



NATIONAL PARKS SERVICE

Biodiversity for the National Parks

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NATIONAL PARKS SERVICE INFORMATION

Collected data: `species_info.csv`

File contents: species_info.csv

- 7 categories
 - 'Mammal'
 - 'Bird'
 - 'Reptile'
 - 'Amphibian'
 - 'Fish'
 - 'Vascular Plant'
 - 'Nonvascular Plant'
- 5541 scientific_name
- 5504 common_names
- 4 conservation_status
 - 'Species of Concern'
 - 'Endangered'
 - 'Threatened'
 - 'In Recovery'

```
1 category,scientific_name,common_names,conservation_status
2 Mammal,Clethrionomys gapperi gapperi,Gapper's Red-Backed Vole,
3 Mammal,Bos bison,"American Bison, Bison",
4 Mammal,Bos taurus,"Aurochs, Aurochs, Domestic Cattle (Feral), Domesticated Cattle",
5 Mammal,Ovis aries,"Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)",
6 Mammal,Cervus elaphus,Wapiti Or Elk,
7 Mammal,Odocoileus virginianus,White-Tailed Deer,
8 Mammal,Sus scrofa,"Feral Hog, Wild Pig",
9 Mammal,Canis latrans,Coyote,Species of Concern
10 Mammal,Canis lupus,Gray Wolf,Endangered
11 Mammal,Canis rufus,Red Wolf,Endangered
12 Mammal,Urocyon cinereoargenteus,"Common Gray Fox, Gray Fox",
13 Mammal,Vulpes fulva,"Black Fox, Cross Fox, Red Fox, Silver Fox",
14 Mammal,Vulpes vulpes,Red Fox,
15 Mammal,Felis concolor,Mountain Lion,
16 Mammal,Felis silvestris,"Wild Cat, Wildcat",
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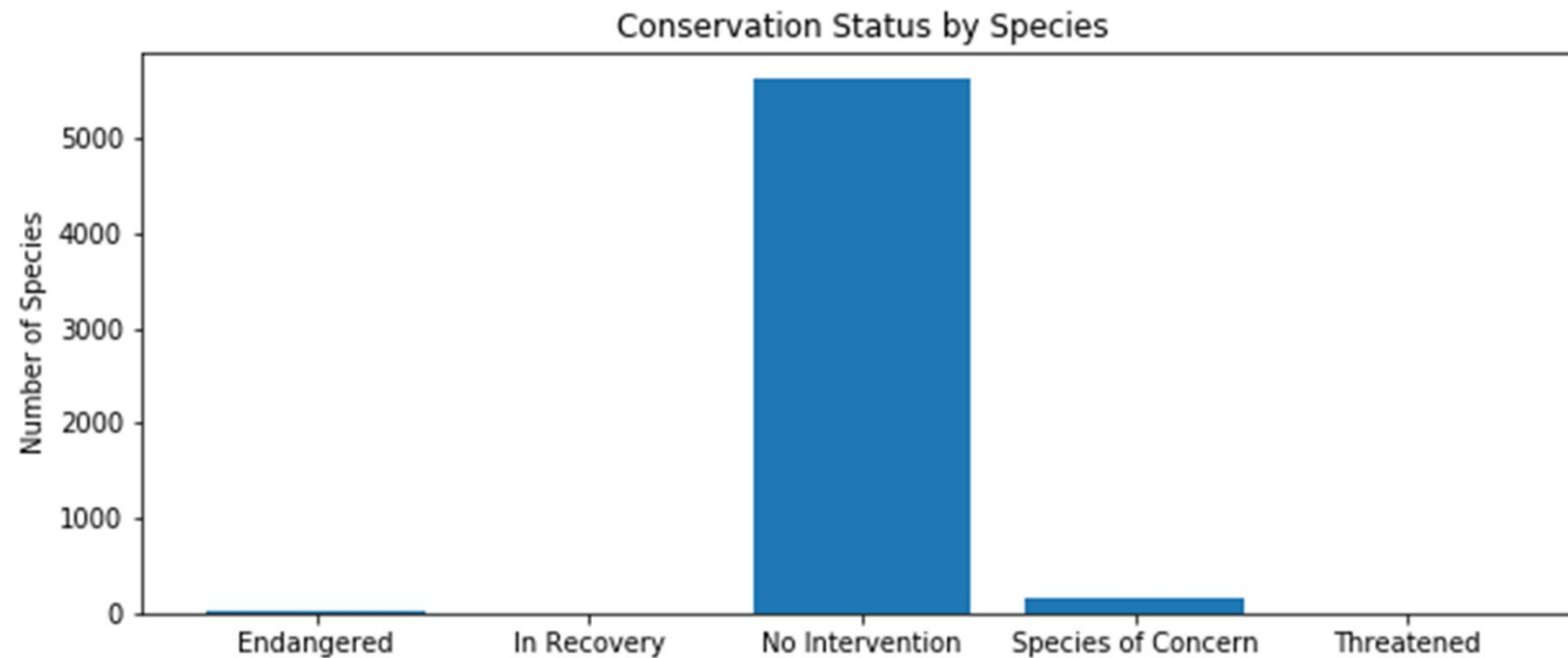
CONSERVATION STATUS ANALYSIS

Endangered Species

Conservation Status

- **Species of Concern:** declining or appear to be in need of conservation
- **Threatened:** vulnerable to endangerment in the near future
- **Endangered:** seriously at risk of extinction
- **In Recovery:** formerly Endangered, but currently neither in danger of extinction throughout all or a significant portion of its range

Species conservation status



category	not_protected	protected	percent_protected
Amphibian	73	7	0.087500
Bird	442	79	0.151631
Fish	116	11	0.086614
Mammal	176	38	0.177570
Nonvascular Plant	328	5	0.015015
Reptile	74	5	0.063291
Vascular Plant	4424	46	0.010291

Likelihood of endangered species

Chi-squared test results

- Mammal and Bird
 - $p\text{-val} = 0.4459$ (no significant difference)
- Reptile and Mammal
 - $p\text{-val} = 0.0233$ (significant difference!)

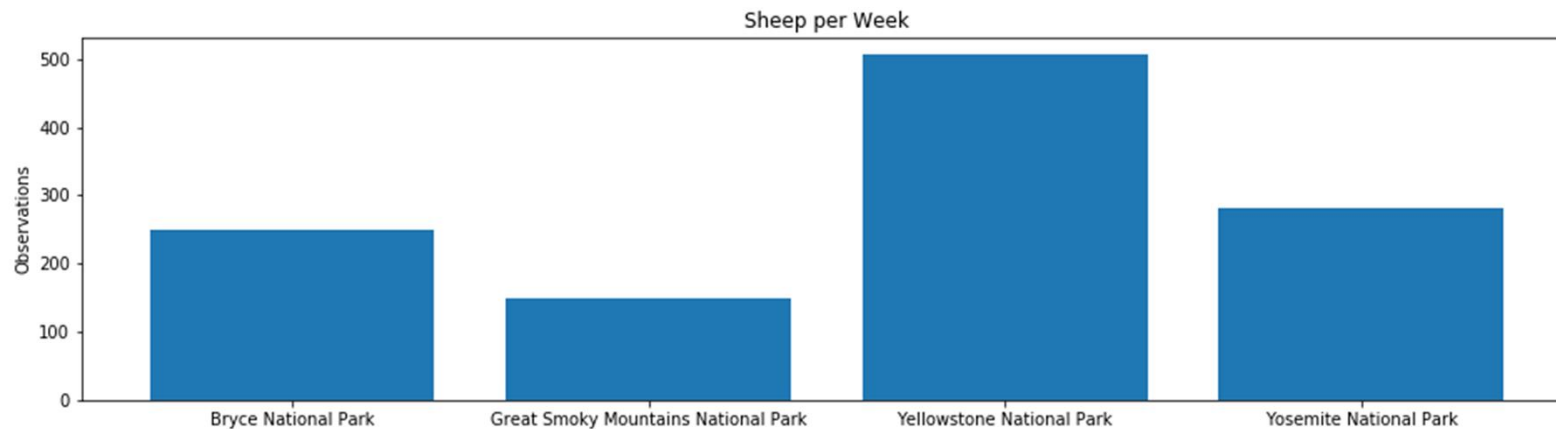
Recomendation for conservationists

- Plants are the least endangered species observed
- Mammals and Birds are the categories with the most endangered species, however there is no significant difference between these two groups
- The threat difference between Reptiles and Mammals is significant
- Mammals should be priority for conservation efforts and further study

SHEEP OBSERVATION BY NATIONAL PARK

Sample size and weeks required to collect samples to
evaluate foot and mouth disease program

Foot and mouse disease sampling



510

Sample size required
based on observations

	park_name	observations	weeks_to_get_sample
	Bryce National Park	250	2.040000
	Great Smoky Mountains National Park	149	3.422819
	Yellowstone National Park	507	1.005917
	Yosemite National Park	282	1.808511