

**Table 1.** Major permanent plot studies at the Harvard Forest, Petersham, Massachusetts (42.5°N, 72°W).

A. Extensive Plots				
<i>Study</i>	<i>Year established</i>	<i>Location, size and number of plots</i>	<i>Core measurements</i>	<i>References</i>
Hurricane Recovery Plots	1940	Fourteen 0.025-0.1 ha plots across the Harvard Forest ownership in Petersham	Tree density by species (1940, 1941, 1942, 1944, 1948, 1978, 1991); Understory vascular vegetation species presence/absence (1940, 1948, 1978, 1991)	19, 21, 32
Prospect Hill Vegetation Survey <sup>a</sup>	1937	In 1992, 161 plots from the 1937 inventory were re-established, plus 108 more plots that were open land or plantations in 1937. Plot size: 22.5 x 22.5 m, located across the 375 ha Prospect Hill Tract of Harvard Forest	Trees by size and species (1937, 1992); Advance regeneration, vascular understory plants, bryophytes (presence/absence in 1937, cover in 1992); Soil physical and chemical analysis, including evidence of plowing (1992)	6, 24, 26
Montague Sand Plain studies	1993	121 20x20m plots across the ~775 ha sand plain in the town of Montague, MA	Tree size, species, sprouts, age on a subset of 11 plots (1993, partial resurvey 1997); Saplings, vascular understory plants cover (1993); Soil physical and chemical analysis, including evidence of plowing (1993)	7, 9, 24, 25
Hemlock Woolly Adelgid Plots	1995	46 plots across 8 hemlock-dominated stands with differing initial adelgid infestation, 20m x 20m plot size, south-central CT	Tree size, species, hemlock vigor rating (1995-1997, 1999, 2001, 2005) and stand age structure; Vascular species cover, seedling density and height (1995-1997, 1999, 2001, 2005); Soil moisture, temperature, pH and nitrogen mineralization, nitrification and availability (1998-ongoing)	29, 30
EMS Biometry Plots	1993	40 plots surrounding carbon-exchange tower on Prospect Hill Tract of Harvard Forest Plot size: 10m radius	Tree species and growth by weekly growing-season dendrometer measurements (1998-2004, initial diameter measurements in 1993); Litterfall (1993, 1998-2004); Soil respiration and moisture; Coarse woody debris (1999-2004)	3

<sup>a</sup>First survey one year before 75% standing timber blown down by 1938 hurricane. In 1937, the center tree of each plot was tagged to mark the plot, but none of these tags were found in 1992. However, plot locations were carefully noted on 1"=200' maps, so locations could be matched closely.

## B. Intensive Mapped Plots

<i>Study</i>	<i>Year established</i>	<i>Location, size and number of plots</i>	<i>Core Measurement types and dates</i>	<i>References</i>
Mapped Overstory	1990	4 plots, 50x50m, Tom Swamp Tract of Harvard Forest	Tree size, location, species, canopy class (1990, 2003)	5, 16, 17
Hemlock Woodlot	1990	One 120x60m plot, Prospect Hill Tract of Harvard Forest	Tree size, location, species, canopy class (1995, 2002); Sapling density and species (2002); Vascular understory vegetation cover, tree seedling density (2002); Soil nitrogen cycling (2002, 2003, 2004)	14, 15
Hemlock History Plots	1995	4 plots, 30x30m, Prospect Hill and Slab City Tracts of Harvard Forest	Tree size, location, species, canopy class (1995, 2002); Sapling density and species (2002); Vascular understory vegetation cover, tree seedling density (2002)	22
Lyford Grid	1969	32 contiguous 100x100 ft. plots, Prospect Hill Tract of Harvard Forest	Tree size, location, species, canopy class, condition after death, including length and orientation of fallen stems (1969, 1975, 1987-1992, 2001); Soil type/drainage, boulders, stone walls and trails mapped	33
Pisgah Tract	1984	14 20x20m plots, Pisgah Tract, Winchester, NH	Tree size, species, age, canopy position (1984, 1990, 1995, 2000, 2005); Downed stem decay and orientation (1984) Understory vascular plant cover, tree seedling/sapling density (1984)	10, 31
Pisgah Tract	1990	30x30m permanent grid established over 8 ha Pisgah Tract, 115 plots, Winchester, NH	Tree size, species (1990); Plot aspect and microsite (1990) Sapling density and understory vascular plant cover (1990)	10
Montague Sand Plain	1998	4.5 ha area completely mapped for trees and understory, Montague, MA	Trees by location, species and size (1998); 14 species of clonal understory vascular plants mapped (1998)	25