National Park Service
U.S. Department of the Interior
Acadia National Park

Managing Exotic Plants on Bar Island, Acadia National Park, ME

Project Background

- Island area: 67 acres
- High public visitation: connected to Bar Harbor at low tide
- Dense exotic invasive plant populations

Planning

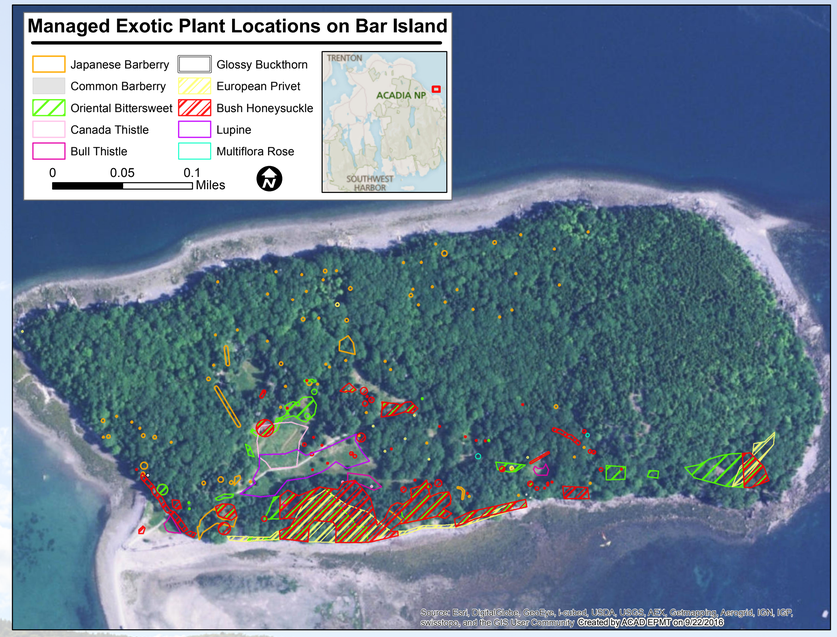
- Established baseline data in March 2015 to determine extent of invasive plant populations
- Annual treatment phases: early May to early October, began in 2015

Execution

- 2015 treatments: mostly cut-stump herbicide applications to reduce reproductive plants; foliar herbicide used for Canada and bull thistles (*Cirsium arvense* and *Cirsium vulgare*); brush was dispersed to reduce aesthetic effects
- 2016 treatments: primarily foliar herbicide for Japanese barberry (*Berberis thunbergii*) and cut-stump for dense privet (*Ligustrum spp.*) population; continued thistle management
- future treatments (2017 and beyond): foliar herbicide for remaining Japanese barberry population, as well as foliar treatments of re-sprouts in the 2015-16 cut-stump areas; continued thistle management

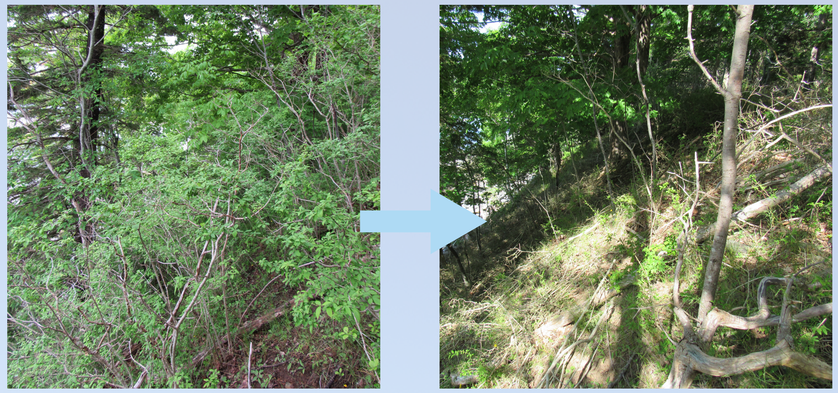


Cut-stump treatment of privet.
NPS Photo





Honeysuckle (*Lonicera spp.*) and Oriental bittersweet (*Celastrus orbiculatus*) removal over 16 months (May 2015 - September 2016).
NPS Photos



Privet cut-stump treatment, before and after (June 2016)
NPS Photos

Public Relations Concerns

High visitation and work site visibility require adjusted treatment methods. Issues include:

1. Public concerns over herbicide use; best applied during non-peak hours.

2. Lupine (*Lupinus polyphyllus*) control is controversial due to plant's aesthetic value. Seed-head removal contains spread while retaining value to visitors.
   - Treatment does not inhibit vegetative spread.
   - Is lupine suppression worth the risk of public alienation?
   - Milkweed (*Asclepias syriaca*) propagation may be justification for management.



Volunteer removing lupine seed-head near milkweed patch, July 2016.
NPS Photo

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