



Baseline Monitoring of Oregon Ash Stands and Understory Vegetation in Anticipation of Emerald Ash Borer (EAB) Infestation



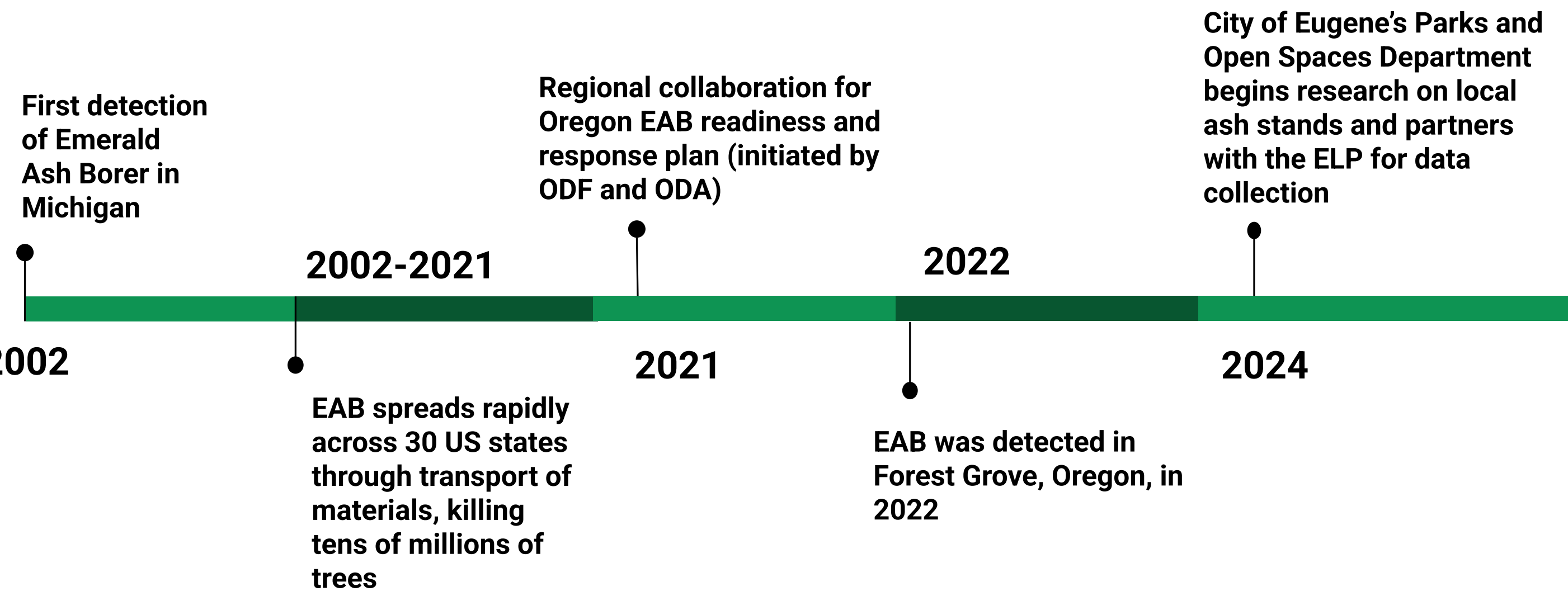
UNIVERSITY
OF OREGON

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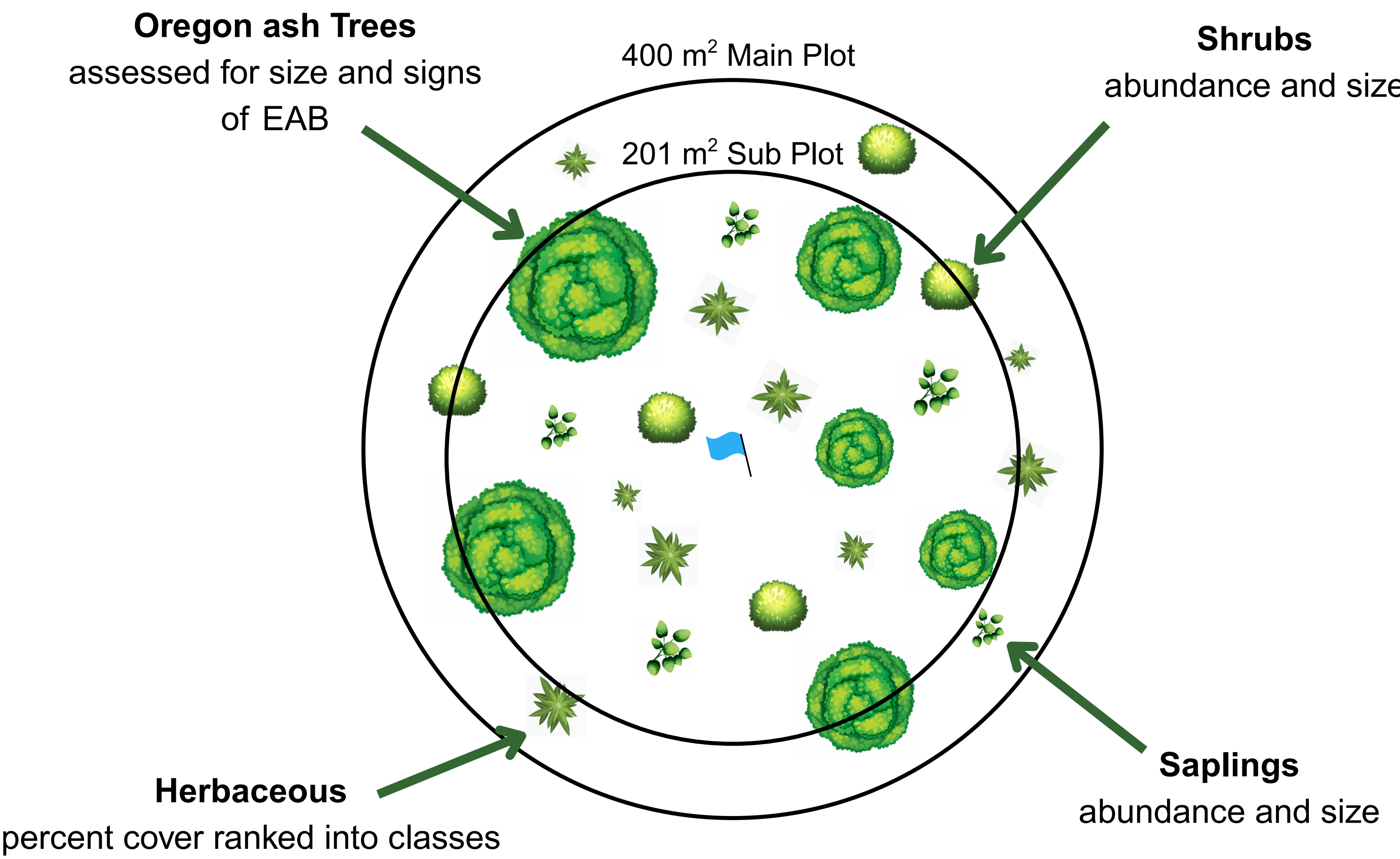
UO Environmental Leadership Program

INTRODUCTION

Oregon ash is a keystone species in the Pacific Northwest's wetland ecosystems offering essential ecological services, including habitat for native species and cooling and wellness effects in urban areas. However, it is now threatened by the invasive emerald ash borer (EAB), a beetle that kills ash trees by feeding on and separating their circulatory tissue, disrupting their nutrient flow. Early detection methods, public awareness, and strategic pest management are critical to slowing EAB's spread and protecting native habitats.



METHODS



Sampling of ash stands were taken using plots chosen at random, most sites contained multiple stands, with 1-7 plots per stand.

DISCUSSION

Management Recommendations

High Priority Sites

Amazon Park
Coyote Prairie
Oak Patch West

- treat a portion of ash trees to preserve habitat
- cut down a portion of ash trees to plant native trees for future habitat development
- continue management of native flora

Low Priority Sites

Bertelsen
Bethel Park
Gudukut

- draw EAB away from priority sites by proactively girdling
- fence off and post warning of falling trees
- cut down and chip infested ash trees near public access

STUDY SITES

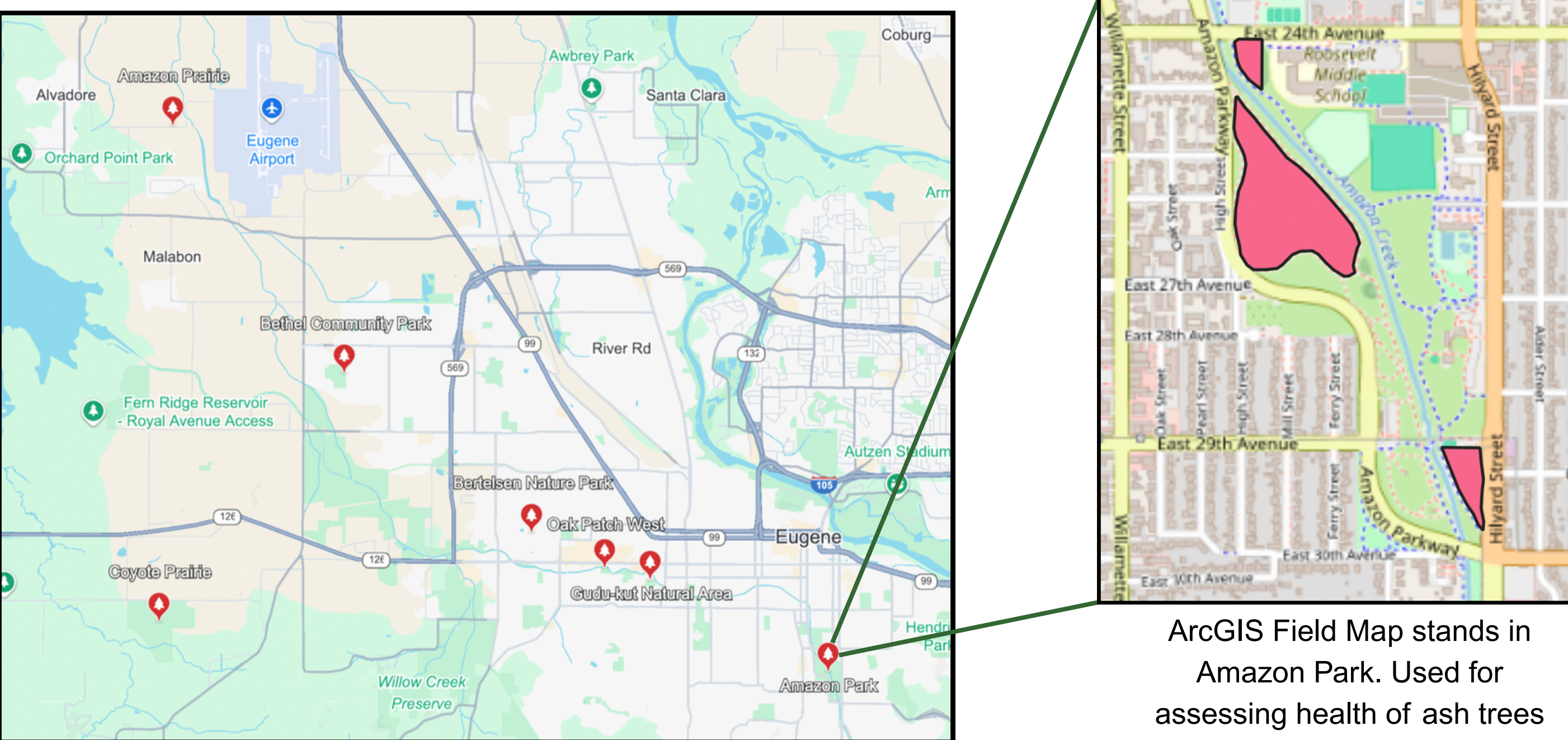


Figure1. Map of study sites, Eugene, OR

The sites evaluated are in Eugene's parks and natural spaces, varying from highly frequented areas for recreation to co-managed (BLM) and restored wetland areas spanning 35-75 acres.

Most contain a variety of native wildflowers and grasses which provide ideal habitat for native birds, insects, and other animals. Current management practices maintain vegetation and address invasive vegetation in the habitat.

RESULTS

Figure 2. Percentage of native species at each site, shown right. Amazon Prairie (East Creek) was excluded when evaluating management priority because we applied a different protocol to the measurement of its plots.

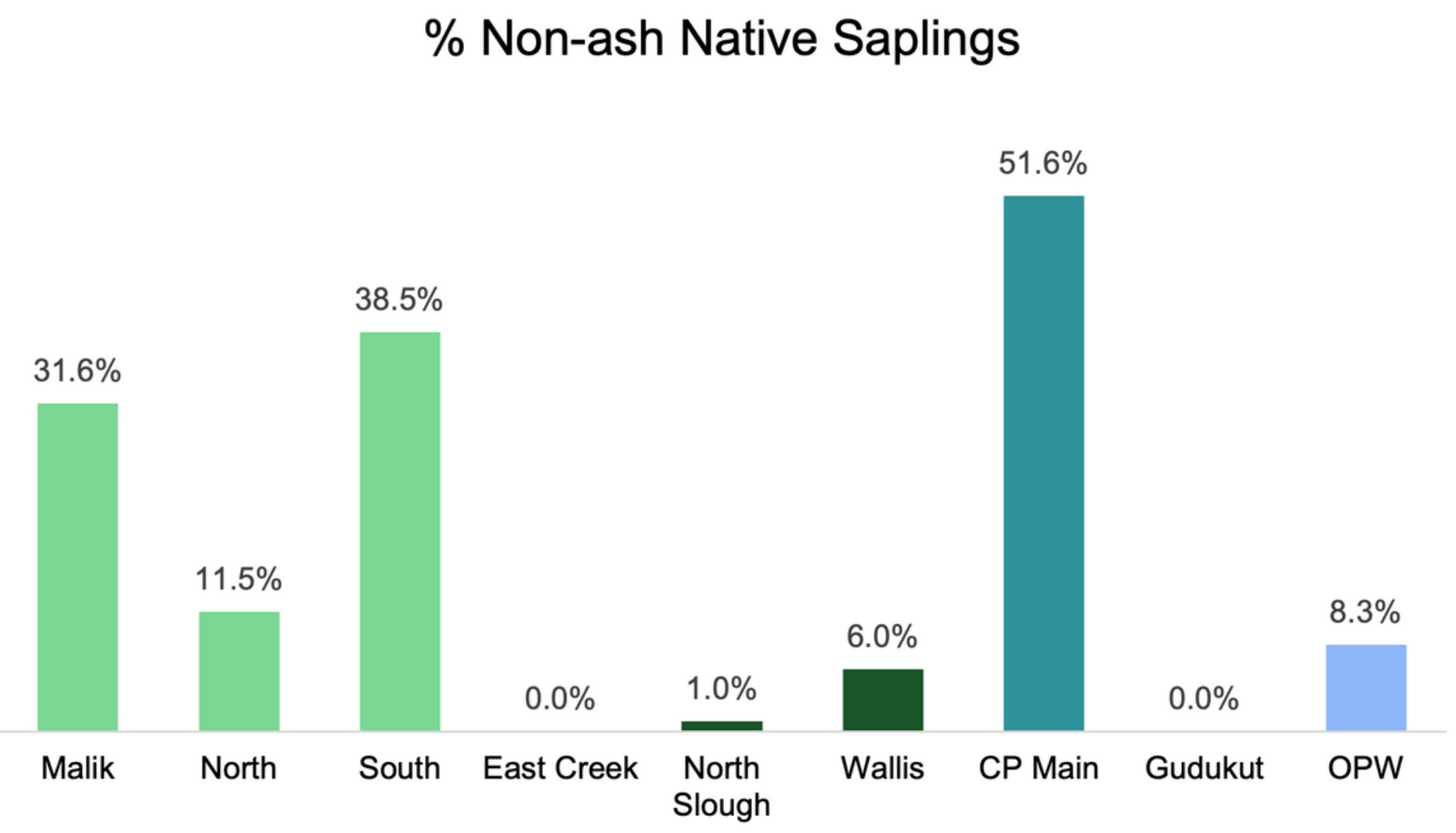
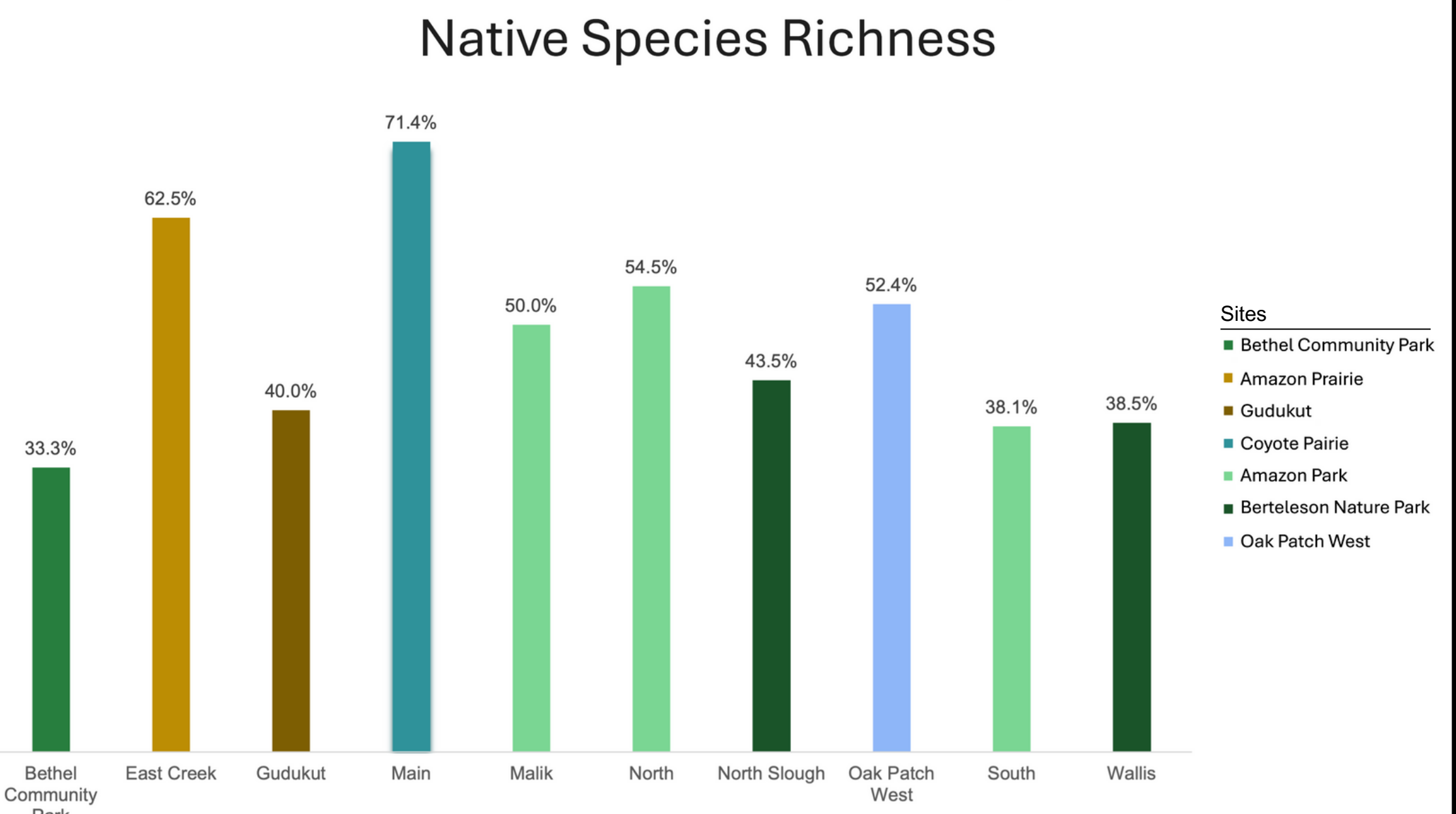


Figure 3. Community composition of saplings by site, shown left, informs the future canopy: the sites with the highest percentage of native saplings are Amazon Park (Malik, North, South), Coyote Prairie (CP Main), and Oak Patch West (OPW).

Factors Considered

- Native Species Richness: higher diversity of native herbaceous species in understory
- Community Composition of Saplings: informs the future habitat and canopy cover in the event of Oregon ash decline
- Social Factors: areas that support public health through outdoor recreation and access to native flora, areas where falling trees pose greater risk to the community

ACKNOWLEDGEMENTS

The Spring 2025 Oregon Ash team offers thanks to our community partner, the City of Eugene and Diane Steeck. In addition, thanks to Peg Boulay (co-director of the Environmental Leadership Program), and our GE Project Manager Momo Kelley.

Oregon Ash Team Website



We want to acknowledge the original stewards of this land. These sites are located on the traditional indigenous homeland of the Kalapuya people, who were dispossessed of them by the US government and forcibly removed to the Coast Reservation in Western Oregon. Today, Kalapuya descendants are primarily citizens of the Confederated Tribes of Grand Ronde and the Confederated Tribes of Siletz Indians, and continue to make important contributions to their communities, to the UO, to Oregon, and the world.