biodiversity

By Breanna Niekamp

Data from Species_Info.csv:

- When delving into the species_info.csv we found that many of the animals that had been protected with intervention were doing better than those that had not been or were left unprotected.
- Mammals more likely to be endangered than the birds, however upon comparing them there was no significant difference.
- There was a definite significant difference that was found when comparing mammals and reptiles though.

	category	not_protected	protected
0	Amphibian	72	7
1	Bird	413	75
2	Fish	115	11
3	Mammal	146	30
4	Nonvascular Plant	328	5
5	Reptile	73	5
6	Vascular Plant	4216	46

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0.687594809666
0.0383555902297
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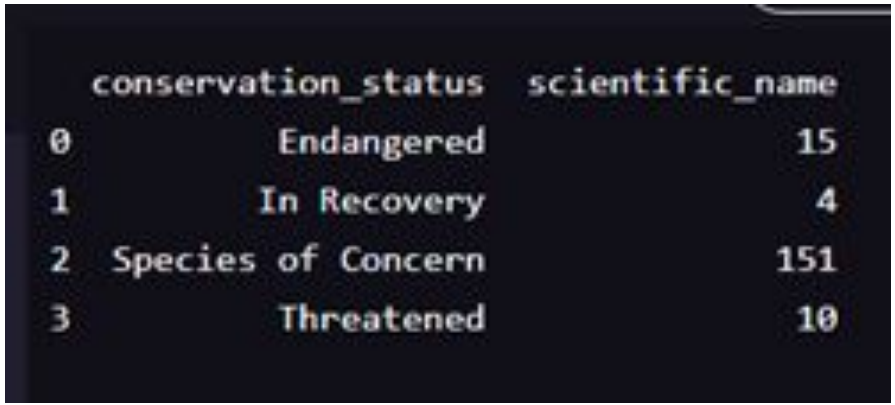
We calculated the endangerment statuses for all of the species in the csv file, and rendered this graphic:



	conservation_status	scientific_name
0	Endangered	15
1	In Recovery	4
2	Species of Concern	151
3	Threatened	10

Recommendations for Conservationists:

I would certainly recommend focussing more efforts to getting involved, as you can see, the number of those that were endangered most were the ones who were lacking in intervention from conservationists.

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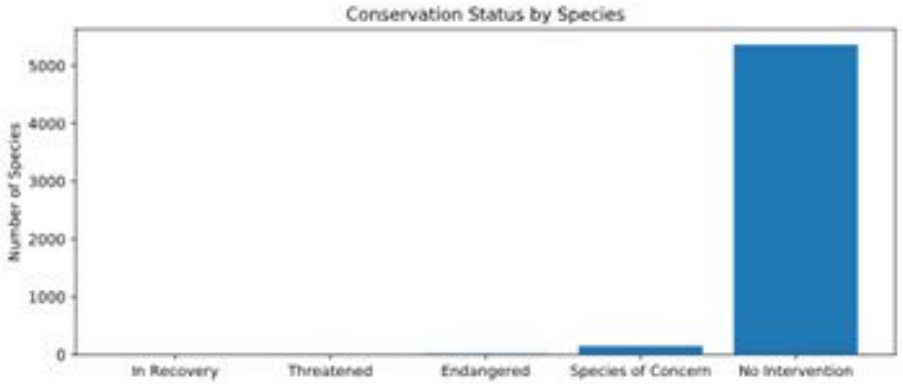
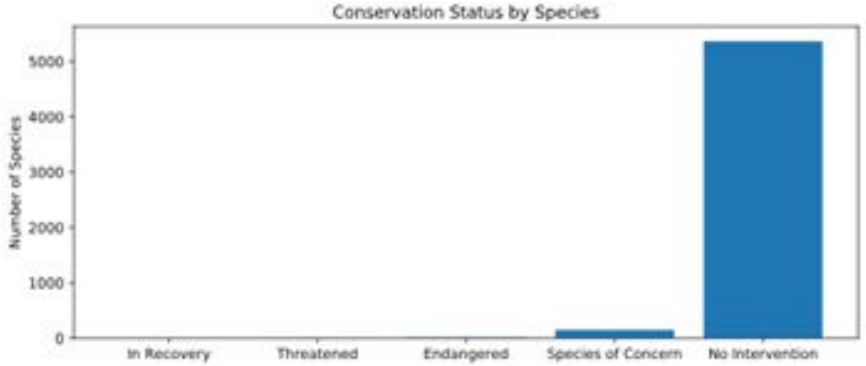


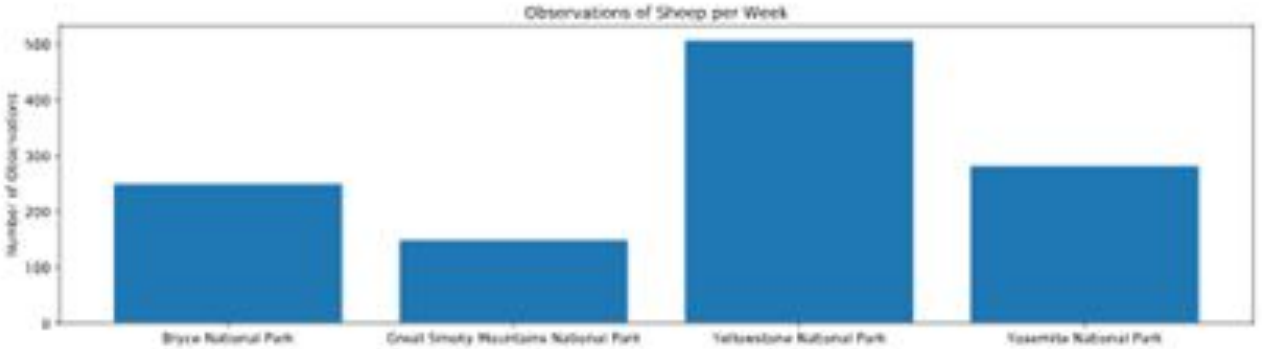
Foot and Mouth Disease Sample Size Determination:

With the provided baseline of 15%, of those that had the foot and mouth disease in sheep, we discovered that if the scientists wanted to be sure that a drop greater than 5% in observed cases was significant they would have to observe 870 sheep or more.

We also discovered that this would take one week of observation in order to see that many sheep in Yellowstone, and two weeks in Bryce National Park.

Graphs:


Conservation Status by Species
Number of Species
5000
4000
3000
2000
1000
0
In Recovery
Threatened
Endangered
Species of Concern
No Intervention


Observations of Sheep per Week
Bryce National Park
Great Smoky Mountains National Park
Yellowstone National Park
Yosemite National Park