Biodiversity for the National Parks

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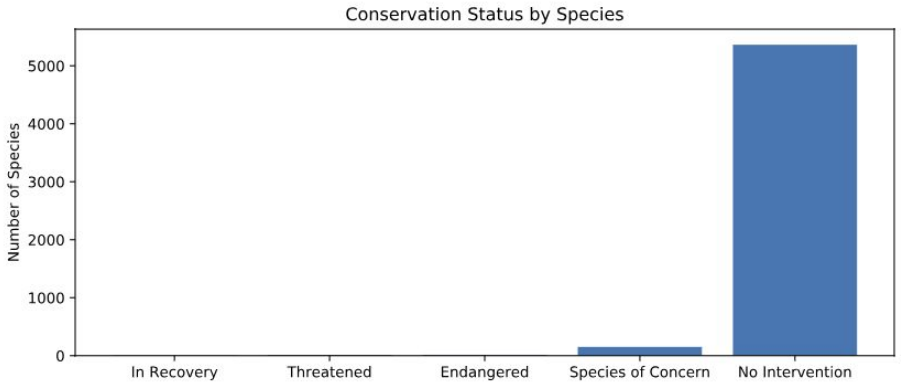
Data Analysis of Species

While going through the Species data, I noticed that there were only about 15 species that were “Endangered”, but 151 species that were “Of Concern”.We should also notice that about 5363 species came up with “No Intervention” needed.

I then broke down each Class that the Species fell into.

We ended up with:

- Amphibian
- Bird
- Fish
- Mammal
- Nonvascular Plants
- Reptiles
- Vascular Plants



Data Analysis of Species

When broken down, our percent protected here were our numbers:

Category	Not Protected	Protected	% Protected
Amphibian	72	7	8.8%
Bird	413	75	15%
Fish	115	11	8.7%
Mammal	146	30	17%
Nonvascular Plants	328	5	1.5%
Reptile	73	5	6.4%
Vascular Plant	4216	46	1%

Significance Calculations

After taking that data I ran a few Chi-Squared Test to analyze the different species.

After comparing percentages of birds to mammals (about ~0.688), I did not find a significant difference between them.

Yet after comparing percentages for reptiles to mammals (about ~0.038), I did find a significant difference between them.

Significance Calculations

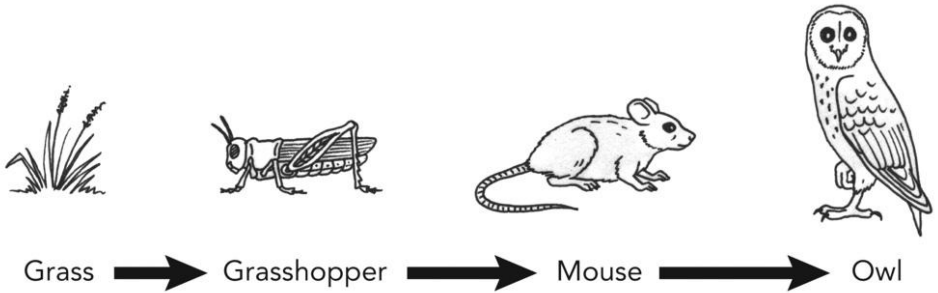
I could safely conclude that certain types of species are more likely to be endangered than others.

Which makes sense. The reptiles and Amphibians are going to the first indicators of issues happening within our parks. With Amphibians taking in more pollutions via their skin, they have always been our first indicators, followed shortly by reptiles.

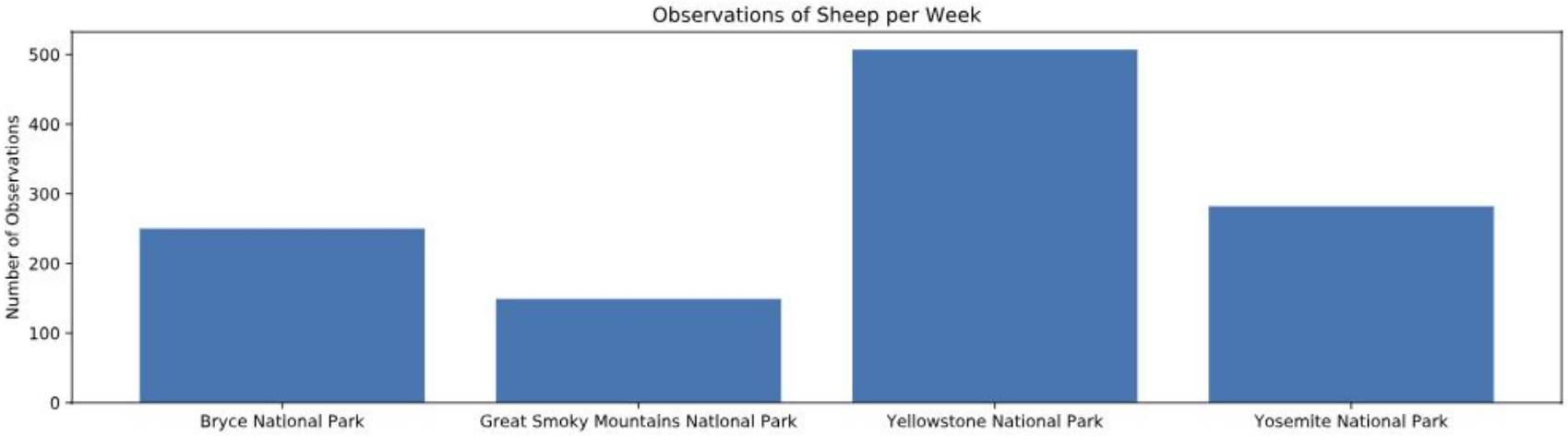
Recommendation for Conservationists

With the the slight increases in the none protected species within our parks, we should step to increase the level of protected status for each species.

Without the continued growth and biodiversity within our parks, we will wreck the food chain and see a **HUGE** decrease within our species biodiversity.



Sample Size Determination for Foot and Mouth Disease



This slide shows our Observations of Sheep per week, and how many we have seen.

Sample Size Determination for Foot and Mouth Disease

After the base report of about 15% of Foot and Mouth disease reported in sheep at Bryce National Park, we need to see 510 sheep over the next two weeks to see a less than 5% drop in cases.

So over the next two weeks, lets tag and bag about 510 of our sheep to determine if we have had this drop!