



Restoration of a Portion of the Gosnell Big Woods

**FWT Habitat Preservation Committee
2014**

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Proposal: Restoration of a Portion of the Gosnell Big Woods

Background

Alien invasive plants: They are green and they do grow.....so why are we concerned with invasive plants?

Invasive plants move into an area where they are newcomers. This means a couple of things: They grow uncontrollably. In the new environment, there are no normal mechanisms (like insects) to control growth. Invasive plants out-compete all the native plants and replace them¹. The normal balance of plants and animals which has developed in nature goes out of whack. If there had been a butterfly that depended on a displaced plant, too bad².

¹ Here's what the USDA says about alien invasive plants: *"An invasive plant has the ability to thrive and spread aggressively outside its natural range. A naturally aggressive plant may be especially invasive when it is introduced to a new habitat. An invasive species that colonizes a new area may gain an ecological edge since the insects, diseases, and foraging animals that naturally keep its growth in check in its native range are not present in its new habitat."*

² Again, here are the words of the USDA: *"It's a matter of ecology. In many cases, plants from other parts of the world are welcomed, manageable additions to our gardens. However, in some situations these non-native species cause serious ecological disturbances. In the worst cases, invasive plants like mile-a-minute, purple loosestrife, and kudzu ruthlessly choke out other plant life. This puts extreme pressure on native plants and animals, and threatened species may succumb to this pressure. Ultimately, invasive plants alter habitats and reduce biodiversity."* If you want to find out more about invasive plants in New York, the following site is a good general reference <http://www.nysgextension.org/glhabitat/epacd/pages/plants/invasives.html>.

Alien Invasive Plants in the Gosnell Big Woods

- The edges of the Big Woods contain alien invasive plant species. These areas are sources for more of the alien plants as they spread into the forest habitat.
- This proposal deals with an area at the south east corner of the Big Woods (see Figure 1, below). A 8500-9000 square foot area on town land had, in the past been cleared of mature trees.
- This sunny area lacks mature trees and is populated with alien invasive plants expanding west into the Woods area. These plants are honeysuckle species, black swallow-wort, ailanthus, privet and autumn olive. (see Figure 2).

Gosnell Woods CE - Invasive Species Project



Figure 1: GIS rendition of disturbed area (provided by K. Blachowski). The point labeled 'Gospp' is the trail post with the 'Passport' marker at the south end of the Big Woods Road.



Figure 2: Photograph of disturbed area (K. Blachowski). Honeysuckle just starting to leaf out.

Proposed Work to Reclaim a Portion of the Big Woods

- Clear the area of invasive plants, starting at the western edge, working in sections 10-foot-on-a side (100 sq. ft.).
 - Woody plants: cut, paint the newly cut surface. Leave cut material on site as cover for wildlife and protection for small trees that we plant.
 - Black Swallowwort: dig by hand. Bag and remove plant material.
- Work will start at the western edge closest to the Woods center and move east over the course of 3 years.
- Keep area cleared free of invasive plants with annual maintenance
- Replant with native tree and shrub species already present in Big Woods

Species	Plant Size	Source
Red and white oak	12-14 inches	3-year old seedlings from yard at 510 Lake Road
Red and white oak	acorns	yard at 510 Lake Road
Black cherry	1-2 feet	yard at 510 Lake Road, Musser Forest ³
Hemlock	8-14 inches	Musser Forest
Spicebush	10-12 inches	1-year old seedlings from yard at 510 Lake Road

Evaluation

Hopefully, this project will serve as a model for further work in the Big Woods and other open space locations. In order to gauge the success of the project and plan for further work, we will document the following.

- Keep track of amount of labor per area cleared
- Monitor effort needed to keep area free of invasives
- Monitor survival of introduced plants

³ The native plants provided by Musser Forest are described at the following website:
<http://www.musserforests.com/browse.asp?m=2&p=360>

Vision: Restoration of a Portion of the Gosnell Big Woods

Ultimately, we would like to see this area serve as a buffer between the heart of the Big Woods and the surrounding frontiers and their invasive plants. We would like to area to be populated with native trees that provide enough shade to inhibit the growth of invasive plant species.

We would also like to provide a history of the work that was needed to aid in the planning of any future efforts.



Figure 3. Image of the heart of the Big Woods. Canopy provides shade and native understory plants is spicebush.

Year 1 2010: Restoration of a Portion of the Gosnell Big Woods



Area cleared by Habitat Volunteers in 2010. (The uncleared brush in back of rehab zone is representative of plant material that was removed.)

The edges of the Gosnell Big Woods contain alien invasive plant species. These areas are sources for more of the alien plants as they spread into the forest habitat. In the southeast corner of the Big Woods was a sunny area that lacked mature trees and contained a thicket of alien invasive plants. This tangle was expanding west into the Woods.

Ten volunteers -- John Bok, John Boettcher, Sharon Galbraith, Ron Happ, Alisa Kokx, Dave Lentz, Norma Platt, Nancy Poeth, Tom Poeth and Warren Sauer -- worked over the summer and fall of 2010 to remove invasive vegetation from an 8500-9000 square foot area at the edge of the Gosnell Big Woods.

The volunteers cleared the area in one season, investing 60 hours to remove the scrubby tangle that contained ailanthus, privet, honeysuckle, autumn olive and grape vines. The brush that generated by the clearing activities was cut up and piled along the east and south sides of the clearing. The original plan conservatively estimated that this step would take three seasons so the one season needed is much lower than expected. The effort we spent translates to the following metric: one hour of labor will clear a square twelve feet on a side.

The next step, planting native trees and shrubs and installing cages⁴ to protect them from browsing deer, took 14.5 hours. These plants were red oak (7), black cherry (1), tulip tree (1), Canadian hemlock (2) and spicebush (10).

As of October, some of the roots left from the scrub were resprouting and seeds were sprouting (ailanthus, tulip tree and sumac). In future growing seasons, we plan to remove this new growth.

⁴ The cages were fashioned from bamboo poles provided by Tom and Nancy Poeth. The poles were planted vertically and wrapped with plastic netting. From a distance, these structures are unobtrusive.

Years 2-4 (2011-2014) : Restoration of a Portion of the Gosnell Big Woods

The following table summarizes the work in the restoration area.

Year	Purpose	Number of visits	Dates	Total hours
2010	Clearing/planting			74.5
2011		0		
2012	Maintenance	2	6/14, 9/20	18
2013	Maintenance	2	6/20, 7/11	32.5
2014	Maintenance	3	6/19, 9/29, 10/2	39

Over the years, members of the Habitat Preservation Committee that participated were: Sally Bauman, John Boettcher, Carolyn Brown, Eric Brown, Joe Coppola, Sharon Galbraith, Margaret Hall, Tom Geiser, Dennis Gent, Shari Gnolek, Ron Happ, Alisa Kokx, Dave Lentz, Ruth Morrill, Tom Nash, Norma Platt, Nancy Poeth, Tom Poeth, Warren Sauer and Larry Yost.

We worked to keep the area cleared of invasive plants and competing plants, to monitor and cage trees and to plant new tree seedlings.

As of October 2014, the population young trees and bushes in the clearing consisted of: red and white oak, 14; black cherry, 2; eastern hemlock, 2; spicebush, 5; tulip tree, 19. Most of the trees are two feet high, or less. Growth is slow and survival is cause for celebration.



Figure 4. Oak seedling netted for protection from browsing.

2014 Summary : Restoration of a Portion of the Gosnell Big Woods

Any progress is the result of the dedication, hard work and tenacity of the volunteers on the Habitat Preservation Committee who have, so far, invested 164 hours in the project.

It looks like it will take many more seasons of maintenance before we can assess the outcome of this project -- the desirable native trees grow slowly. We believe, however, that the cleared area represents an improvement over the condition in which we found it.

Future removal of competing growth is essential to success of the project.