

Bloomington Parks and Recreation  
Cascades Park: Asian Bush Honeysuckle Control

**Summary:**

The City of Bloomington Parks and Recreation Department, in cooperation with EcoLogic LLC, the Southern Indiana Cooperative Weed Management Area, and Monroe County Identify and Remove Invasive Species (MC-IRIS) has embarked on a project to remove invasive plants from Lower Cascades Park.

Bush honeysuckle is outcompeting native vegetation. A control project established in November 2008 is intended to help native plants and animals re-establish themselves in the Park. Graduate students from the Indiana University Department of Biology gathered data before and after the removal project to study the effects of the bush honeysuckle infestation on native plant populations. Monitoring and treatment of the site is on-going.

**Methods and Objectives:**

Three experimental treatment units have been established within Lower Cascades Park. Treatment Unit 1 underwent complete manual and mechanized removal of Asian Bush Honeysuckle (ABH) stems and foliage in the fall of 2008. Debris was removed from the site, mulched, and dried. Spring re-growth was sprayed with a 3% glyphosate solution before the emergence of most native understory flora.

Treatment units 2 and 3 were established in the fall of 2009 to the south of Unit 1. ABH within Unit 2 was cut using chainsaws and brushcutters. Central stems were immediately treated with a 50% solution of glyphosate and surfactant. Foliage and woody debris was not removed from the unit. ABH within Unit 3 received a single-step basal-bark treatment of 20% triclopyr (the active ingredient in Garlon 4) combined with an oil carrier.

Monitoring of the units includes plot surveys of ABH mortality rate, ephemeral diversity, tree seedling recruitment, and fuels analysis for the potential use of prescribed fire. Treatment and control plot surveys in Unit 1 have been repeated since 2008; monitoring of units 2 and 3 will begin during the fall of 2010. Experimental objectives include: a) testing for differences in the diversity and abundance of native ephemerals within and around the treatment units, b) identifying differences in treatment effectiveness (ABH mortality) between treatment units, c) determining differences in native tree and shrub seedling recruitment between treatment units and control plots, and d) the assessment of prescribed fire as a management tool within the treatment units.

## **Timeline:**

### *November 2008*

- Bloomington Parks and Recreation, EcoLogic, and additional volunteers from the Southern Indiana CWMA join forces for the manual removal of 2.9 acres (Treatment unit 1) of Asian bush honeysuckle from Lower Cascades Park (Figure 1, 2).

### *April 2009*

- Ecologic and Bloomington Parks and Recreation applies a mild glyphosate foliar treatment to ABH re-sprouts within treatment Unit 1 in the early spring while natives are still dormant (Figure 3).

### *November 2009*

- Ecologic, Bloomington Parks and Recreation, and 21 other volunteers expand the project through cut-stump (Unit 2) and basal bark (Unit 3) treatments to the south of treatment Unit 1 (Figure 4).
- Joshua Ohde adopts the Lower Cascades Creek Trail and removes ABH from areas adjacent to recreation trails.

### *April 2010*

- Heather Reynolds, Indiana University Professor of Biology, and her team of graduate students survey spring ephemerals within the original treatment unit.
- Bloomington Parks and Recreation and students from Peggy Schultz Environmental Biology course survey Unit 1 to assess ABH mortality, ephemeral diversity, and prescribed fire fuel density.

### *Fall 2010*

- Monitoring of Unit 2 and Unit 3 will begin
- Monitoring reports for Unit 1 are completed

**Images:**



**Figure 1: EcoLogic donating labor and equipment for the initial treatment of Unit 1 in November 2008**



**Figure 2: Tom Tremain hauling Asian bush honeysuckle debris out of Unit 1 volunteering on behalf of the Southern Indiana Cooperative Weed Management Area**



**Figure 3: Asian bush honeysuckle regrowth after foliar treatment in May 2009**



**Figure 4: Spencer Goehl of EcoLogic applying a basal bark treatment to ABH in Unit 3 during November 2009**

\*\*Please make the treatment unit map file ([LowerCascadesABH\\_Treatment\\_Units.pdf](#)) available via a link on the reports/projects page because it is much higher quality than the image below on the next page

