Trip Report:
Inside Mashomack's Deer Exclosures

July 29, 2011

Thomas J. Rawinski

U.S. Forest Service
Northeastern Area State and Private Forestry
271 Mast Road, Durham, NH
(trawinski@fs.fed.us)

On July 29, 2011 I had occasion to walk into two of the hectare-sized deer exclosures at The Nature Conservancy's Mashomack Preserve in Shelter Island, New York. I made some notes and took some pictures. One exclosure was in the area north of the house, and the other was in the area known as Section 6.

This was the fourth growing season (2008 through 2011) for the plants within the exclosures. Detailed accounts of the vegetation development will be presented at a later date by Dr. Marc Abrams, who is conducting research here.

How fascinating it was to see the plant life within the exclosures! Was this really Mashomack, where, for decades, the vegetation has been so ravaged by overly abundant deer? Was that really maple-leaf viburnum (*Viburnum acerifolium*) in fine fruit – after only four short years?

Young saplings of many tree species grew knee-high or taller on the forest floor. Forbs of many species showed flower buds, flowers, or fruit. Yes, it was clear that chronic browsing by deer had kept these plants suppressed. I could only imagine the abundance of native pollinators that now work these flowers.

As managers strive to attain a balance between the needs of the deer and the health of the forest, one might consider a future in which most tree species are able to regenerate, and where most of the forbs are able to flower and set seed. One wouldn't expect anything close to the lush greenery presently found within the exclosures, but something in-between perhaps, where, with a bit of searching, one could find some individuals of most of the preferred forbs in flower or fruit. The deer-preferred forbs that I observed within the exclosures are listed in Table 1.

Table 1 is by no means a complete list of deer-preferred forbs that one could use to gauge deer impacts in Mashomack's forest. For example, along one trail I spotted some wild sarsaparilla (*Aralia nudicaulis*), which has been all but eliminated from the interior forests. Similarly, bracken fern (*Pteridium aquilinum*) has also become scarce at Mashomack. The few fronds that I saw were alongside the main road. In the absence of excessive browse pressure, this fern would be common in the dry oak woods.

Table 1. Deer-preferred forbs observed within two deer exclosures at Mashomack Preserve.

Dicots		**Native (N) / Introduced (I)**
Asteraceae (Aster Family)		
Eurybia divaricata	White Wood Aster	N
Euthamia graminifolia	Grass-leaf Goldenrod	N
Hieracium paniculatum	Woodland Hawkweed	N
Lactuca canadensis	Yellow Wild Lettuce	N
Nabalus trifoliolatus	Fall-Rattlesnake-root	N
Solidago bicolor	Silverrod	N
Solidago caesia	Bluestem Goldenrod	N
Solidago rugosa	Rough Goldenrod	N
Symphyotrichum laeve	Smooth Aster	N
Symphyotrichum lateriflorum	Calico Aster	N
Fabaceae (Bean Family)		
Desmodium nudiflorum	Naked Tick-trefoil	N
Lespedeza intermedia	Wand Bush-clover	N
Primulaceae (Primrose Family)		
Lysimachia quadrifolia	Whorled Loosestrife	N
Trientalis borealis	Starflower	N
Scrophulariaceae (Figwort Family)		
Aureolaria virginica	Downy False Foxglove	N
Violaceae (Violet Family)		
Viola palmata	Three-lobed Violet	N
Monocots		
Liliaceae (Lily Family)		
Maianthemum canadense	Canada Mayflower	N
Maianthemum racemosum	False Solomon's Seal	N
Polygonatum pubescens	Solomon's Seal	N
Uvularia perfoliata	Perfoliate Bellwort	N

In addition to the oaks, red maple, sassafras, and beech that grow well within the exclosures, a number of other woody species have become established, or are now released from suppression. These plants are listed in Table 2. Note that many of these, upon maturity, would provide soft mast for wildlife.

The photographs in Figures 1, 2, 3, and 4 show vegetation conditions within and outside the fencing.

Table 2. Some woody plant species established or released from suppression within the Mashomack deer exclosures.

Dicots		**Native (N) / Introduced (I)**
Anacardiaceae (Cashew Family)		
Rhus copallinum	Winged Sumac	N
Rhus glabra	Smooth Sumac	N
Toxicodendron radicans	Poison-ivy	N
Asteraceae (Aster Family)		
Baccharis halimifolia	Groundsel-tree	N
Betulaceae (Birch Family)		
Ostrya virginiana	Hop-hornbeam	N
Caprifoliaceae (Honeysuckle Family)		
Viburnum acerifolium	Maple-leaf Viburnum	N
Cornaceae (Dogwood Family)		
Cornus florida	Flowering Dogwood	N
Rosaceae (Rose Family)		
Amelanchier arborea	Serviceberry	N
Rubus allegheniensis	Allegheny Blackberry	N
Rubus phoenicolasius	Wine Raspberry	I
Salicaceae (Willow Family)		
Populus grandidentata	Big-toothed Aspen	N
Populus tremuloides	Trembling Aspen	N
Vitaceae (Grape Family)		
Parthenocissus quinquefolia	Virginia Creeper	N
Vitis labrusca	Fox Grape	N

Figure 1. Vegetation conditions along a fence line.

Figure 2. Vegetation conditions along a fence line. The crooked tree in the distance is the same tree appearing in Figure 1.

Figure 3. Young hop-hornbeam saplings dominate the forest floor in this photograph.

Figure 4. A close-up of the hop-hornbeam saplings shown in Figure 3.