

Biodiversity for the National Parks

September 2018

More than 5,000 species identified, including animals and plants

5,541 different **species**, both animal and plants

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graph TD; A["5,541 different species, both animal and plants"] --- B["5 categories of animals"]; A --- C["2 categories of plants"]; B --- B1["• Mammal"]; B --- B2["• Bird"]; B --- B3["• Reptile"]; B --- B4["• Amphibian"]; B --- B5["• Fish"]; C --- C1["• Vascular"]; C --- C2["• Non-vascular"];
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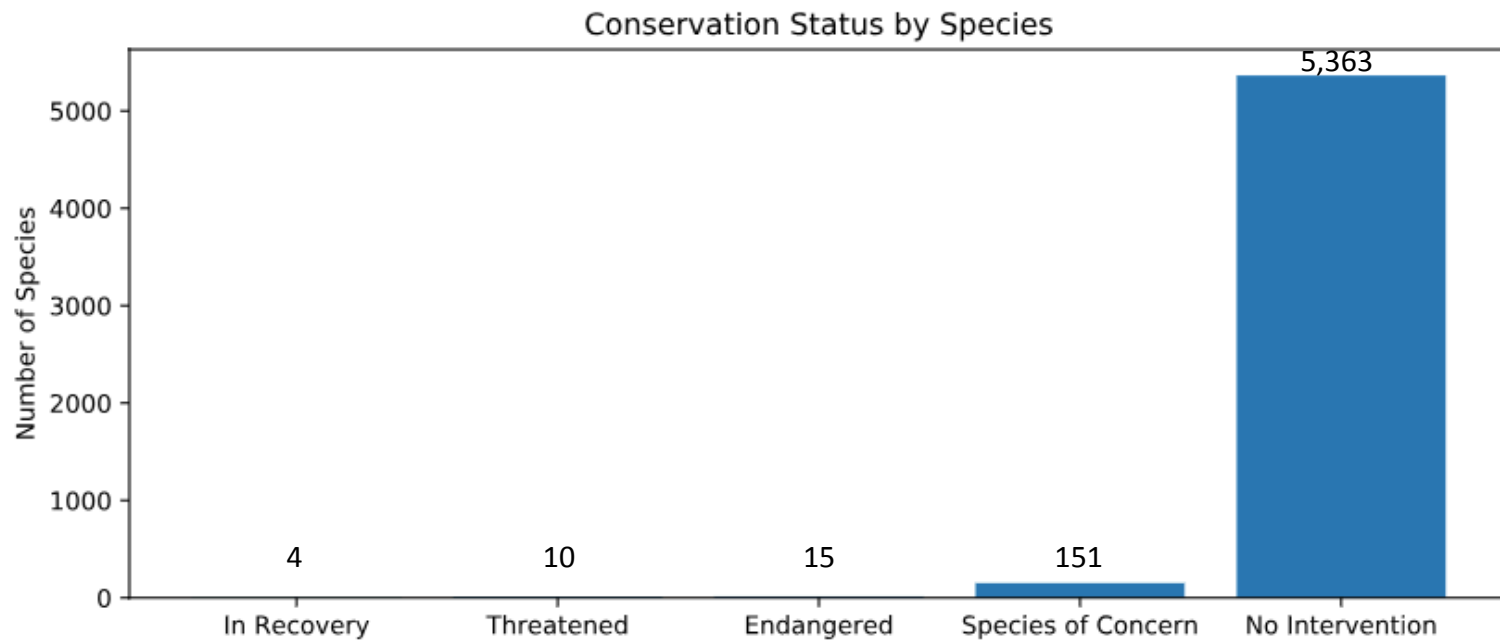
5 categories of **animals**

- Mammal
- Bird
- Reptile
- Amphibian
- Fish

2 categories of **plants**

- Vascular
- Non-vascular

All species classified regarding their conservation status



Birds and mammals: categories with more species protected

Category	Not protected	Protected	% protected
Amphibian	72	7	8.86
Bird	413	75	15.36
Fish	115	11	8.73
Mammal	146	30	17.05
Reptile	73	5	6.41
Non-vascular plant	328	5	1.50
Vascular plant	4,216	46	1.08

Conservation efforts should focus specially on birds and mammals, rather than on reptiles

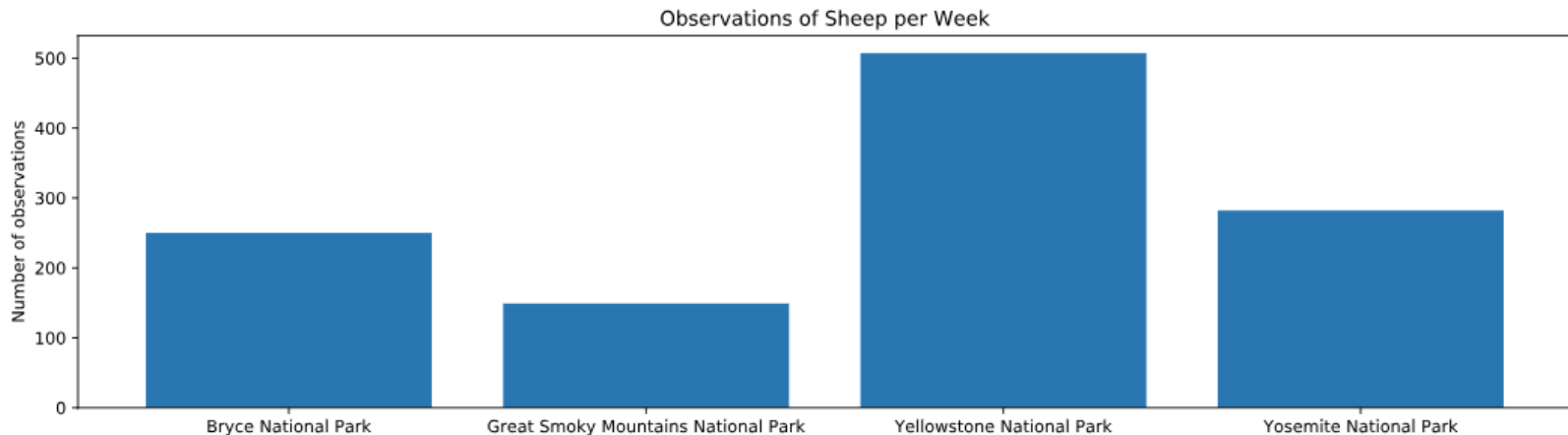
With a p-value of 68.76% ($>5\%$) , we **cannot conclude that there is a significant difference between birds and mammals** in terms of conservation status

With a p-value of 3.84% ($>5\%$), we can conclude that **mammals are more protected than reptiles**

A sample of 890 observations is needed to get conclusive results about foot and mouth disease

Baseline conversion rate	15%
Statistical significance	90%
Minimum detectable effect	33%

Sample size
890



1.8 weeks in Yellowstone and 3.6 weeks in Bryce National Park needed to make all required observations to analyze foot and mouth disease