National Parks Service

INVESTIGATING PROTECTED SPECIES

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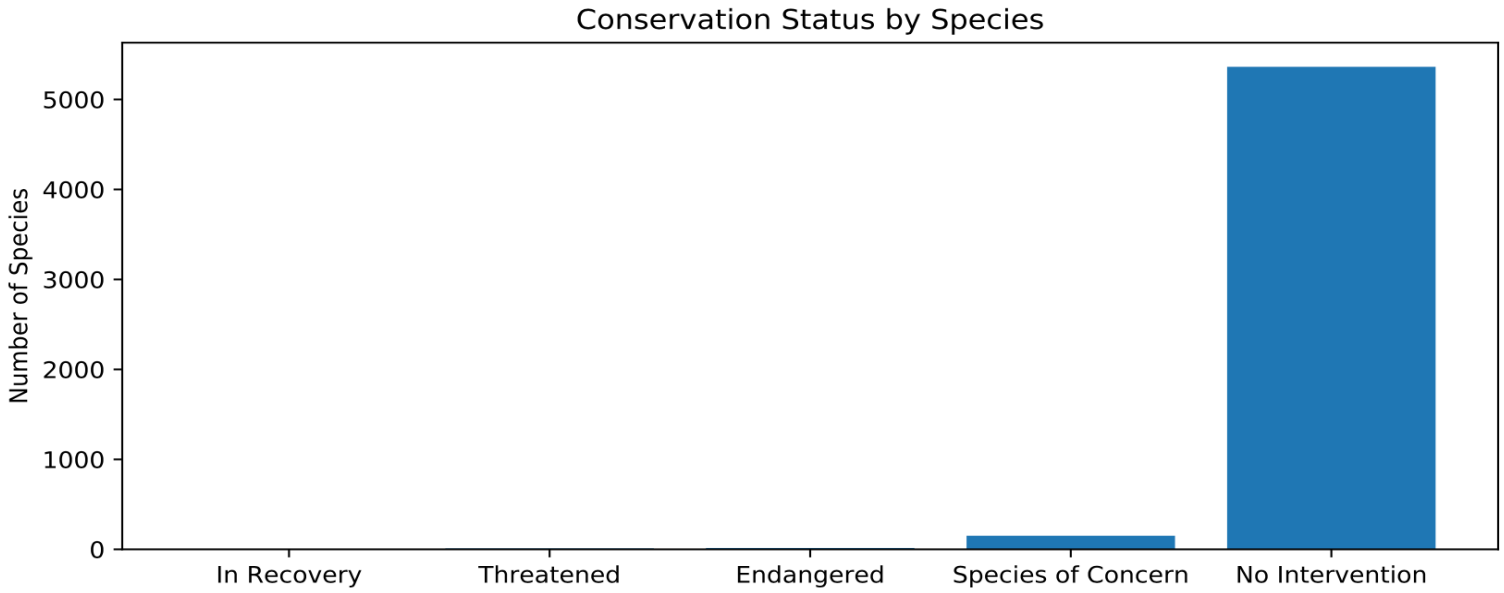
Species Conservation Status

The data shows there is a small number of species that can be classified as protected. The following table and graph show the number of species per conservation status.

conservation_status	scientific_name
Endangered	15
In Recovery	4
No Intervention	5363
Species of Concern	151
Threatened	10

Species Conservation Status



Protected Species

CHI-SQUARED TEST

This table shows the percentage of the number of species that are protected. An initial test shows no significance between the percentages of protected birds and mammals. However, the comparison test between the percentages of protected mammals and reptiles resulted in a significant difference. In summary, certain types of species are more likely to be endangered than others!

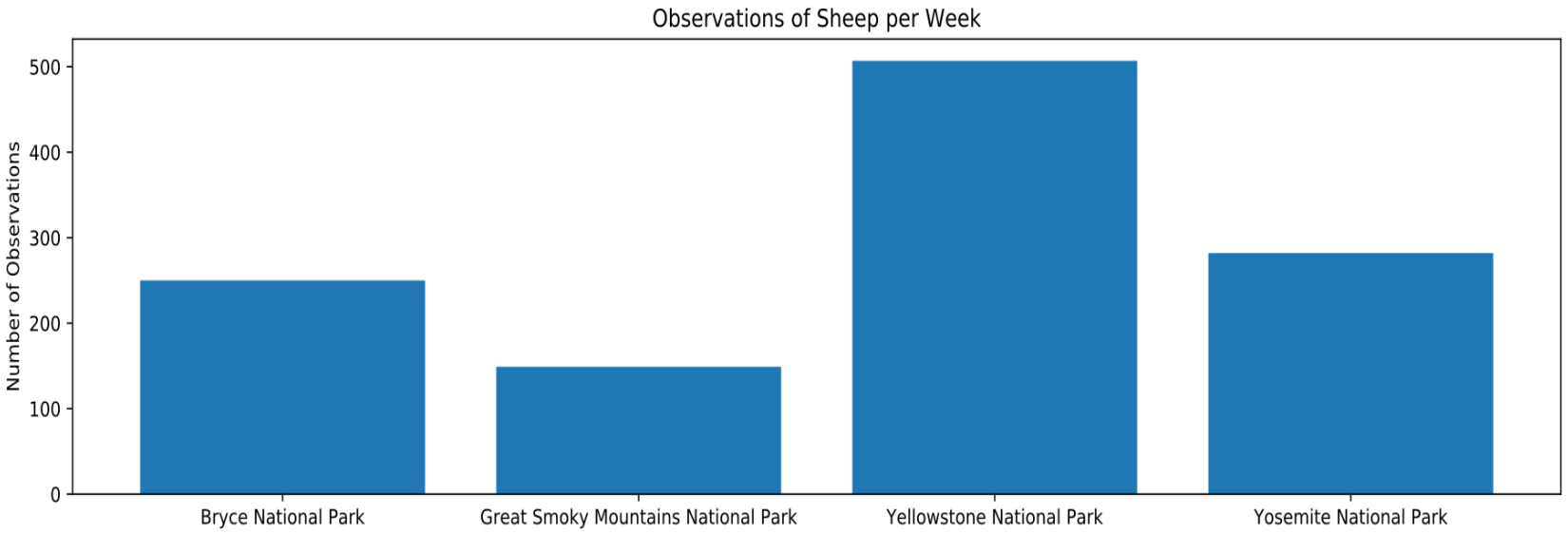
category	not_protected	protected	percent_protected
Amphibian	72	7	0.088608
Bird	413	75	0.153689
Fish	115	11	0.087302
Mammal	146	30	0.170455
Nonvascular Plant	328	5	0.015015
Reptile	73	5	0.064103
Vascular Plant	4216	46	0.010793

Sheep Observations

The following table and graph show the total number of sheep observed in each park over 7 days.

park_name	observations
Bryce National Park	250
Great Smoky Mountains National Park	149
Yellowstone National Park	507
Yosemite National Park	282

Sheep Observations



Sheep Observations

SAMPLE SIZE DETERMINATION

Our sample size is calculated using the previous year's recorded 15% of foot and mouth disease as the baseline rate. With a minimum detectable effect rate of 33.3% and statistical significance of 90%, the calculated number of sheep that need to be observed is 870.