

# The Norway Maple Forest in Acadia National Park: Initial Response to Management

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## Background

- Our objective was to determine the vegetation composition and structure of forests dominated by invasive exotic Norway maple (*Acer platanoides*). Subsequent annual assessments will help track changes as treatment of Norway maple progresses.
- In August 2017, the Acadia National Park Exotic Plant Management Team (EPMT) established and assessed ten forest monitoring plots (7 treatment and 3 control) across three major Norway maple populations (see large shaded red circles in **Fig. 1** below).

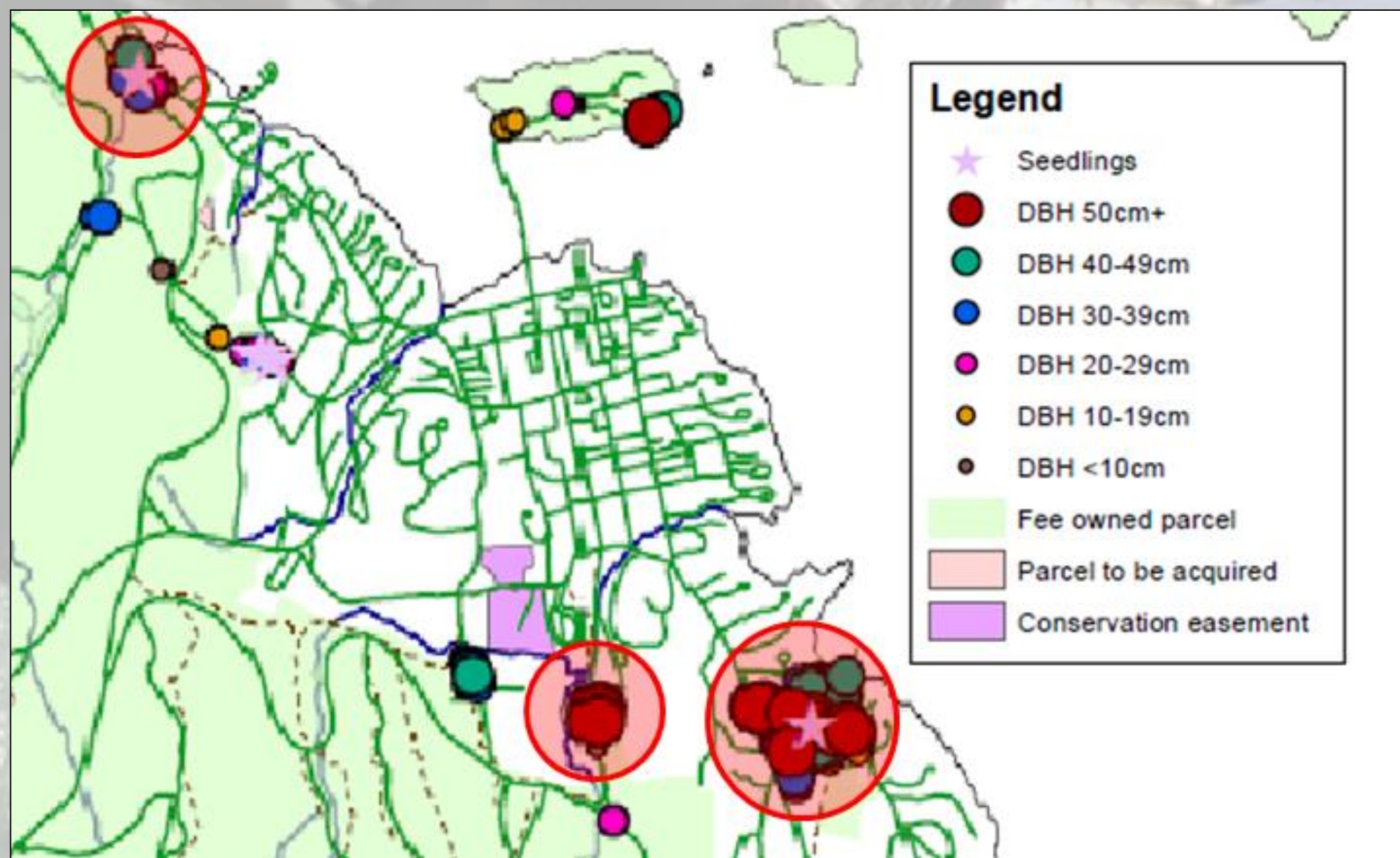


**Fig. 1:** Map showing distribution of Norway maple in Acadia NP lands near downtown Bar Harbor. (NPS map, modified from the original created by Camilla Seirup on 11/02/2015)

A special thanks to our project supporters:



**Fig. 2:** EPMT Data Manager Nick Stevenson girdles a large Norway maple in preparation for herbicide treatment in Compass Harbor. (NPS photo; 01/09/2018)

## Initial Treatment

- Management began January 2018 on the seven treatment plots containing Norway maple (**Fig. 2**).
- Some Norway maples were left alive to prevent complete opening of the canopy, reducing the risk of exotic plant invasion of the understory.

## Post-treatment Assessment

- No significant changes in understory composition and structure (**Fig. 3**).
- The most visible difference between 2017 and 2018 was increased sun on the forest floor due to canopy reduction (see **Fig. 4**).

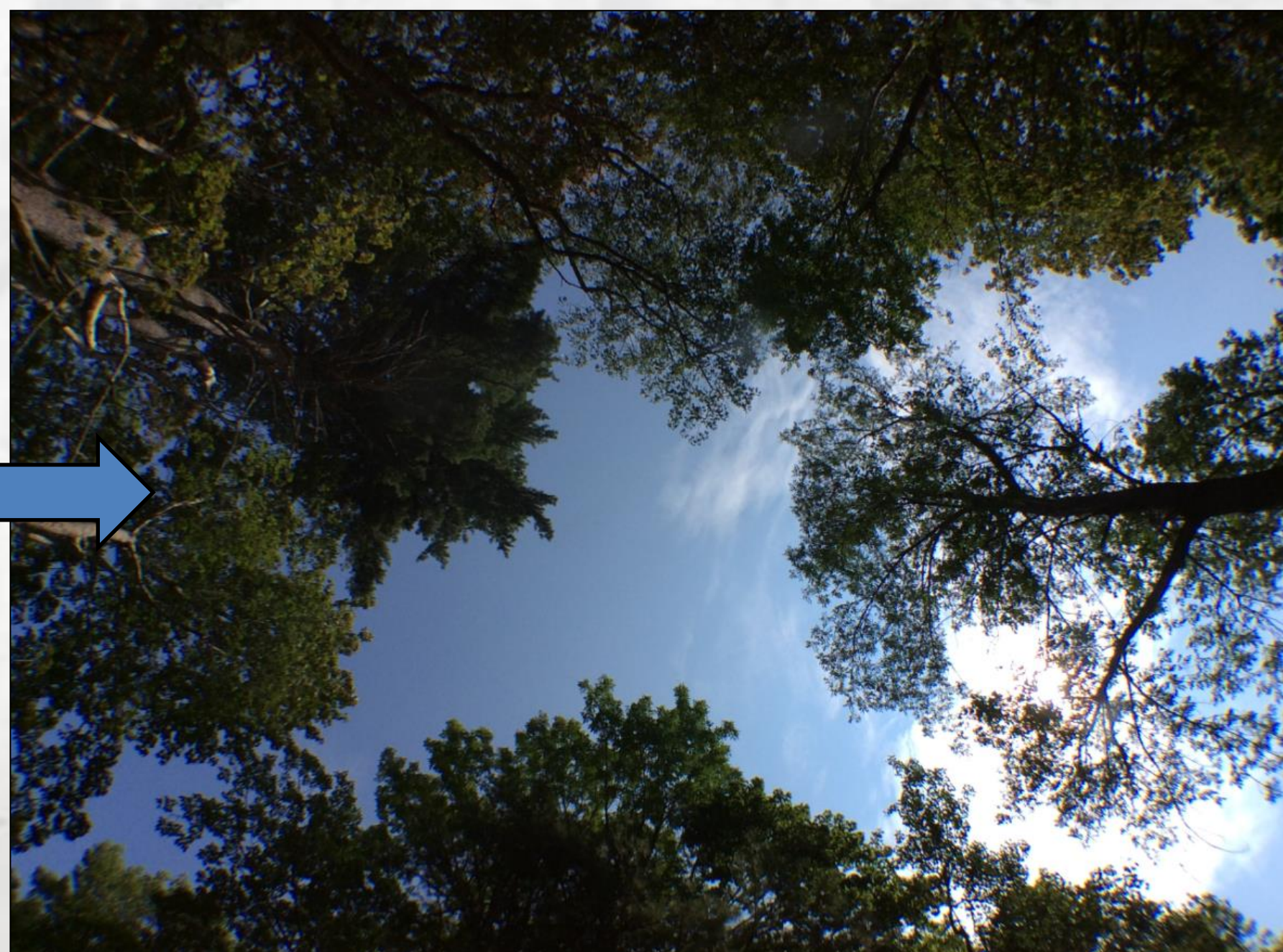


**Fig. 4:** Both of these photos were taken from the same location within Compass Harbor Plot #3; the left was taken 08/30/2017, the right on 08/28/2018. This showcases the dramatic increase in open canopy after the first wave of Norway maple treatment. (both NPS photos)



**Fig. 3:** Schoodic Institute Intern Diana Gurchich, EPMT Data Manager Nick Stevenson and EPMT Member Alex Fetgatter conduct the second annual assessment of seedling, shrub and groundcover data in a microplot in Compass Harbor Plot #2. (NPS photo; 08/28/2018)

## One plot with significant changes

### Compass Harbor Plot #3 results

- 50% increase in forb groundcover.
- Recruitment of one *Fraxinus americana* (white ash) sapling into a tree.
- White ash germinant comparison:  
2017 = 789; 2018 = 8.
- Increase in size of existing invasive exotic plant populations: *Convallaria majalis*, *Dactylis glomerata* and *Euonymus* spp.
- Two new invasive plant species appeared in 2018: *Lonicera* spp. and *Luzula luzuloides*.
- New native tree seedlings:  
*Pinus strobus* (white pine) with 5 germinants.