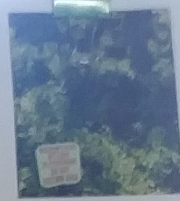




L. maackii Seasonal Basal Bark Efficacy and Off Target Impacts

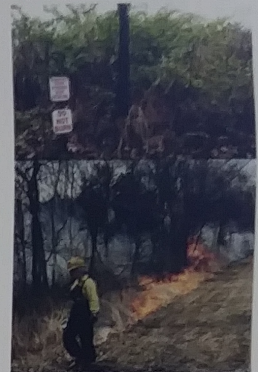


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Objective Investigate how seasonal timing of basal bark treatments and fire impact *Lonicera maackii* (Japanese honeysuckle) and the management impacts on the local flora.

Background

- *Lonicera maackii*, an invasive shrub to North America, has become ubiquitous across many eastern and midwestern deciduous forests.
- While many studies have investigated differences between invaded and uninvaded locations, little is known about the impacts *L. maackii* removal, and there have been few studies on the effectiveness of eradication measures.
- Triclopyr basal bark treatments are quick and easy, but their effectiveness has been debated likely from improper application or rushed conclusions (Rathfon & Ruble 2007).
- Understanding any off-target impacts of treatments on native plants can assist managers in choosing the best technique to remove *L. maackii* while minimizing negative native effects.

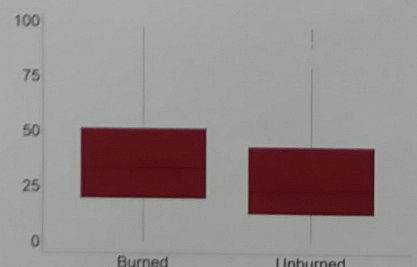
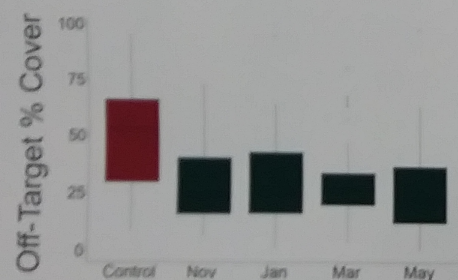
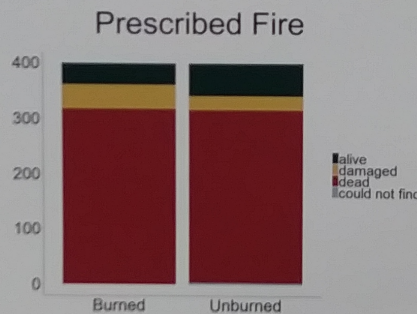
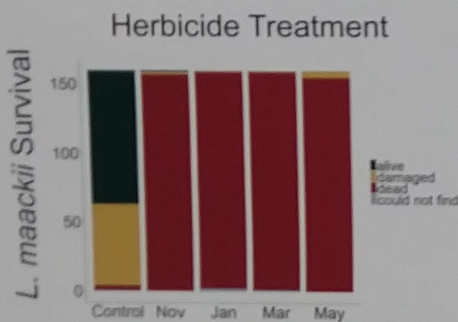


Study Site & Methods

We studied 800 individually identified *L. maackii* across 5 sites at Nachusa Grasslands, Franklin Creek State Natural Area, and an adjacent private property. Prescribed fire was administered to half of each site Spring 2018. Within each burned/unburned plot, 5 basal bark triclopyr herbicide treatments were applied in Fall, Winter, Early Spring, Late Spring, and no treatment. Off target vegetation impacts were measured using 1m² quadrat centered on 200 *L. maackii*, and the percent cover of all species were measured. *L. maackii* were checked in fall to determine survival status.

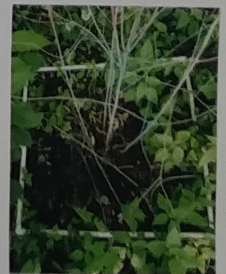


Findings



- *L. maackii* across all herbicide treatment seasons were >97% killed. Prescribed fire did not impact kill rates, but burning did increase the number of damaged *L. maackii*.
- Healthy off-target native herbaceous cover was reduced similarly across all seasonal herbicide treatments. Burned areas showed higher herbaceous cover across all treatments.

- The average "ring of death" had a 15.75" (40 cm) radius.



Conclusions

- *L. maackii* reduction through triclopyr based basal bark treatments is effective regardless of application season or burn status so usage is recommended throughout non-growing seasons.
- The average off-target herbaceous damage was not affected by the season of herbicide application, but was lower in burned units. Because the average "ring of death" was 16", application in high quality areas is not recommended.

Acknowledgments:

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Literature Cited

Rathfon and Ruble 2007, e-Gen. Tech. Rep. SRS-101. U.S. Department of Agriculture, Forest Service, Southern Research Station. 187-197