

Forest Service Management Creates Forest Health Problems

Research indicates that increased amounts of black cherry lead to forest health problems

Forest Service Management Creates Black Cherry Monocultures

The 1986 Forest Plan outlined the Forest Service's intent to manage intensively for black cherry in the Allegheny National Forest. Specifically, the Forest Plan states, "emphasize financial returns from production of high-quality hardwood sawtimber." For years, the Allegheny Defense Project has been calling for an end to this preferential management based exclusively on economics.

The management for black cherry is outlined in two primary manuscripts which the Forest Service acknowledges drive timber management in the Allegheny National Forest. A Federal Magistrate recently found the Forest Service's extensive use of these manuscripts "troubling".

Surveys of the Allegheny National Forest have found that even-aged logging practices which focus on clearcutting combined with herbicides and deer fencing have dramatically increased the composition of black cherry in the Allegheny. While black cherry made up less than 1% of this forest over 150 years ago, today black cherry makes up 28% of the forest canopy and more than 50% of the young trees.

Black Cherry Dominance Hurting Biodiversity

Scientists have given extensive warning to the Forest Service that their management practices which dramatically increase concentrations of black cherry in the Allegheny National Forest make the forest more susceptible to natural catastrophes and biodiversity problems:

"These pure black cherry stands are more likely to have understories dominated by plants that interfere with the establishment and growth of herbaceous and woody vegetation." - *USFS Timber Harvest Capability Report (THCR)*.

"Current stand regeneration treatments result in stands which are less diverse, are changing in forest type, and are composed primarily of either black cherry or black birch. The total impact of a major shift of tree species cannot easily be measured, but we know that there are related effects to wildlife habitat and wildlife species habitation." - *Forest Service Adaptive Management Program Summary*.

"Forest type conversion will likely occur in the Northern hardwood stands where a black cherry component exists, and where shelterwood systems and herbicides and/or fences are used to establish advanced regeneration." - *USFS THCR*



"One may question the value, however, of increasingly converting much of the forest to nearly pure stands or monocultures of black cherry." - Whitney, 1990.

"If vast areas of pure black cherry stands were to develop throughout this region, the potential threat from an outbreak of an insect or disease epidemic would be great." - Tilghman 1989.

More Black Cherry Means Insect Infestations

Current research is now indicating that increased amounts of black cherry lead to "statistically significant increases" in defoliations from cherry scalloped shell moth and elm spanworm.

A decade of research in the Allegheny has shown that the amount of black cherry that is in the forest today is indeed having negative impacts on forest health. The graph below shows that the more black cherry that is in the forest, the more problems there are with defoliations. (Morin et al 2001)

Interestingly, on overlay of the dominance of black cherry in the Allegheny National Forest and the area affected by forest health problems shows a direct relationship. The maps below show black cherry densities on the left with crown dieback on the right. The relationship is obvious with the only outliers on the right being dieback on oak types.

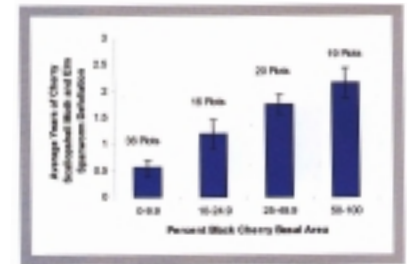
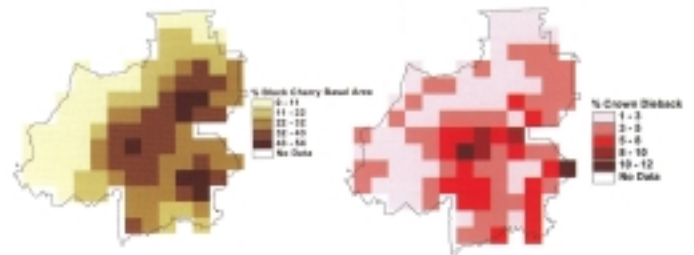


Figure 66. Percent black cherry basal area (1990-1999 FHM data) plotted against the average years of cherry scalloped shell defoliation and elm spanworm (2000-2002) (2002).



Black Cherry More Susceptible to Windthrow

Research has shown that black cherry is more susceptible to wind disturbance than other native species. This was verified by studies of windthrow in New York State. Field visits show that this is also true of the 2003 windstorm in the Allegheny National Forest.

Black Cherry Health Threatened by Ozone

Research documents that black cherry is highly susceptible to ground level ozone. This research has found that when exposed to ground level ozone black cherry suffers from canopy deterioration and growth stunting.