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Field Review Of The Apshawa Preserve And Fence
November 22, 2010

In our role as a watershed protection group operating in the Pequannock River Watershed, we recently learned that the New Jersey Conservation Foundation (NJCF) will be closing off 300 acres of the Apshawa Preserve in West Milford, NJ with a deer-proof fence. Since this site is within our watershed we are very concerned by this project.

According to NJCF, the fence is intended to protect and encourage native plants by preventing deer from browsing on them. While we applaud the idea of promoting native plants, a forest is a complex system. You cannot surround a substantial portion of it with a high fence without impacts that extend far beyond deer and plants. Animals often utilize different areas in different seasons, with specific lands being key to their survival at varying times. That complexity seems to have been missed here. Restricting the movement of wildlife with a fence can be deadly for them, especially in winter. The effect on everything from black bear to cottontail rabbits, and on locally endangered animals such as bobcat and wood turtle, was ignored or at least not fully considered.

In support of this plan, NJCF insists that the Apshawa Preserve is severely over-browsed by deer, that the forest is failing to regenerate through new growth of saplings, and that it is becoming dominated by invasive, non-native vegetation. They state that the fence will keep deer out but not restrict the movement of other forest species. But how accurate are these claims?

On November 22, our Executive Director, Ross Kushner, toured the Apshawa Preserve specifically to consider these points and documented his findings. Provided here are the results:

Deer Overpopulation And Over-browsing

In over 3 miles of travel across this preserve Mr. Kushner did not encounter a single deer. Of course, deer sign was present, but the sign did not indicate particularly high numbers.

There was no evidence of over-browsing. In fact, plants utilized as deer forage were widespread. For example, greenbrier is a greatly preferred food for deer, particularly as winter browse. Where deer numbers are excessive this plant will become scarce or nonexistent. On the Apshawa tract it is abundant (see Figure 1). In several areas thickets of greenbrier were dense enough and large enough to impede travel (see Figure 2).

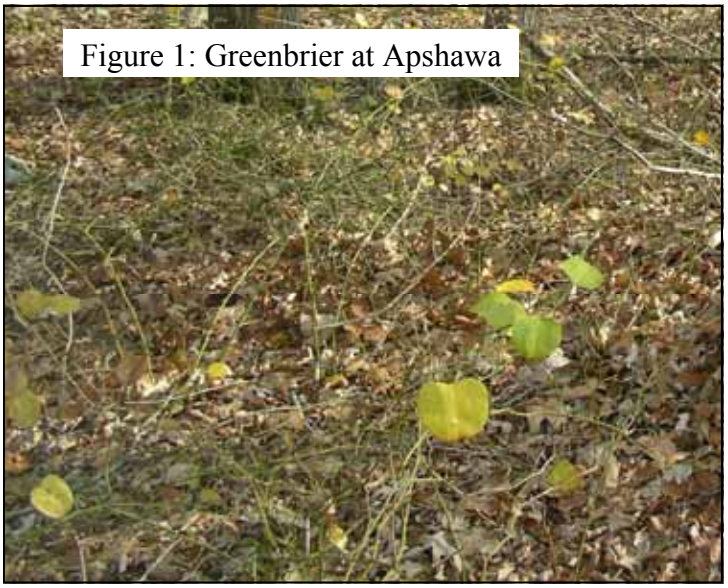


Figure 1: Greenbrier at Apshawa

Figure 2: Thicket Of Greenbrier

Eastern redcedar is another preferred deer browse. Where deer numbers are excessive these trees will be browsed as high as the deer can reach standing on their hind legs. In contrast, the redcedar found at Apshawa had luxuriant growth extending to ground level (see Figure 3). Such growth is never seen where over-browsing is occurring.

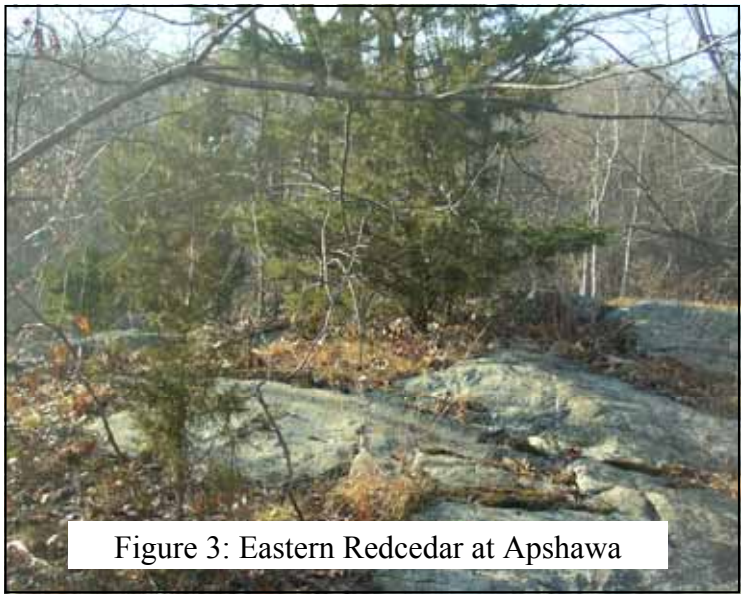


Figure 3: Eastern Redcedar at Apshawa

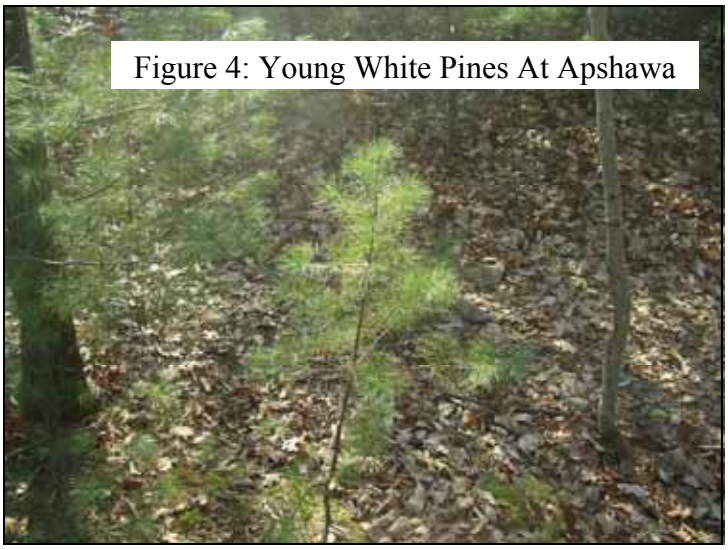


Figure 4: Young White Pines At Apshawa

White pine is eaten by deer when they have over-browsed more desirable plants. Where deer numbers are spiraling, as NJCF has claimed at Apshawa, white pine will be damaged. Yet, there was absolutely no browsing of white pine at Apshawa. Stands of undamaged young pines were common (see Figure 4).

Forest Regeneration

The majority of the Apshawa Preserve is mature forest, where the tall tree canopy is the major impediment to new forest growth. However, where openings exist, sapling growth is healthy, and mixed ages of trees are evident (see Figure 5). There were frequent examples of young, vigorous maple, oak, birch and beech saplings. There is no failure of forest regeneration at Apshawa.

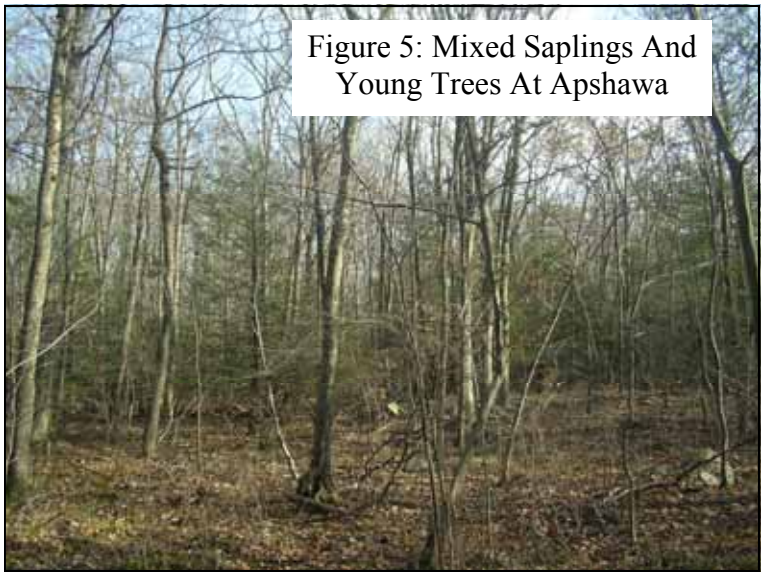


Figure 5: Mixed Saplings And Young Trees At Apshawa

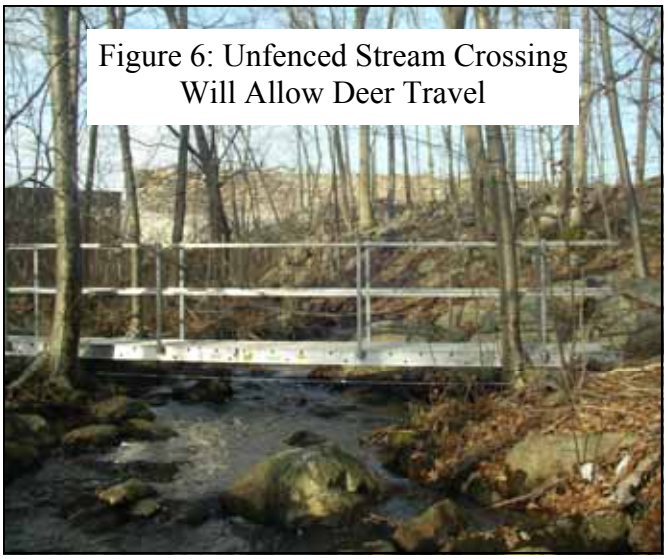


Figure 6: Unfenced Stream Crossing Will Allow Deer Travel

“Deer-proof” fence

This fence crosses multiple streams in its 3-mile course. Each of these crossings required large mesh-free openings to allow the passage of water. These openings will be used by deer to re-enter the fenced area (see Figure 6). Unfortunately, other animals that may not swim, or that do not have the range to find these openings, such as the state-endangered bobcat or the state-threatened wood turtle, cannot make use of these. Therefore, the fence will not impede deer, as intended, but it will certainly obstruct other wildlife.

The location of the fence is also problematic. The highest value for wildlife is found in “edge” cover, where different habitat types meet. The edge where the forest meets the reservoir is a prime example in Apshawa. Unfortunately, the fence bisects this area (see Figure 7).

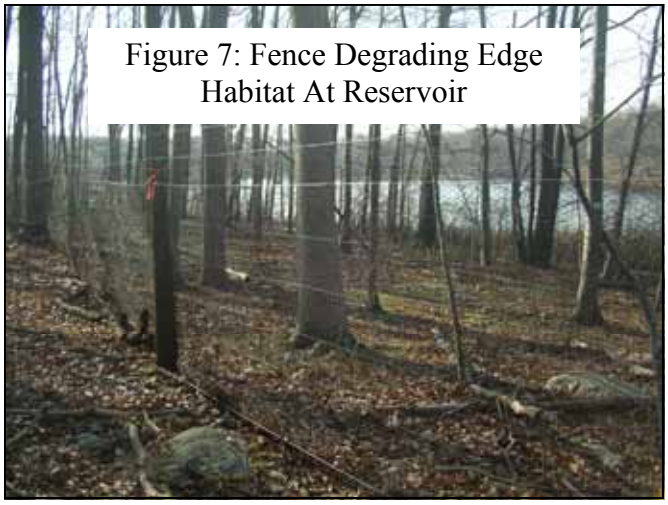
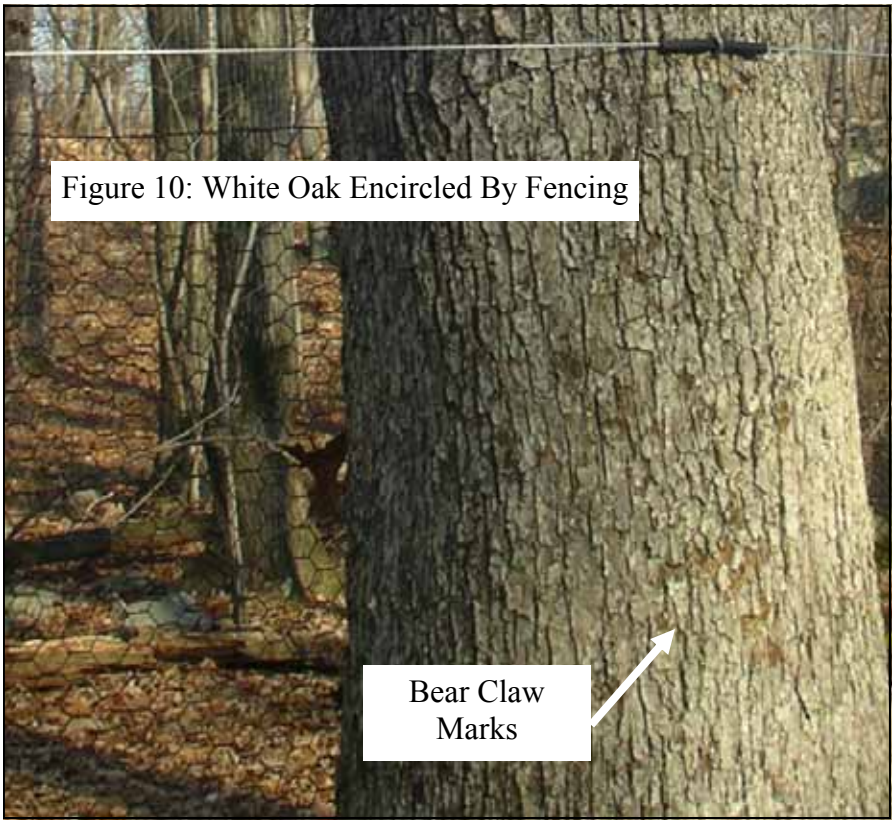


Figure 7: Fence Degrading Edge Habitat At Reservoir

Due to variations in the terrain, there were many locations where the top of the fence was only 3 to 5 feet above ground level (see Figures 8 and 9). To prevent entry by deer, this fence should be a minimum of 8 feet in height. Deer will have no difficulty in crossing over this fence.

Figure 8: Top Wire Of Fence Placed At Waist Height

Figure 9: Top Wire Of Fence Placed At Shoulder Height



In some cases the fence was placed encircling important individual trees. Figure 10 shows a white oak formerly utilized by black bears to collect acorns. Bear claw marks are prominent on the trunk. These white oaks, with large lateral branches, are unusual and are much used by bears. Sadly, this particular oak is now surrounded by fencing.

Invasive And Non-native Vegetation

Little of this vegetation exists. Only two Japanese barberry bushes were found. The overwhelming majority of plants are native and typical. Trees such as hemlock, in real trouble elsewhere in the region, appear to be thriving at Apshawa.

Summary:

Contrary to claims made by NJCF, there is no evidence of over-browsing or deer overpopulation at Apshawa. The fence has been constructed in such a way as to ensure that deer will not be excluded, although other important species will. In addition, the fence was routed with little consideration for significant natural features and areas.

Recommendation:

The scope of this project needs to be drastically altered. Several smaller enclosures, greatly reduced in size, would be more manageable, more suitable, and would accomplish the stated goals without the same undue negative impacts.