Internship with the Institute for Natural Resources

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Introduction

My climate resilience internship was at the Institute for Natural Resources, Oregon's most extensive database of rare species. State, federal, and private agencies use data from INR to make informed decisions and policies related to natural resources. I worked as the rare species data intern. During my internship, I learned how INR manages the rare species data that they collect, receive, and distribute within the Oregon Biodiversity Information Center (ORBIC). I had the opportunity to work under Dr. Eleanor Gaines, the director and zoologist of ORBIC, and Lindsey Wise, who is the biodiversity data manager.

Problem Statement

Climate change is a problem that is threatening biodiversity worldwide. Rare species are especially at risk. They are vital to Oregon's ecosystems and need to be protected.

INR's Solution

- INR combines information from various Oregon agencies and researchers to create a useful central data source
- Readily available research is important for science-based decisions to be made by environmental policymakers
- Rank Reviews— INR assesses species by range, rarity, and threats in Oregon and assigns conservation ranks based on observed data.
- Partner agencies and organizations will then use those ranks to prioritize their projects and actions
- The Oregon Biodiversity Information Center (ORBIC) within INR has various projects including organizing and inputting data into NatureServe's Oregon Biotics, which is an online source, catalog, and map of species data – both plant and animal.

My Work at INR

I completed training to learn how rare species data is managed under INR and the NatureServe Network's protocols. I evaluated rare species data provided by partners such as the Xerces Society and incorporated new or updated information into INR's rare species database. Species data that I worked on entering into NatureServe's Network's Oregon Biotics include:

- American Pika data from the Bureau of Land Management
- Golden Eagle data from US Fish and Wildlife Service
- Mollusca (*Juga hemphilli dallesensis, Juga hemphilli hemphilli, Monadenia fidelis minor*) from Xerces Society for Invertebrate Conservation
- Western bumblebee (*Bombus occidentalis*) data from Xerces and GeoBOB
- Caddisfly (*Neophylax smithii*) data from Xerces Society for Invertebrate Conservation
- Mussels (*Anodonta oregonensis*) data from Xerces Society for Invertebrate Conservation

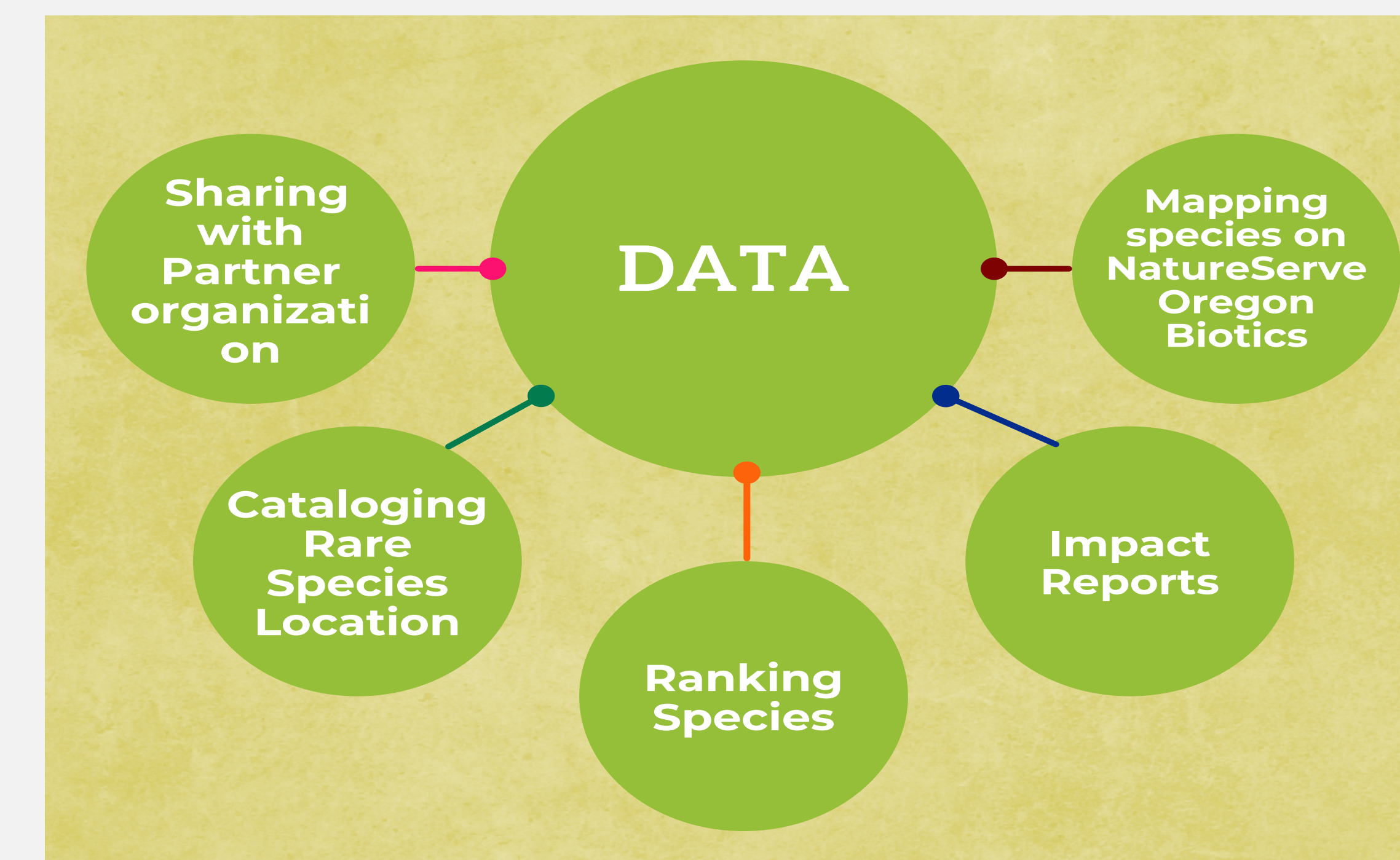Figure 1. Species data I worked with at INR

Figure 2. Map displaying the flow of data at the Institute for Natural Resources

Lessons Learned

During my 5 months spent at INR I was able to learn so much about a variety of topics including:

- NatureServe's Oregon Biotics
- MS Access database design
- ArcGIS
- How to interpret and organize species data
- The importance of centralized data and it's various uses and purposes
- Increased my familiarity with the species and habitats within Oregon, specifically learned more about rare species I had no prior knowledge of
- Environmental Policies

Future Directions

Working at INR has helped me to expand on topics related to climate change, conservation, environmental policy and has provided me with an introduction to GIS. I've also built many connections and gained valuable experience within the field of environmental science and conservation work. Obtaining hands-on experience has allowed me to expand my knowledge and has brought me closer to obtaining my career goals.

References

Gaines, Eleanor. "Interview with Dr. Eleanor Gaines." 8 Feb. 2022.

Wise, Lindsey. "Interview with Lindsey Wise." 5 May 2022.

Institute for Natural Resources, https://inr.oregonstate.edu/.