Appendix 1. Albahary and Grossman Preserves

Acreage: 7.97 (Albahary 7.04 acres, Grossman 0.93 acres)

Block and Lot: Albahary: B13, L1; B8, L47; B8, L48; Grossman: B8, L108

Ownership: FoHVOS (100%)

Year(s) Purchased: 2003 (Albahary); 2001 (Grossman)

Location & Access:

From North Greenwood Avenue, the Preserve can be accessed from Washington Street (dead end). Turning around requires use of neighbor's driveway. The Preserve can also be accessed from the Highland Cemetery. Parking can be accommodated along Washington Street (park in grass to allow farm vehicles to pass). Nearest street address: 3 Midland Avenue, Hopewell, NJ, 08525.

Structures: None

Additional property information is summarized in Appendix W. The following Preserve maps are provided at the end of this document:

- Map 1 2007 Aerial Photography
- Map 2 1930 Aerial Photography
- Map 3 Topography
- Map 4 Bedrock Geology
- Map 5 Soils
- Map 6 Land Cover Types (2007)
- Map 7 Protected Lands
- Map 8 Deer Management
- Map 9 Invasive Plant Cover (Relative Infestation Severity for all species)

Website Description:

Albahary and Grossman Preserves are located just north of Hopewell Borough in the foothills of the Sourland Mountain region. The area has a unique history—Webster Edgerly, founder of a health and self-improvement movement called Ralstonianism, purchased this land in the late 1800s. He envisioned a utopian community, Ralston Heights, for his followers. Buyers were not forthcoming, and many of the planned houses and public roads between Hopewell-Amwell and Hopewell-Wertsville Roads were never built. The preserves are primarily Norway spruce plantation and ash.

BROAD PROPERTY DESCRIPTION

The Albahary and Grossman Preserve (see Map 1) is located between Hopewell Borough and the Sourland Mountain region. The topography (see Map 3) slopes southward, from 120 to 80 feet above sea level. The Preserve is surrounded by residential development, the Highland Cemetery, agricultural lands, and forest.

Based upon analysis of NJDEP's 2007 Land Use/Land Cover dataset, the preserve contains three broad plant communities: upland coniferous forest (> 50% canopy), upland deciduous forest (> 50% canopy), and upland deciduous woodland (10-50% canopy). Land Use/Land Cover is summarized in Appendix X and illustrated in Map 6.

The coniferous forest is an abandoned plantation, which comprises nearly 80% of the preserve. The canopy is dominated by Norway spruce with ash and Norway maple in smaller numbers. Japanese aralia and occasionally ash colonize the gaps between the spruces. The aralia has successfully dominated the subcanopy and shrub layer of most gaps, regardless of gap size. As the spruce trees decline, canopy gaps are more frequent, allowing for mile a minute vine to colonize. The shrub layer is sparse. Spicebush is infrequent and heavily browsed. Multiflora rose and Japanese barberry are scattered throughout.

The remaining deciduous forest patches are found primarily in the western portion of the preserve adjacent to the cemetery. Though still scattered, multiflora rose and Japanese barberry are more prevalent in this forest patch. Linden viburnum is a small component of the shrub layer.

Hay-scented fern and Japanese stiltgrass are prevalent throughout the herb layer. Jack-in-the-pulpit and false Solomon's seal are exceedingly infrequent. Mile a minute vine rings the Preserve and is prevalent on the eastern edge and on neighboring parcels. Leaf damage was observed in the summer of 2009 – the mile a minute biocontrol is suspected but not confirmed.

The preserve has one type of bedrock geology--the Passaic formation. See Map 4.

The preserve has four soil types (see Map 5) with Lansdale channery loam, 6 to 12 percent slopes, eroded; Bucks silt loam, 6 to 12 percent slopes, eroded; and Bucks silt loam, 2 to 6 percent slopes being the three most common types. The preserve's soils are described in Appendix Y.

CONSERVATION VALUES

Based on an analysis involving the ranking of ecological values and threats (See Community Stewardship Plan text), the Preserve lies within the 50-75th percentile. See Appendix A for a description of ranking factors.

Forest and Woodland Communities: The preserve is a part of the Sourland Mountain region. Connections to the Sourland core forest are tenuous—residential development, roads, and agricultural fields make the Preserve a highly fragmented forest.

The forest patch is small, fragmented, and highly disturbed. Recruitment of conservative native species is unlikely in the foreseeable future. Given a reduced deer density, species like spicebush and ash would rebound readily and begin to shade out Japanese barberry, multiflora rose, and Japanese stiltgrass.

Old forest: None - See Map 2.

Early Successional Communities: Shrublands: None.

Meadows/Grasslands: None.

Waterbodies: None.

Rare Species:

Rare Plants: None documented on the Preserve.

Rare Animals: Landscape Project has identified the Preserve as habitat for State Endangered species that is part of an 18,000 acre contiguous forest patch. However, the connection to this larger forest patch is tenuous (See above) and the Preserve's forest patch size is too small to provide significant habitat. The forest patch found on the Preserve and surrounding area is an important stop-over habitat (spring and fall

resting and feeding) for migratory species. Forest fragmentation and lack of a woodland shrub layer reduce the chance of nesting and successful breeding.

THREATS

Deer: White-tailed deer have suppressed much of the native community, leaving only canopy trees and an extremely sparse herb and shrub layer.

Invasive species: In 2008 staff began walk-through surveys for emerging invasive species on all preserves. Mapping documented each species and its population size. Japanese aralia, mile-a-minute, linden viburnum, and Japanese wisteria were detected. See <u>www.njisst.org</u> for the current status of emerging invasive species at the Preserve.

Japanese aralia is scattered in dense patches throughout the preserve. It is especially vigorous and produces seeds in the forest's canopy gaps. It is found even in the dense shade of the Norway spruce trees. Linden viburnum is a small component of the shrub layer near the cemetery. A small population of Japanese wisteria was eradicated in the southern portion of the preserve.

The adjacent private parcel (currently owned by Nini) is high priority as the species is present there. The species was also mapped on the Frances Preston easement (D&R Greenway) and has been observed elsewhere in the Sourlands (Sourland Mountain Preserve and private property-Somerset county).

Mile a minute vine proliferates around the preserve's boundaries and in canopy gaps. Evidence of the biocontrol is present.

In 2011 staff completed surveys for invasive plant species on all preserves (see Map 9). Mapping documented each species found and its population size (See Table 1 below). The five species with the highest infestation scores include: Japanese Stiltgrass, Multiflora Rose, Japanese Honeysuckle, Wineberry and Garlic Mustard. Multiflora rose, Japanese barberry, and Japanese stiltgrass are scattered throughout and become more robust and frequent on the Preserve's edges.

Other: N/A

STRATEGIES and ACTIONS

Forest and Woodland Habitat Stewardship: Because of the Preserve's proximity and connection to the Sourland Mountain region, stewardship efforts at the Preserve are high priority. The overarching goals at the Preserve are to protect the forest habitat at the Preserve and throughout the region. Thus, regular surveys with eradication of emerging invasive species is the highest priority at this Preserve. Partner work days with Washington Crossing State Park and D&R Greenway began in 2009 to address emerging species.

A significant portion of the Japanese aralia has been successfully treated with basal bark herbicide applications. Follow up treatment is planned with attention on eradicating any remaining fruiting individuals and foliar spray of smaller individuals. Control efforts will continue until all stems are eradicated on the Preserve. Simultaneously, D&R Greenway conservation easement landowner, Frances Preston, and Preserve neighbor, Dante Nini, should be contacted for permission to survey and treat for Japanese aralia.

All seed-producing linden viburnum were treated by the cut stump method. All wisteria were eradicated by foliar spray. Monitoring and eradication should continue for these species as detected.

No action is recommended for mile-a-minute vine due to the abundance of seed sources and biocontrol presence.

For widespread invasive species, treatment of mature, fruiting individuals of Winged Burning Bush are recommended. Unlike nearly all other invasive plants, this species would likely increase with a decrease in deer density and would be less subject to ecological control exerted by native species due to its mature height and shade tolerance.

Reduced deer density will allow the native plant communities to recover and compete with nearly all widespread invasive species.

Early Successional Habitat Stewardship: N/A

Deer Management: Since 2011, the preserve has been enrolled in the DMP with bow hunting only. The 450' safety zone restricts gun hunting at the preserve.

However, the 150' safety zone for bow hunting allows for hunting in nearly all portions of the preserve. Only the eastern tip of the Albahary Preserve (B13 L1) and southwestern tip of the Grossman Preserve (B8 L108) are within the 150' safety zone. Access is not hindered, nor are hunting prospects.

If feasible, improve hunting access through arrangements with neighbors. Parcel data shows the following neighbors within the safety zone: Charles Staats, 5 Midland Avenue (B8 L51) and Dante Michael Nini, 3 Midland Avenue (B8 L50).

See Map 8 for delineations of the 150' and 450' safety zones and hunting status.

Rare Species Management: N/A

Neighboring Lands: All neighbors sharing borders with the Preserve have been contacted about the Japanese aralia. One request for ED/RR survey was answered—Irene Simmons (108 Grandview; B8 L44.01), an acquaintence of FoHVOS Board President John Jackson, responded and allowed an NJISST survey in 2009.

Large blocks of land under conservation easement are located east of the Preserve, including a FoHVOS easement on the Preston tract (Michele and Richard). To the north lie conservation easements and preserved parcels connecting Van Dyke Road, Mountain Church Road, and Featherbed Lane. Preserves are owned by FoHVOS, the State, Mercer County Park Commission, and D&R Greenway. This network offers opportunities to collaborate on regional conservation projects, improve hunting access (see Deer Management), and expand on existing regional trails (see Recreational Opportunities Assessment). See Map 7 for adjacent protected lands.

Waterbodies Management: N/A

Undesirable Activities Management: N/A

Scientific Research Assessment: The Preserve is available for scientific research.

Recreational Opportunities Assessment: This property was considered for the Sourlands Foothills regional trail system by an Eagle Scout in 2009, but his project had to be completed before he reached the Preserve.

							Acreage by Percent Ground Cover Categories						
				Percent									
				of									
			Total	Preserve		LOE		•					
Scientific Name	Common Name	Infestation Index Score ¹	Acres Present	Area Present	Treatment Recommendation	Estimate (Hours)	Category 0: 0%	Category: Trace	Category 1: 1-10%	Category 2: 10-25%	Category 3:	Category 4: 50-75%	Category 5 75-100%
Acer palmatum	Japanese Maple	0.0	0.0	0.0	N/A	(Hours)	8.23	0.0	0.0	0.0	25-50% 0.0	0.0	0.0
Acer platanoides		0.0	0.0	1.2	None		8.13	0.0	0.0	0.0	0.0	0.0	0.0
1	Norw ay Maple		-				8.23	-					0.0
Ailanthus altissima	Tree-of-Heaven	0.0	0.0	0.0	N/A		1.08	0.0	0.0	0.0	0.0	0.0	0.0
Alliaria petiolata	Garlic Mustard	6.8 0.0	7.2	86.9 0.0	None N/A		8.23	0.0	0.7	0.0	0.0	0.0	0.0
Artemisia vulgaris	Common Mugw ort						8.23	0.0	0.0	0.0			0.0
Arthraxon hispidus	Small Carpgrass	0.0	0.0	0.0	N/A		8.23 7.51	0.0	0.0	0.0	0.0	0.0	0.0
Berberis thunbergii	Japanese Barberry	0.7	0.7	8.7	None		8.23	0.0	0.7	0.0	0.0	0.0	0.0
Cardamine impatiens	Narrow -leaved Bittercress	0.0	0.0	0.0	N/A N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Catalpa bignonioides	Northern Catalpa						8.23	0.0	0.0	0.0	0.0	0.0	0.0
Celastrus orbiculatus	Asiatic Bittersweet	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Centurea sp.	Knapweed sp.	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0		0.0	0.0
Cirsium arvense	Canada Thistle	0.0	0.0	0.0	N/A			0.0	0.0		0.0		0.0
Dipsacus sylvestris	Teasel	0.0	0.0	0.0	N/A N/A		8.23 8.23	0.0	0.0	0.0	0.0	0.0	0.0
Eleaegnus umbellata	Autumn Olive	0.0	0.0	0.0	Control - Treat		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Euonymus alata	Winged Burning Bush	0.0	1.4	16.8	Fruiting Plants	5	6.85	1.4	0.0	0.0	0.0	0.0	0.0
Iris pseudoacris	Yellow Iris	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Lespedeza cuneata	Chinese Bushclover	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Ligustrum obtusifolium	Border Privet	1.3	1.3	15.6	None		6.95	0.0	1.3	0.0	0.0	0.0	0.0
Lonicera japonica	Japanese Honeysuckle	8.5	2.8	34.3	None		5.41	0.0	0.2	0.2	1.9	0.6	0.0
Lonicera maackii	Amur Honeysuckle	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Lonicera morrowii	Morrow's Honeysuckle	4.0	2.5	30.9	None		5.69	0.0	1.1	1.4	0.0	0.0	0.0
Lysimachia nummularia	Moneyw ort	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Lythrum salicaria	Purple Loosestrife	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Malus toringo	Toringo Crabapple	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Microstegium vimineum	Japanese Stiltgrass	37.5	8.2	99.9	None		0.01	0.0	0.0	0.1	0.8	1.8	5.6
N/A	Non-native, cool season grass	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Phalaris arundinacea	Reed Canary Grass	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Phragmites australis	Common Reed	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Polygonum cuspidatum	Japanese Knotw eed	0.0	0.0	0.0	N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Polygonum perfoliatum	Mile-a-Minute	4.3	3.6	43.1	None - Check for biocontrol agent		4.68	0.0	3.0	0.4	0.2	0.0	0.0
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Callery Pear	4.3	0.0	43.1	N/A		8.23	0.0	0.0	0.4	0.2	0.0	0.0
Pyrus calleryana		0.0	0.0	0.0	N/A N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Ranunculus ficaria Robinia pseudoacacia	Lesser Celandine Black Locust	0.0	0.0	2.1	None		8.06	0.0	0.0	0.0	0.0	0.0	0.0
Robinia pseudoacacia Rosa multiflora	Multifloral Rose	8.7	2.8	2.1 34.0	None		5.43	0.0	0.2	0.0	2.2	0.0	0.0
Rubus pheoniculasius	Wineberry	7.3	2.8	34.0 43.1	None		4.68	0.0	1.5	0.2	1.7	0.4	0.1
	Vineberry Crown vetch	0.0	3.6 0.0	43.1	None		8.23	0.0	0.0	0.4	0.0	0.0	0.0
Securigera varia Viburnum dilatatum	Linden Viburnum	0.0	0.0	0.0	N/A N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
Viburnum dilatatum Viburnum sieboldii	Siebold's Viburnum	0.0	0.0	0.0	N/A N/A		8.23	0.0	0.0	0.0	0.0	0.0	0.0
					N/A N/A		8.23						
Wisteria floribunda	Japanese Wisteria	0.0	0.0	0.0	NA Total LOE	5	0.23	0.0	0.0	0.0	0.0	0.0	0.0

¹ The Infestation Index Score combines the extent of acreage infested and the intensity of the infestation. It was derived by multiplying the cover class number by the number of acres within each cover class.

















