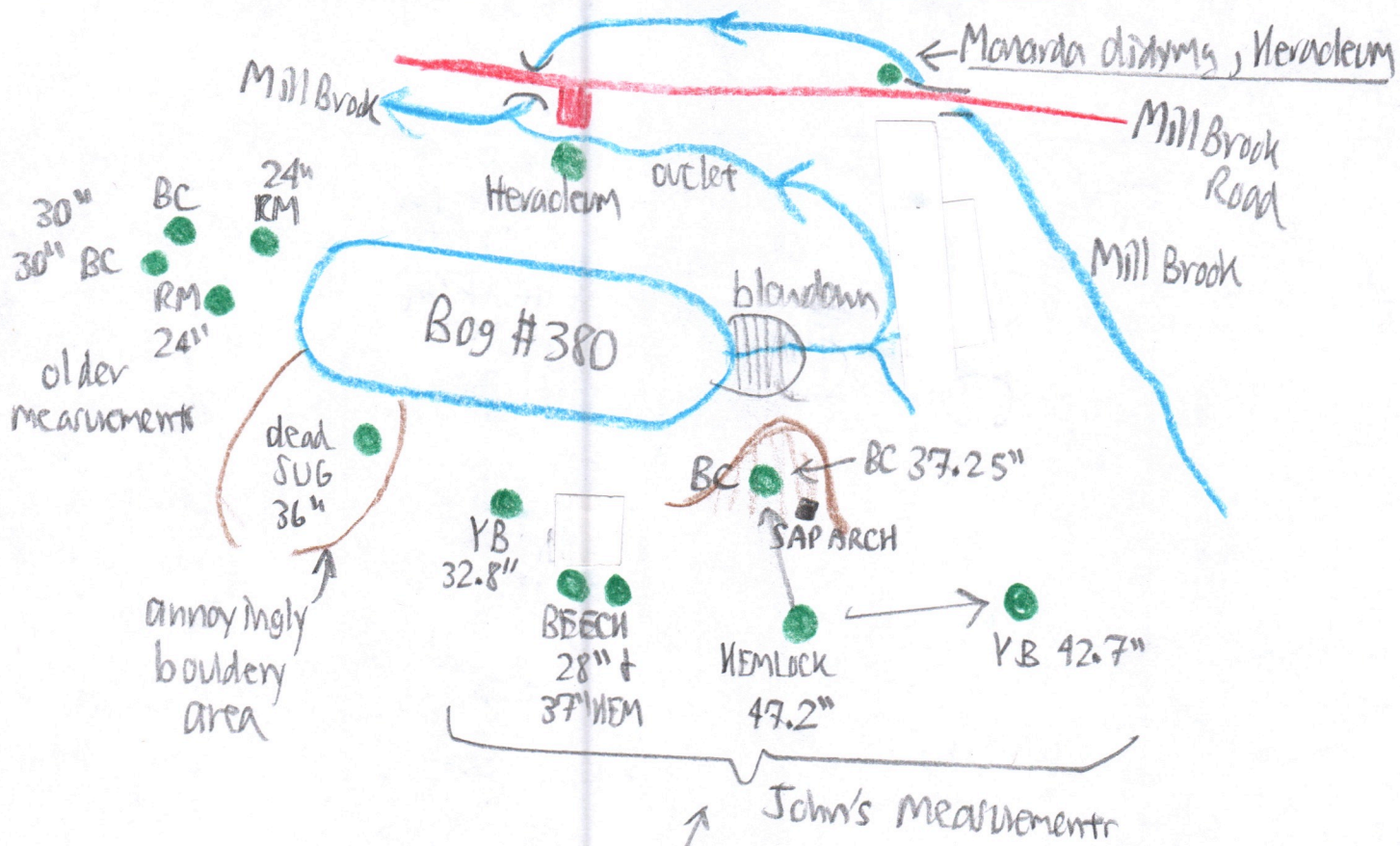
11. Gelisols = permafrost in Alaska
12. Andisols = with Andesite minerals

E horizon is a fine sandy loam to loam.
E horizons (albic) generally may not always be transitional to B & may not be pale gray.

*BG = ferric red-brown ferras gray but not hematite & limonite; other Fe minerals instead

Observations with John Van Benschoten, 8/6/17 after Bog #392 Sids Notch

260-73



37.25" BC is well below HEM + prob. a bit West of it. Sap arch is about 40 or 50' SE of BC.

↑ only YB is about 10' below 47.2" Hemlock, but maybe 200 ft east.

Mileage -	
5.8?	2810
0.0	Haynes Hollow pull off for #392
1.1	Dry Brook rd + Haynes H. rd.
5.3	Bog #380 pull off
11.8	2810