

PLOT 5A-4C

TREE #	SPECIES	coordinates		ingrowthyr	censinyr	deathyr	censoryr												
		x	y					1931	1937	1942	1947	1954	1961	1965	1973	1979	1984	1989	1994
12	RM	38.6	62.4		1931	2012		1.5	1.6	2.2	2.4	2.4	2.7	3.0	3.2	3.5	3.5	3.6	3.8
14	RM	43.9	68.2		1931			1.2	1.3	1.4	1.5	1.6	1.8	1.8	2.0	2.3	2.5	2.6	2.7
15	RO	56.7	67.5		1931			4.0	4.8	5.6	6.7	7.8	9.3	9.7	10.6	11.7	12.3	13.0	13.7
16	RO	58.9	67.5		1931			4.0	5.0	5.9	7.5	9.1	10.6	11.0	12.2	13.0	13.6	14.4	15.2
33	BB	16.0	57.9		1931			7.8	7.8	8.4	8.8	9.1	9.8	9.8	10.4	10.9	11.4	11.6	12.1
40	RO	9.3	43.0		1931			6.1	7.0	8.0	9.1	10.4	11.6	12.0	12.7	13.5	13.9	14.4	14.9
43	RM	2.3	27.7		1931			3.1	3.2	3.5	3.8	3.9	4.2	4.3	5.0	5.3	5.5	5.6	5.6
51	CO	27.5	38.5		1931			6.0	6.9	7.9	8.9	9.8	11.0	11.5	12.4	13.2	13.8	14.2	14.7
57	BG	45.2	36.2		1931			4.4	4.9	5.4	6.0	6.5	7.6	7.7	8.5	9.2	9.7	10.5	11.0
59	BB	55.1	36.4		1931			1.1	1.7	2.0	2.6	3.0	3.6	3.8	4.2	4.6	4.7	4.9	5.2
60	CO	56.8	36.4		1931			6.1	6.7	7.6	8.6	9.5	10.6	11.0	11.9	12.6	13.0	13.4	13.8
62	RM	63.8	43.0		1931	2013		2.2	2.4	2.6	2.9	3.1	3.3	3.4	3.8	4.1	4.3	4.5	4.6
67	WO	55.5	14.9		1931			12.3	13.2	13.9	14.6	14.9	16.3	16.5	17.0	17.2	17.5	17.7	17.9
68	BB	53.3	29.0		1931			0.6	0.6	1.2	1.6	1.9	2.1	2.2	2.3	2.4	2.5	2.5	2.5
80	RM	35.1	11.4		1931			4.4	4.9	5.5	6.1	6.6	7.1	7.4	7.9	8.2	8.3	8.4	8.4
88	RO	19.5	20.6		1931			4.2	5.4	6.5	7.6	8.5	10.5	11.1	12.3	13.3	14.0	14.7	15.4
89	RO	18.2	21.1		1931			2.8	3.7	4.6	5.8	6.9	8.3	9.0	10.3	11.4	12.3	13.1	14.0
96	BB	1.1	4.4		1931			1.1	1.6	2.1	2.4	2.5	2.7	2.8	3.2	3.4	3.5	3.6	3.8
110	BB	53.8	16.1		1931			1.6	2.6	3.5	4.3	5.3	5.8	5.9	6.4	6.9	7.2	7.5	7.9
114	BB	45.7	62.5	1973											2.5	3.1	3.2	3.4	3.5
116	BE	14.9	39.4	1979												1.9	2.1	2.5	3.1
118	MW	13.7	57.2	1994															1.7
119	MW	20.1	59.3	1994															1.3
122	HM	63.2	53.5	1979												1.8	1.8	2.7	3.4
123	HM	62.0	53.5	1994															2.2
124	BG	34.5	35.2	1994															1.4
126	RM	27.0	67.9	1979												1.5	1.6	1.8	1.9

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diameter at breast height (in)																					height (ft)		
1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2001	2007
3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.0	3.8	4.0	3.8							
2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.8	2.7	3.7	2.7	2.8	2.8	2.8	2.8		
13.8	14.1	14.1	14.3	14.5	14.6	14.8	14.9	15.1	15.1	15.2	15.3	15.5	15.9	15.7	15.8	16.0	16.1	16.2	16.3	16.4	16.8		
15.3	15.6	15.7	15.9	16.0	16.2	16.3	16.4	16.6	16.7	16.8	17.0	17.1	17.4	17.4	17.5	17.6	17.8	17.9	18.1	18.2	18.3		
12.4	12.4	12.4	12.4	12.6	12.6	12.6	12.6	12.7	12.7	12.8	12.8	12.8	13.1	13.0	13.0	13.0	13.2	13.1	13.1	13.1	13.2		
15.1	15.3	15.3	15.5	15.8	15.8	15.8	16.0	16.1	16.1	16.2	16.4	16.6	16.8	16.9	17.0	17.1	17.3	17.4	17.5	17.5	17.6		
5.6	5.7	5.7	5.7	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.7	5.6	5.6	5.6	5.6	5.7	5.6	5.6	5.6		
14.8	14.9	15.0	15.1	15.1	15.3	15.4	15.5	15.6	15.7	15.8	15.9	15.9	16.1	16.1	16.4	16.3	16.4	16.5	16.6	16.5	16.6		
11.2	11.3	11.3	11.5	11.6	11.7	11.8	12.0	12.0	12.1	12.2	12.3	12.4	12.6	12.7	12.8	12.8	12.9	13.0	13.1	13.2	13.3		
5.2	5.3	5.3	5.4	5.4	5.5	5.5	5.6	5.7	5.7	5.8	5.9	5.9	6.1	6.2	6.2	6.3	6.4	6.5	6.6	6.6	6.6		
13.9	14.0	14.1	14.1	14.1	14.2	14.3	14.4	14.4	14.5	14.5	14.5	14.6	14.8	14.7	14.9	14.9	14.9	15.0	15.3	15.2	15.1		
4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.4	4.5	4.4	4.3	4.4						
18.0	18.1	18.1	18.1	18.1	18.2	18.2	18.2	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.2	18.2		
2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	3.0		
8.4	8.5	8.5	8.5	8.5	8.5	8.5	8.6	8.6	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.6	8.7	8.7	8.7	8.7		
15.6	15.8	15.9	16.0	16.1	16.2	16.3	16.5	16.7	16.8	16.9	17.0	17.1	17.3	17.5	17.4	17.6	17.7	17.9	17.9	18.1	18.2		
14.3	14.5	14.7	14.8	15.2	15.2	15.3	15.5	15.7	15.9	16.1	16.2	16.4	16.7	16.8	16.9	17.1	17.3	17.4	17.6	17.8	18.0		
3.8	3.9	3.9	3.9	3.9	4.0	4.0	4.1	4.1	4.1	4.2	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.5		
8.0	8.1	8.1	8.1	8.2	8.2	8.3	8.3	8.5	8.5	8.6	8.7	8.7	8.9	9.0	9.0	9.0	9.0	9.1	9.1	9.1	9.1		
3.5	3.6	3.7	3.7	3.7	3.8	3.8	3.9	3.9	4.0	4.0	4.2	4.3	4.5	4.6	4.7	4.8	5.0	5.0	5.2	5.2	5.2		
3.2	3.3	3.4	3.6	3.7	3.7	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.7	4.8	4.9	5.1	5.3	5.5	5.6	5.7	5.9		
1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.3	2.4			
1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.0	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6		
3.5	3.7	4.0	4.1	4.3	4.4	4.6	5.0	5.0	5.2	5.4	5.6	5.7	6.1	6.2	6.3	6.5	6.8	7.3	7.4	7.3	7.5		
2.4	2.5	2.6	2.7	2.8	2.9	2.9	3.1	3.2	3.3	3.4	3.6	3.6	3.8	3.8	4.0	4.2	4.5	4.8	4.9	4.9	5.0		
1.5	1.5	1.5	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.2	2.2		
1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.7	2.7		

PLOT 5A-4C

canopy class																								
1931	1937	1942	1947	1954	1961	1965	1973	1979	1984	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
i	i	s	s	s	s	s	i	s	s	s		s			s		s	s	s		s	s	s	
s	s	s	s	s	s	s	s	s	s	s		s			s		s	s	s		s	s	s	
d	c	c	d	c/d	d	d	d	d	d	d		d			d		d	d	c		c	d	c	
d	c	c	d	c/d	d	d	d	d	d	d		d			d		d	d	c		c	d	c	
d	d	d	d	c/d	c	c	c	c	c	c/d		d			d		c	c	c		c	c	c	
d	d	d	d	d	d	d	d	d	d	d		d			d		c	c	c		d	d	c	
d	c	c	i	i	s	i	i	i	i	s		i			i		s/i	s	i		i	i	s	
d	d	d	d	d	d	d	d	d	d	d		d			d		d	c	c		d	d	c	
d	c	d	c	i	i	c	c	c	c	c/d		d			d		c	c	c		c	c	c	
s	s	s	s	s	s	s	s	s	i	s		i			i		s	s	i		i	c	s	
d	c	c	d	c/d	c	d	d	d	d	d		d			d		d	c	c		c	d	c	
s	i	i	s	s	s	s	s	s	s	s		i			i		s	s	i		s	i	s	
d	d	d	d	d	d	d	d	d	d	d		d			d		d	c	c		d	c	c	
s		s	s	s	s	s	s	s	s	s		i			i		s	s	s		s	i/s	s	
d	c	c	c	c	i	i	c	c	c	i		c/d			c		i	i	i		c	c	i	
d	c	c	d	d	d	d	c	d	d	d		d			d		d	c/d	c		d	d	d	
d	c	c	c	d	c	c	d	d	d	d		d			d		d	c/d	c		d	d	d	
s	s	s	s	s	s	s	s	s	s	s		i			i		s	s	s		i	s	i	
s	s	s	s	i	s	s	s	i	i	i		c/d			c		i	i	i		i	c	i/s	
							s	s	s	s		s			s		s	s	s		s	s	s	
								s	s	s												s	s	s
												s			s		s	s	s		s	s	s	
												s			s		s	s	s		s	s	s	
								s	s	s		s			s		s	s	s		s	s	s	
												s			s		s	s	s		s	s	s	
												s			s		s	s	s		s	s	s	
								s	s			s			s		s	s	s		s	s	s	

PLOT 5A-4C

										1931	1937	1942	1947	1954	1961	1965
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016							
s		s	i	s												
s		s	i	s	s	s	s	s	s							
c		c	c	c	c	c	c	c	c							
c		c	c	c	c	c	c	c	c							
c		c	c	c	c	c	c	c	c	butt rot						
c		c	c	c	c	c	c	c	c							
s		s	s	s	s	s	s	s	s							
c		c	c	c	c	c	d/c	d/c	c							
c		c	c	c	c	c	c	c	c							
s		s	s	s	s	s	s	s	s							
c		c	c	c	c	c	c	c	c							
s		s	s	s												
c		c	c	c	c	c	c	c	c							
s		s	s	s	s	s	s	s	s							
s		c	i	i	s	i	c	s	s							
c		c	c	c	c	c	c	c	c							
c		c	c	c	c	c	c	c	c							
s		s	s	s	s	s	s	s	s							
s		s	i	i	s	s	s	s	s						top gone	
s		s	i	s	s	i	i	i	i							
s		s	s	s	s	s	s	s	s							
s		s	s	s	s	s	s	s								
s		s	s	s	s	s	s	s	s							
s		s	s	s	s	s	s	s	s							
s		s	s	s	s	s	s	s	s							
s		s	s	s	s	s	s	s	s							
s		s	s	s	s	s	s	s	s							
s		s	s	s	s	s	s	s	s							

PLOT 5A-4C

											notes
1973	1979	1984	1989	1994	1995	1996	1997	1998	1999	2000	2001
									declining		
										leaning	
										small canopy	
										best tree in plot	
										leaning	
	bent over										
									east of 33		
									west of 33		
					near 51						

PLOT 5A-4C

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		sickly					measure on bulge		dying	dead?	dead
					shares base with 16, moss and lichen						
					shares base with 15, moss and lichen						
					moss and lichen						
					rot, moss, dead stem						top is dead
					moss and lichens						
					moss						
					exposed roots						
				dying	some moss and lichen					not healthy	
									dead?	dead?	dead
				dying	moss up trunk 1 foot				lots of dieback	many dead branches, alive?	
					top dead						
					critter chewed 3 inch hole in base					many woodpecker holes	
					shares stem with 89, moss and lichens						
					shares stem with 88, moss and lichens						
					exposed roots	broken top	broken top		top dead		top is broken
					moss, exposed roots		broken top		broken top		
		hit by falling log	dying?		damaged by fire		dead		dead		
							repaint above branch		read upper yellow line		top is missing
											needs new tag

PLOT 5A-4C

2014	2015	2016	
dead top			
	not doing well	some dead branches	
	broken top		
	broken top		
	measure above branch		
fallen, branch	measured on old DBH line,	fallen over, branches taken over as main stem	
read upper yellow line			

Plot 5a-4c Mount Misery Control. Rectangular plot established in 1931, size is 4419 square feet (approx. 66 fe
Latitude- 41 24 10.29781 W
Longitude- 74 01 09.46040 N
Tree number- unique number assigned to each tree and painted on trunk bark
Species- RO (red oak, *Quercus rubra*), CO (chestnut oak, *Quercus prinus*), SO (scarlet oak, *Quercus coccine*
Coordinates- measured in feet from plot corner
Ingrowthyr- year when ingrowth was first recorded
Censinyr- left censored yr (present in plot when first sampled)
Deathyr- year when death was first recorded
Censoryr- right censoring (e.g., cut down)
Diameter at breast height- trunk diameter in inches rounded to the nearest tenth. Measured with diameter tape
Height- vertical distance in feet from ground to live top as measured with clinometer or laser rangefinder
Canopy class- d= dominant, c= codominant, i= intermediate, s= suppressed (or "o" for overtopped)

et by 66 feet).

ea), BO (black oak, *Quercus velutina*), WO (white oak, *Quercus alba*), SM (sugar maple, *Acer saccharum*

at painted line on all live trees 0.5 inches or greater dbh at line, generally after July 15 of each year to rep

), RM (red maple, *Acer rubrum*), MW (moosewood, *Acer pensylvanicum*), BB (black birch, *Betula lenta*), GB (gra

represent end of year measurement, sometimes measured as late as spring of following year (4/19/32, 10/27/37, 9/2

y birch, *Betula populifolia*), YB (yellow birch, *Betula allagheniensis*), PH (pignut hickory, *Carya glabra*), SH (shag)

9/42, 11/20/47, 11/8/54, 9/6/61, 9/21/65, 8/3/73, 8/8/79, 7/2/84, 8/24/89, 7/13/94, 7/12/95, 8/1/96, 8/8/97, 7/27/98, 7

bark hickory, *Carya ovata*), BA (basswood, *Tilia americana*), CH (American chestnut, *Castanea dentata*), HM (ea

'16/99, 4/26/01, 8/2/01, 8/13/02, ?/03, ?/04, 6/5/06, 1/07, ?/07, 4/10/08 (height), 12/09, ?/10, 11/9/11, ?/12, 8/29/1

stern hemlock, *Tsuga canadensis*), SB (shadbush, *Amelanchier canadensis*), WA (white ash, *Fraxinus americana*

3, 9/9/14)

а), BG (black gum, *Nyssa sylvatica*), BE (American beech, *Fagus grandifolia*), BC (black cherry, *Prunus serotina*)

), DW (dogwood, *Cornus florida*), AL (alder, *Alnus rugosa*)

Mt Misery 5a-4c Control

TREE #	SPECIES	coordinates		DBH (in)			CC			Notes	
		x	y	2013	2014	2015	2013	2014	2015	2014	2015
12	RM	38.6	62.4								
14	RM	43.9	68.2	2.8	2.8	2.8	s	s	s		
15	RO	56.7	67.5	16.2	16.3	16.4	c	c	c		
16	RO	58.9	67.5	17.9	18.1	18.2	c	c	c		
33	BB	16.0	57.9	13.1	13.1	13.1	c	c	c		
40	RO	9.3	43.0	17.4	17.5	17.5	c	c	c		
43	RM	2.3	27.7	5.7	5.6	5.6	s	s	s	dead top	
51	CO	27.5	38.5	16.5	16.6	16.5	c	d/c	d/c		
57	BG	45.2	36.2	13.0	13.1	13.2	c	c	c		
59	BB	55.1	36.4	6.5	6.6	6.6	s	s	s		
60	CO	56.8	36.4	15.0	15.3	15.2	c	c	c		
67	WO	55.5	14.9	18.3	18.3	18.2	c	c	c		not doing well
68	BB	53.3	29.0	2.9	2.9	2.9	s	s	s		
80	RM	35.1	11.4	8.7	8.7	8.7	i	c	s		broken top
88	RO	19.5	20.6	17.9	17.9	18.1	c	c	c		
89	RO	18.2	21.1	17.4	17.6	17.8	c	c	c		
96	BB	1.1	4.4	4.4	4.4	4.4	s	s	s		broken top
110	BB	53.8	16.1	9.1	9.1	9.1	s	s	s		
114	BB	45.7	62.5	5.0	5.2	5.2	i	i	i		
115	RM	56.0	67.1								
116	BE	14.9	39.4	5.5	5.6	5.7	s	s	s		measure above branch
118	MW	13.7	57.2	2.5	2.3	2.4	s	s	s	fallen, branches taking over	
119	MW	20.1	59.3	2.4	2.5	2.5	s	s	s		
122	HM	63.2	53.5	7.3	7.4	7.3	s	s	s	read upper yellow line	
123	HM	62.0	53.5	4.8	4.9	4.9	s	s	s		
124	BG	34.5	35.2	2.1	2.0	2.2	s	s	s		

Mt Misery 5a-4c Control

TREE #	SPECIES	coordinates		DBH (in)			CC			Notes	
		x	y	2013	2014	2015	2013	2014	2015	2014	2015
126	RM	27.0	67.9	2.6	2.6	2.7	s	s	s		
134	MW				0.5			s		get x,y	too small, sprout?
135	RM				0.9			s		get x,y	off plot? Not tagged?

TREE #	SPP	x	y	DBH	NE		SE		NW		SW		Notes
					< 1/2 m	1/2-1 m	< 1/2 m	1/2-1 m	< 1/2 m	1/2-1 m	< 1/2 m	1/2-1 m	
15	RO	56.7	67.5	16.4									
16	RO	58.9	67.5	18.2									
40	RO	9.3	43.0	17.5									
51	CO	27.5	38.5	16.5									
60	CO	56.8	36.4	15.2									
67	WO	55.5	14.9	18.2									
88	RO	19.5	20.6	18.1									
89	RO	18.2	21.1	17.8									

0: No Smooth Patch detected or trace amounts (P:less than 1% cover)

1: 1-25% cover of smooth patch

2: 26-50% cover of smooth patch

3: 51-75% cover of smooth patch

4: 76-100% cover of smooth patch