

The Land Trust
of Huntsville & North Alabama





Preserving the Land...
Enhancing the Community....

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*Identification and Control of
Bush Honeysuckle in the
Tennessee Valley*


Presenter *Andy Prewett*
Program written and Coordinated by
Amy Werkheiser
Andy Prewett

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Project Location


- ❖ The project focused on property located on Monte Sano Mountain Preserve in Huntsville, Madison County, AL which is located on the western edge of the southern Cumberland Plateaus physiographic region of the Appalachian Plateau Providence
- ❖ The Cumberland Plateau has one of the highest species diversity of the southeastern United States



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Project Location

- ❖ The Land Trust's Monte Sano Preserve is adjacent to Monte Sano State Park, both located near Downtown Huntsville



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The Problem!

- ❖ Asiatic Bush honeysuckle is running rampant in the Tennessee Valley
- ❖ The Land Trust of Huntsville and North Alabama has more than 3400 acres of preserved green space with a disproportionate amount of honeysuckle throughout.
- ❖ The Monte Sano Target area has close to 1000 acres. Honeysuckle is present on more than 40% of that acreage.
- ❖ Its Spreading at a rate of ¾ to 1 acre per year!

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The Problem!

- ❖ Our Monte Sano Preserve is adjacent to the 2140 acre Monte Sano State Park.
- ❖ Honeysuckle is prevalent throughout the State Park as well.
- ❖ The State Park currently has no staff or volunteer group working directly on honeysuckle or invasive eradication.

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The Problem!

- ❖ Our Monte Sano Preserve and Monte Sano State Park are located near downtown Huntsville.
- ❖ We are surrounded by cultivated neighborhoods.
- ❖ These neighborhoods have honeysuckle prevalent throughout.

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The Problem!



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Project Funding

- ❖ **Grants** - August 2003, the Land Trust of Huntsville and North Alabama's grant proposal for honeysuckle identification and control was selected for funding by the Fish and Wildlife Service thru their Private Stewardship Grant Program.
- ❖ We have submitted a grant request for the 2005 Private Stewardship Grant Program to keep the program going.
- ❖ **Private Donations** - A member of the Land Trust donated \$1500, directed specifically to honeysuckle eradication efforts.
- ❖ **Indirect Donations** - A land donor and member of the Land Trust donated \$5000 to be used to hire workers from the Breaking Free Mission to eradicate honeysuckle from our Monte Sano Preserve.

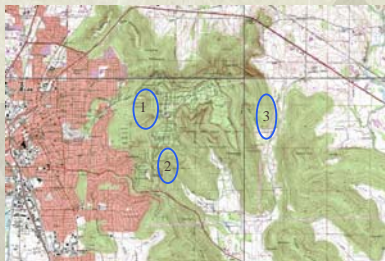
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LT Eradication and Control Program

- ❖ Establish a target area
- ❖ Commence Baseline Data Collection
 - Through Transects, Access the Study Area for Honeysuckle Density
 - Observe for "At Risk" Plant Species
 - Observe and Document Contributing Environmental Factors
- ❖ Map Observations and Prioritize Sites for Management and Control
- ❖ Implement a Management and Control Program

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Monte Sano Mountain Preserve



- The Monte Sano Preserve held in trust by the Land Trust of Huntsville and North Alabama consists of approximately 1,000 acres, which adjoins portions of the Monte Sano State Park in Huntsville, AL.
- The original project study area includes approximately 366 acres (three tracts) located on the Monte Sano Mountain

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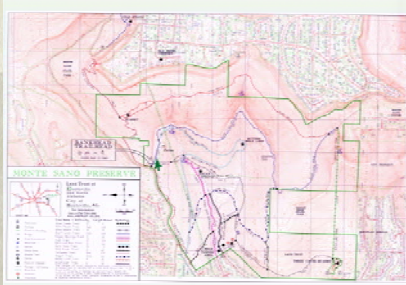
Project Goals

- ❖ Determine and reduce the threat of bush honeysuckles invasion to existing and likely habitats of eleven eligible plant species (federally listed, and globally or state listed "at risk")
- ❖ Reduce the population size and reproductive output of bush honeysuckle through locating, mapping and removal methods.
- ❖ Develop and maintain an on-going maintenance and removal program of bush honeysuckle.

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Transects and Data Collection

- Transects were first conducted along the trail system and then in between the trails
- Data was collected every 50 meters



Map Courtesy of City of Huntsville GIS Department

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Baseline Data Collection

The property was hiked and areas were assessed through transects conducted approximately 60 meters apart and data collected every 50 meters within a ten meter radius. At each point location the following data was collected in the field for the preliminary ranking program:

Honeysuckle Density	Species of Concern Present?	Cedar Present?	Canopy Openness
No Honeysuckle Present	Yes	Yes	Light Canopy (5 to 10 Meters)
1 to 5 Individuals Present			Moderate Canopy (10 to 20 Meters)
5 to 10 Individuals Present	No	No	Heavy Canopy (> 20 Meters)
Thicker > 10 Individuals			

The remaining baseline information was generated after mapping was completed and is included as baseline data:

Elevation	Geology	Slope Aspect
Mean Sea Level to be determined after mapping.	This information is based on two resources, field observations and USGS geological map of the area	North, Northeast, North West, South, Southeast, Southwest, East, East West

Species of Concern

Known populations of the species of concern and likely habitats were documented and mapped as located. During the field transects additional observations of populations of species of concern will be noted and included in the baseline map as well as additional site visits to the likely habitats.

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Species of Concern "At Risk" Plant Species

Species Scientific Name	Species Common Name	Federal Listing	ALNHP AND Nature Seeker Global/State Rank
<i>Clematis morefieldii</i>	Morefield's leather flower	LE	G1/S1
<i>Apios priceana</i>	Price's potato bean	LT	G2/S1
<i>Viburnum bracteatum</i>	Limerock arrowwood	N/A	G1/S1
<i>Blephilia subausta</i>	Smooth blephilia	N/A	G1G2/S1S2
<i>Nevada alabamensis</i>	Alabama snow wreath	N/A	G2/S2
<i>Silphium brachiatum</i>	Cumberland rosinweed	N/A	G2/S2
<i>Polymnia laevigata</i>	Tennessee leafcup	N/A	G3/S2S3
<i>Sedum nevii</i>	Nevins' stonecrop	N/A	G3/S3
<i>Panax quinquefolius</i>	American ginseng	N/A	G3G4/S4
<i>Agalinis auriculata</i>	Auriculate false-foxglove	N/A	G3/S3
<i>Cotinus obovatus</i>	American smoketree	N/A	G4/S2

The project included observations for the above listed plant species during baseline data collection and revisits to likely habitats during seasonal flowering times

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Morefield's Leather Flower (*Clematis morefieldii*)



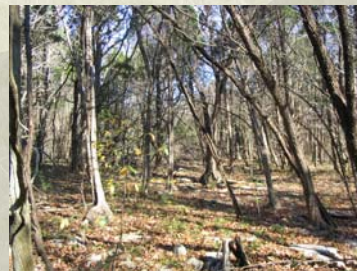
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Cumberland Rosinweed (*Silphium Brachiatum*)



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Smoketree (*Cotinus obovatus*)



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Prices Potato Bean (*Apios Priceana*)



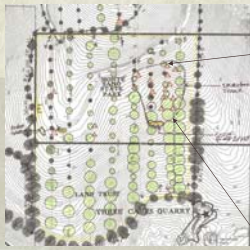
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Alabama Snowwreath (*Neviusia Alabaensis*)



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Mapping and Data Evaluation



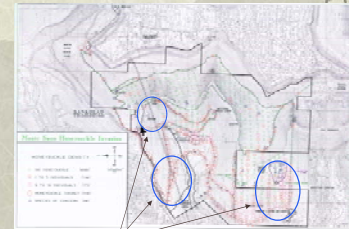
•As part of the mapping process the study area was segregated into Areas, Transect Lines and Point locations
 •AREA "E", Transect 7, Point 3 was observed for both honey suckle with 1 to five individuals and the presence of species of concern (smoketree)

	>10 Individuals Present
	5 to 10 Individuals Present
	1 to 5 Individuals Present
	No Honeysuckle Present
	Species of Concern Present

•This area shows the encroachment of honeysuckle thickets into a large stand of the American smoketree (one of the species of concern)

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Mapping and Data Evaluation



•The City of Huntsville GIS Department is currently digitizing the map for use with GIS applications for Management and Control

•The map can be updated and new layers added as areas are controlled and sites are revisited

•Although this map is still under construction, areas for management and control of bush honeysuckle have been identified and work implemented

Areas currently under management and control and identified as a threat to species of concern

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Management and Control Efforts



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Management and Control Efforts

❖ Volunteer Support:

- Alabama A&M University, Forestry Department Students
- The Sierra Club, Huntsville Chapter
- The Huntsville Botanical Society
- The Huntsville Wildflower Society
- The Boy Scouts and Girl Scouts
- Eagle Scout Projects
- Three Springs, Inc. (Girls and Boys Groups)
- Our own Trail Care Crew
- Various individual Volunteers

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Bush Honeysuckle - Management Methods

❖ Our Preferred Method

Cut Stump Soak

- Cut the plants down to stumps as close to the ground as possible
- Immediately Paint/Soak/Dribble a 25% solution of glyphosate
- We use "Roundup"
- When mixing, stir aggressively for a minimum of 5 minutes.
- Because of our highly acidic soil we add a small cup of ammonium sulfate to maintain potency



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Bush honeysuckle – Alternative Management Methods

Due to the variety of volunteers we get with a wide range of skills and abilities, we tailor eradication techniques to the group we have on a given work day.

❖ Mechanical

Weed eaters with brush blades

❖ Foliar Spraying

Experienced volunteers only

❖ Simple Cut

Theory being that it will take time to regenerate and produce berries, thus slowing it down.



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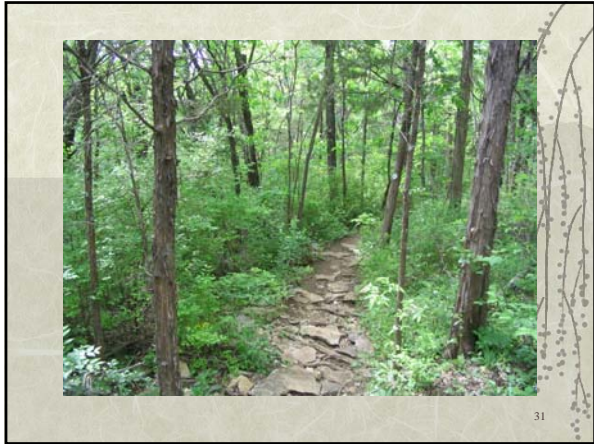
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Not Our Only Problem!

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Not Our Only Problem!

- ❖ Princess Tree
- ❖ Mimosa Tree
- ❖ Nonnative Roses
- ❖ Many, Many more!!!

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Community Education

Post notices outlining our eradication program in active work areas.

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Community Education

Work with land Trust neighbors by providing tips and techniques for eradicating bush honeysuckle

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Community Education

Share information through newspaper and radio features

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Community Education

Host the Tennessee Valley Invasive Plant Symposium

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Conclusion

- ❖ A serious threat exists to “At Risk Species” and the native flora.
- ❖ Progress has been made to identify the threat and to establish and implement a control plan
- ❖ A long term Commitment toward maintenance and education is necessary
- ❖ We could cut every stem of bush honeysuckle on our property, but if we don’t address the problem in its entirety throughout the Tennessee Valley, all efforts will be in vain.

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It's For You.....Help Us Preserve it.....

Andy Prewett
 The Land Trust of Huntsville and North
 Alabama
Andy@landtrust-hsv.org

Amy Werkheiser
 OMI Engineering, Inc
Awerkheiser@omi-eng.com

The Land Trust of Huntsville and North Alabama
 256 534-LAND www.landtrust-hsv.org