An observed global decline in pollinators has placed special attention on bees in recent decades, especially in the pacific northwest region, where native bee species such as *Bombus occidentalis* have declined as much as 90% (Graves et al. 2020). Initiatives like the Oregon Bee Atlas(OBA) aim to survey local bees, identifying bees and the associated plants that they are foraging on. Such a massive dataset is important to the world of pollinator conservation; not only have bee species declined, but pollinator function as a whole has been on a downward trend as well. As these plant-pollinator networks become more fragile, data on plant-pollinator interactions become a powerful tool(Burkle et al. 2013).

While the Oregon Bee Atlas has been a success in sampling effort since 2018, the dataset is large, and data visualization/interpretation efforts are still ongoing within the program. One of the largest applications of the OBA is its utilization by land managers. A forest service report on “Pollinator-Friendly Best Management Practices for Federal Lands” advises land managers to work with their local pollinator conservation initiatives to decide which bee populations to monitor, which native species to plant, and how to avoid harming pollinators during other projects (USFS 2015). Having a strong diversity of pollinators in an area benefits natural and agricultural ecosystems, and improves both environmental health and human welfare (Katumo et al. 2022). The Oregon Bee Atlas has the information to meet these needs and deliver these benefits. The Oregon Department of Agriculture provides a guide to “Common Bee Pollinators of Oregon Crops,” but the guide is static, last revised in 2017, and focuses on commercial crops as opposed to the wild-growing and native plants that are detailed in the OBA dataset (Kincaid 2017). The Oregon Bee Atlas is location based and can provide valuable info on networks that can increase resiliency and diversity. Pollination networks are also quite complex, and the specificity of the data set might give managers the upper hand compared to more general initiatives to increase native foliage.

This being said, it isn’t easy to download the OBA data and immediately have that local pollinator knowledge. Trends across all of Oregon won't apply to specific areas of land, and only looking at one bee or plant might not give land managers the whole picture. There needs to be a way to quickly get and visualize specific OBA data to inform land managers of the important interactions that might be happening on their land. And while the spatial spread of OBA samples is large, there might be a lack of OBA samples taken from any specific plot of land, necessitating a way to gather relevant observations.

The purpose of this project is to give land managers (or gardeners or farmers or researchers etc.) a tool to efficiently parse and present OBA data that is relevant to the land that they are managing. I plan to use Natureserve’s land cover classification dataset to divide Oregon into distinct vegetation types. Users of this tool will then be able to enter their location, and receive concise visualizations of OBA data that have

been collected in similar ecosystems across Oregon. The data will be arranged in a way that emphasizes plants that facilitate bee abundance and diversity, so that the user can make informed decisions on what to plant or remove. I predict that making these decisions will result in an increase in pollinator visitation rates and ecosystem resiliency.

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