

Mimi Kato x Cleveland Metroparks

Retro-reflections on Sculpting Nature



STATEMENT

Familiar plants remove some of the strangeness of unfamiliar landscapes. Living far from my home country, Japan, I found a sense of home in the Japanese plants growing wild in the American landscape. Understanding that many of these plants are considered invasive and disruptive to local ecosystems, I reached out to Cleveland Metroparks to explore how invasive plants and human effort of removing them shape the landscape we see daily. In this collaboration, we developed a site-specific installation at Cleveland Metroparks North Chagrin Reservation as part of the SPACES World Artist Program, hosted by SPACES Gallery in Cleveland, Ohio.

I was fascinated by the time and effort invested in invasive plant control, and was inspired by the meticulous work required for selective plant removal. Cleveland Metroparks, truly a home park to the people of Cleveland, attracts 42 million annual visitors. However, sealed behind the green veil, a continuous battle between human and invasive plants remains hidden to most visitors. In this project, we brought the effort of Cleveland Metroparks' Invasive Plant Management Crew (IPMC) into public view after they removed the highly-invasive glossy buckthorn (*Frangula alnus*).

The project made visible an eight-hour work shift of IPMC. As the crew cut invasive shrubs and treated the stumps with herbicide, we marked each stem with retro-reflective tape. When visitors explored the landscape at night with flashlights, retro-reflectors shined light back at them making the treated plants visible from a distance. The goal of this project was not only to show the amount of the plants in the area and the scale of human effort to remove the invasive shrubs, but also to ask ourselves a question: what kind of landscape do we want to create for the future generations?

PROJECT DETAILS

Use of retro-reflectors as material choice for the installation

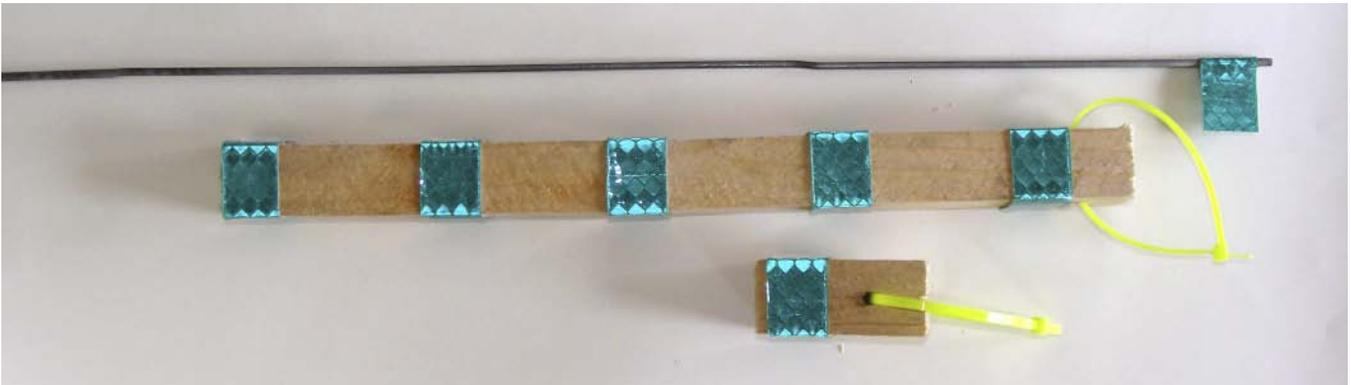
The idea of highlighting the IPMC's effort naturally led to the use of light for the project. Retro-reflectors used as plant markers had ideal properties for conceptual and environmental reasons.

Conceptual reason

The characteristic of retro-reflectors to bounce light back to its source with a minimum of scattering fit well with the project concept. By definition, invasive plant species were introduced – intentionally or accidentally – from a source population outside the species' home range. Human activity is the primary source of spread of plants between continents, and is the dominant source of invasive plants that were bred for survival in new regions. For this installation, the reflection of light between observer and plant implies these dynamics.

Environmental reason

The material needed to stand in outdoor weather for the 2-month exhibition period without deteriorating or leaching into the surrounding environment. The reflectors chosen for this project are weatherproof, marine-grade retro-reflective tape used by the U.S. Coast Guard*. The lines and zip ties were brightly colored to make cleanup easy, in case they were dropped or scattered on the site.



Retro-reflectors made out of durable materials; retro-reflective tape, pine wood block, sign stake, zip tie
* 3M USCGFP-37 sponsored by 3M

Installation Site

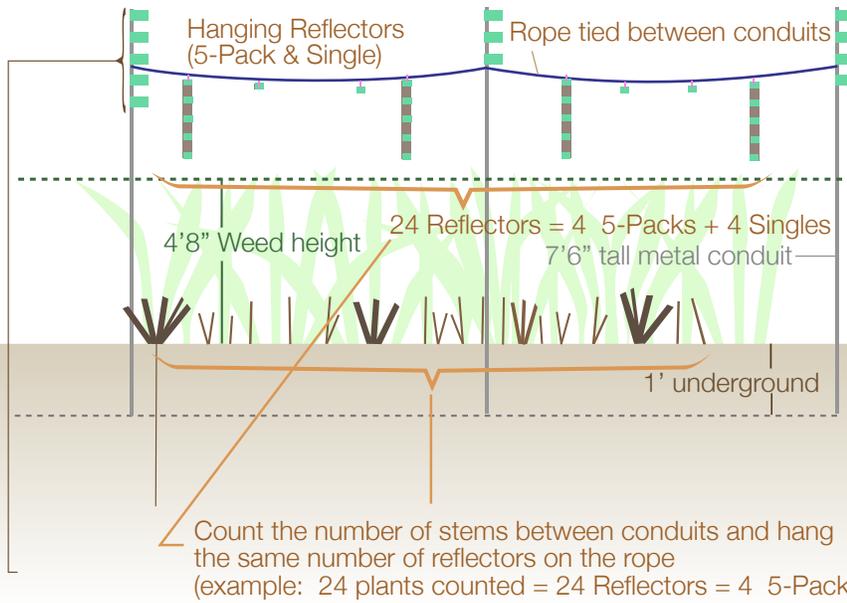
Two sites were selected for the visibility and ease of access for park visitors at night.

Site #1 was directly across a small pond from the North Chagrin Nature Center. Reflectors were elevated to be visible above the native shoreline vegetation. The relative distribution of single and multi-stemmed clumps was planned, but ultimately not shown in the design.

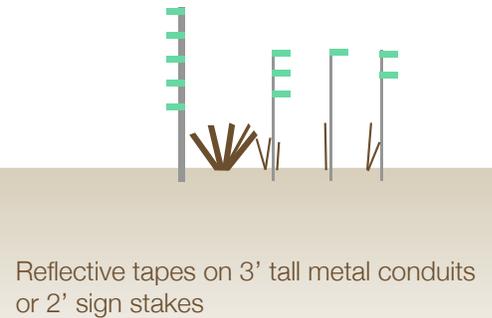
Site #2 was along a trail on a wooded peninsula with a shady understory. Metal yard sign stakes were inserted right next to the plants, and showed whether stems grew in clumps or were solitary.

SITE DIAGRAM

SITE #1



SITE #2



Stake a conduit by a plant. Count the number of stems of the plant and install reflective tape on the conduit (example: 5 stems total = 5 pieces of reflective tape on the conduit)

DATA

TABLE 1

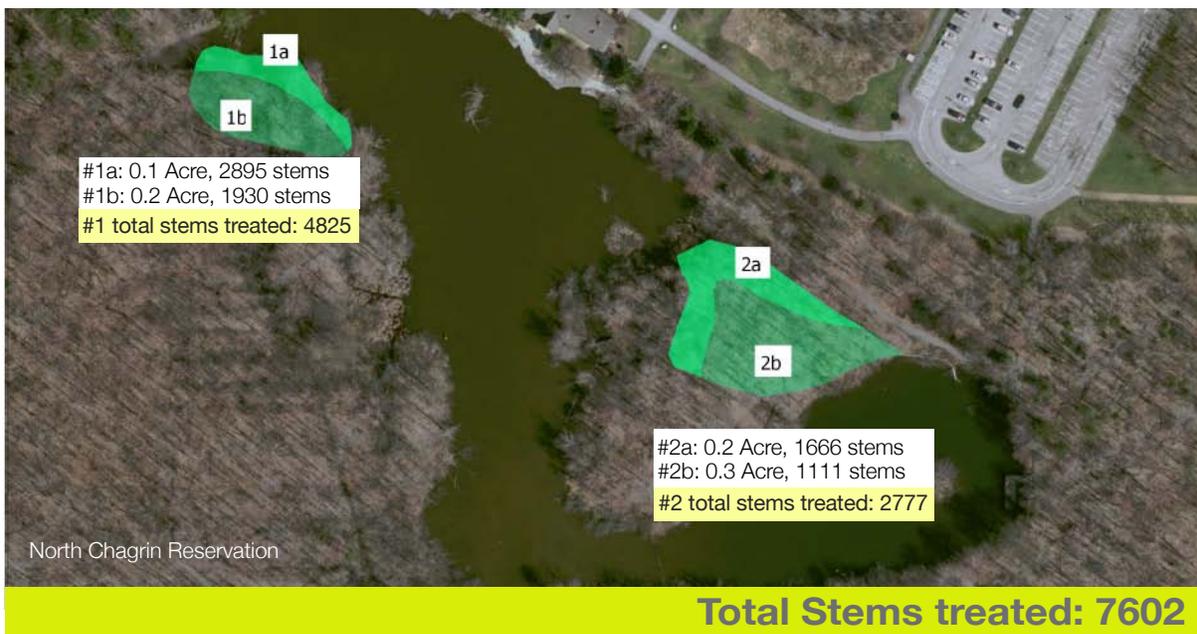
Mimi Kato x Cleveland Metroparks: On-Site Effort	Friday, August 9, 2013				Saturday, August 10, 2013	
	Shrub Removal		Art Installation		Art Installation	
	People	Total Hours	People	Total Hours	People	Total Hours
Staff*	9	56	6	33	3	22
Volunteer	6	37	2	9	9	46
Totals	15	93	8	42	12	68

*Artist, Cleveland Metroparks, and SPACES Gallery

Table 1: Shrub removal included cutting, herbicide treatment, and hauling biomass from the site. Art installation activity included preparing retro-reflective markers, stakes, tallying stems during treatment, and installing markers.

TABLE 2

Shrub removal effort	Site #1 (shoreline)	Site #2 (forest)	Total
Area treated	0.3 Acre	0.5 Acre	0.8 Acre
Number of stems removed	4,825	2,777	7,602
Herbicide used	Razor Pro (EPA 228-366) 50% & Lesco Tracker Dye 1% (v/v)		2.1 Liters



Map of removal sites showing stem density

Special thanks to **Jennifer Hillmer**, Invasive Plant Coordinator, from Cleveland Metroparks

