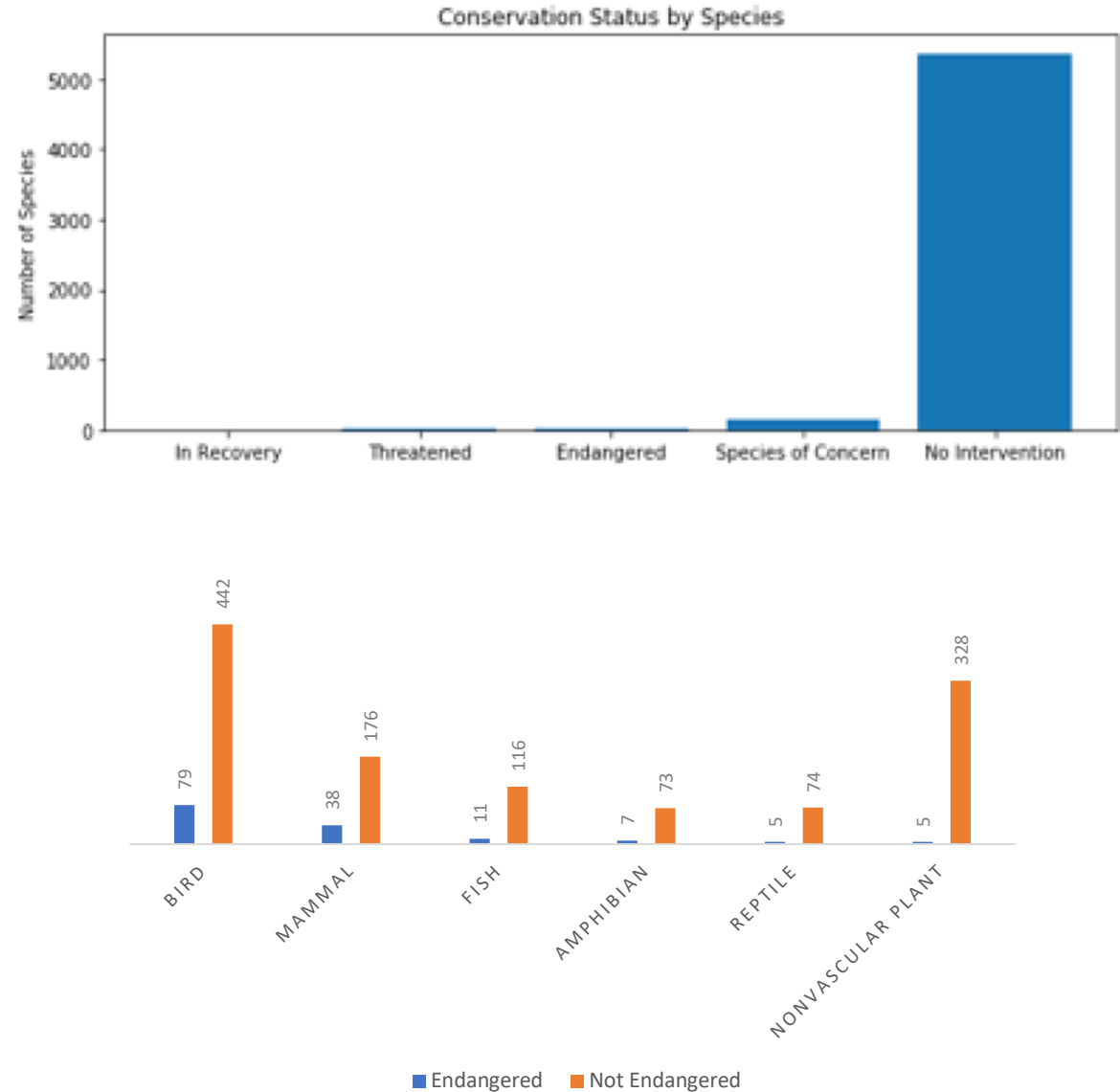


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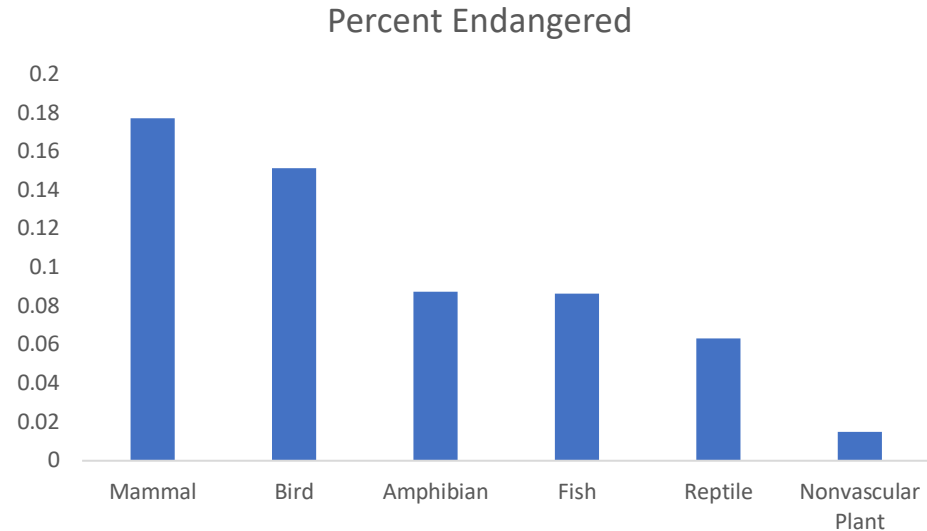
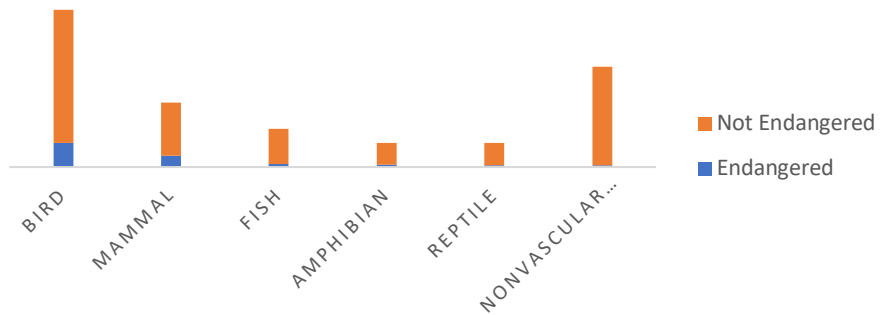
Biodiversity: Endangered & Diseased Species

Most species are not at risk

- The data in species_info.csv indicates that most of the species are not at risk of an intervention
- Of the sample taken, the top 3 at-risk species include
 - Birds
 - Vascular Plants
 - Mammals
- However, there are insights when digging into the sample sizes



High level data shows that mammals are at the highest risk of being endangered as a percent of their sample size – good idea to protect them



However, the chi-squared test indicates certain species are more likely to be endangered than others

- Slight difference in the percentages of birds and mammals that fell into the protected category
- Null hypothesis = difference a result of chance
- Mammals vs reptiles disproved the null hypothesis

Test	P-value of chi-sqrd	Significance
Mammals vs birds	0.688	Chance
Mammals vs reptiles	0.038	Not Chance

Sample size determination for the foot and mouth disease study

- To be sure that a >5% drop in observed cases of foot and mouth disease in the sheep at Yellowstone was significant, need to observe at least 510 sheep
- Approximately one week of observing in Yellowstone to see that many sheep
- Approximately two weeks in Bryce to see that many sheep

