

# THE IMPACT OF POPULATION ON BIODIVERSITY IN THE U.S.



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# What is Biodiversity?

- Biodiversity- a measure of the genetic variation in organisms within an ecosystem
- The more biodiversity within a species, the less likely it is to experience extinction
- Hot spots- places where there is an extreme lack of biodiversity in a plant or animal species
- Maintaining biodiversity is very important because it affects many things in our daily lives like medicine and food production



# My Hypothesis

- The more populated an area is, the more hotspots will be seen
- I tested this by comparing the U.S. population by state and hotspots in 2022
- I predicted that the states with the most people will have the least biodiversity
- This study, and similar studies, are significant because our population is rapidly growing

# Map Details

Study Area: the continental United States

Source & Data (living atlas):

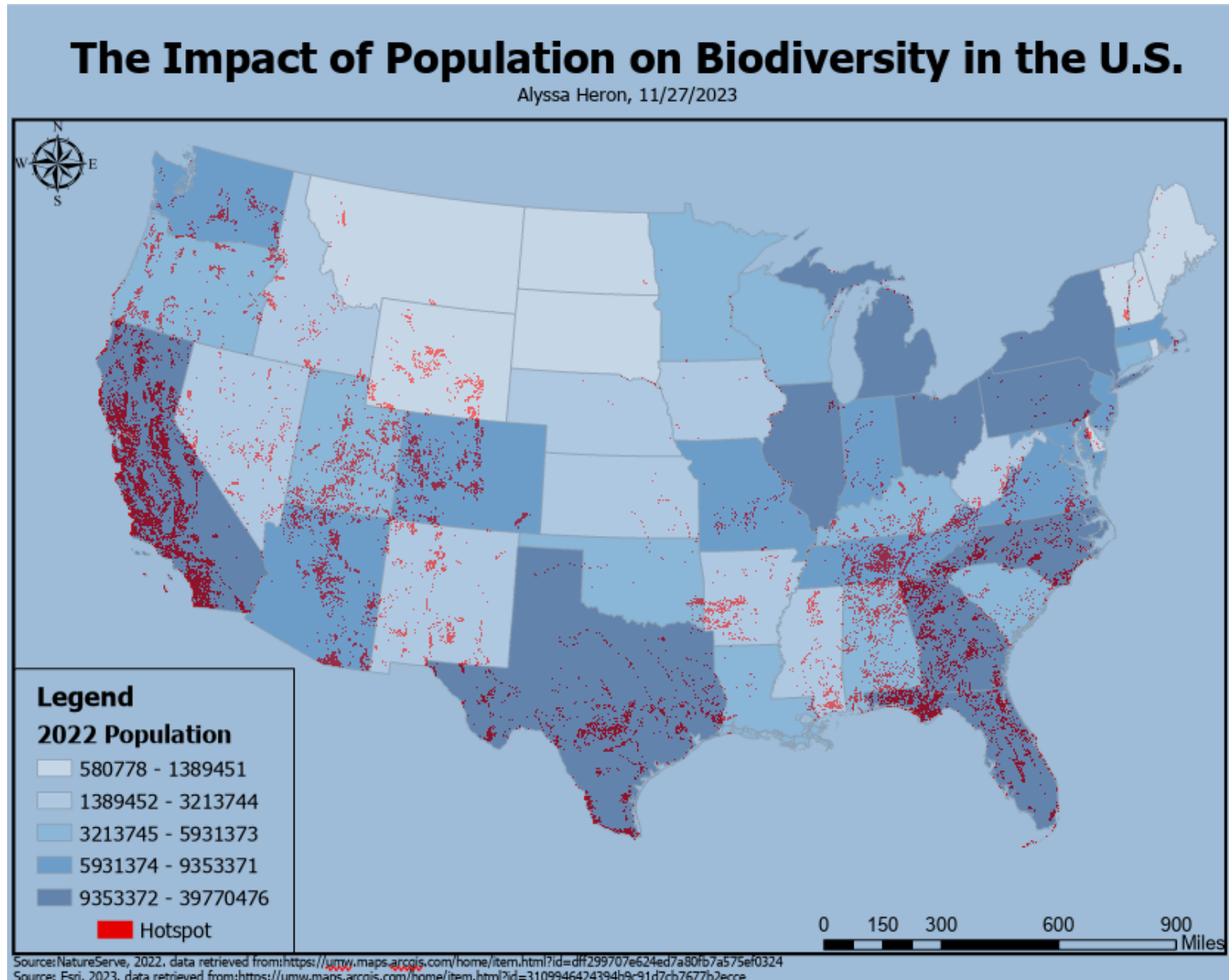
- Areas of Unprotected Biodiversity Importance of Imperiled Species in the United States, 2022 (raster)
- United States State Boundaries, 2023 (feature class)

GIS Methods Used:

- project tool (Albers Conic Equal Area)
- snapping tool
- symbology and element pane

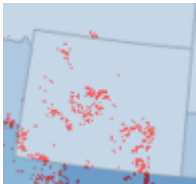


# Results & Findings



## What Does This Mean?

- My hypothesis was not fully correct
- There are states with many hotspots, but a lower population and vice versa
  - ex) Wyoming and Michigan
- Biodiversity doesn't only depend on population, but it does have an impact
  - ex) California and Florida
- Further studies on areas that have an unexpected number of hotspots could be done



# References

[https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/USA\\_Boundaries\\_2022/FeatureServer](https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/USA_Boundaries_2022/FeatureServer)

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**THANK YOU**

