Biodiversity in the National Parks

Data analysis on the conservation statuses of endangered species

species_info.CSV data file

Contains following information about 5541 species

- The species category
- The scientific name of each species
- The common names of each species
- The species conservation status

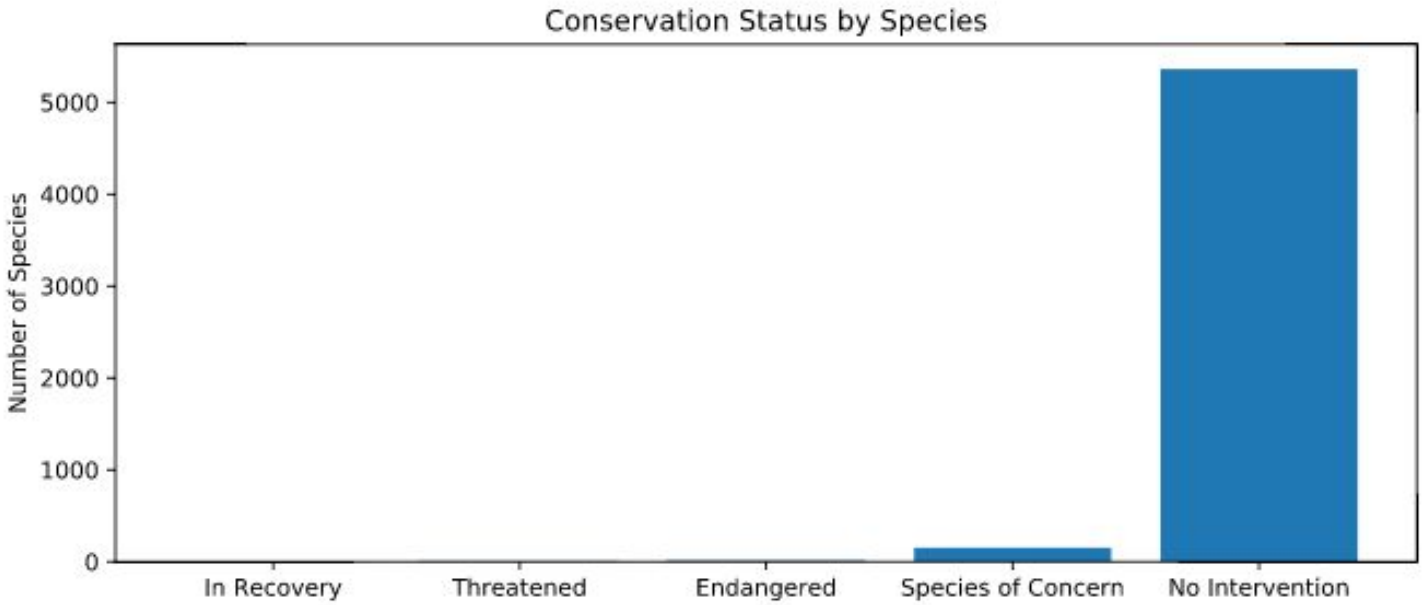
The categories of species

1. Mammal
2. Bird
3. Reptile
4. Amphibian
5. Fish
6. Vascular Plant
7. Nonvascular Plant

Number of species in each conservation status

1. Endangered - **15**
2. In Recovery - **4**
3. No Intervention - **5363**
4. Species of Concern - **151**
5. Threatened - **10**

Number of species in each conservation status



Percent of endangered species in each category

	category	not_protected	protected	percent_protected
0	Amphibian	72	7	8.860759
1	Bird	413	75	15.368852
2	Fish	115	11	8.730159
3	Mammal	146	30	17.045455
4	Nonvascular Plant	328	5	1.501502
5	Reptile	73	5	6.410256
6	Vascular Plant	4216	46	1.079305

Are certain types of species more likely to be endangered?

birds vs mammals

p-value of ~0.688

not significant

reptiles vs mammals

p-value of ~0.038

significant

Certain types of species *are* more likely to be endangered than others

Recommendations

The good news, that only a small number of species are categorized as needing some sort of protection. On the other hand, our data analysis on the conservation statuses shows that certain species are more likely to become endangered than others. Mammals and Birds have the highest percent of endangered species. These species need extra attention from scientists of National Parks.

Number of sheep observed in each park over the past 7 days

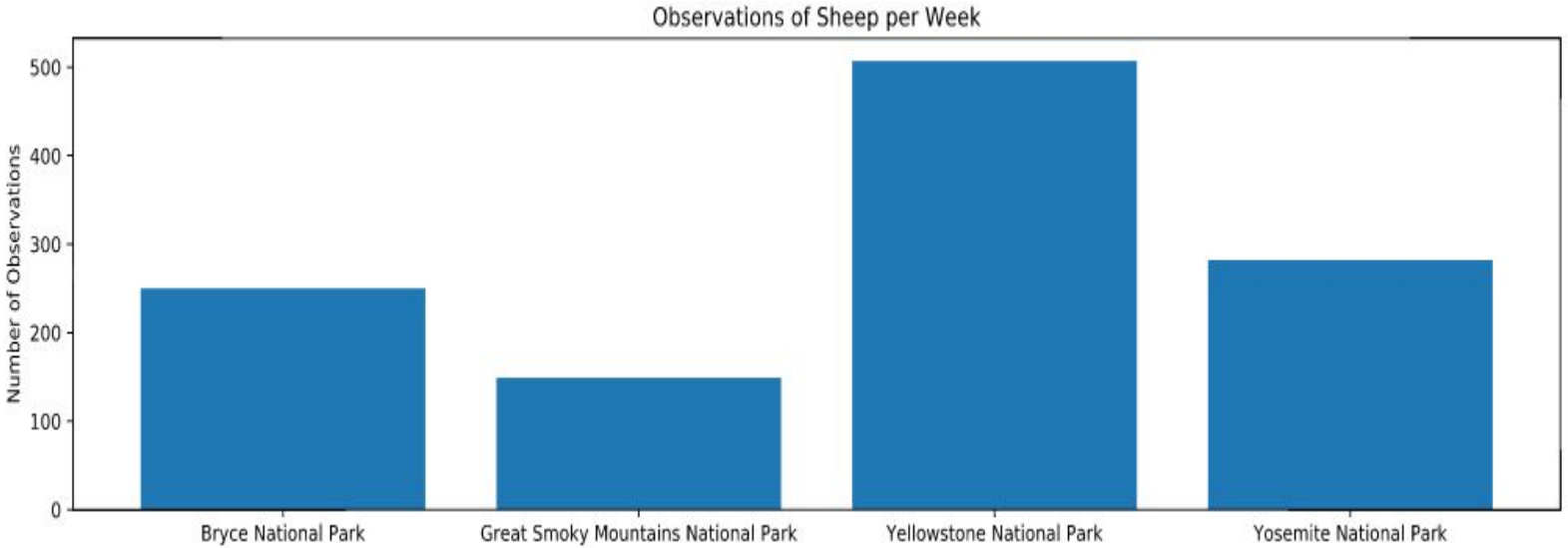
Bryce National Park - **250**

Great Smoky Mountains National Park - **149**

Yellowstone National Park - **507**

Yosemite National Park - **282**

Number of sheep observed in each park over the past 7 days



Foot and Mouth reduction effort

Baseline - **15**

Minimum detectable effect - **33.3**

Sample size - **510**

Current occurrence of Foot and Mouth disease in sheep at Bryce National Park -15%

Desirable drop in observed cases of foot and mouth disease in the sheep - >5%

Number sheep will need to be observed at Yellowstone in approximately one week or in approximately two weeks at Bryce National Park - 510