Biodiversity in Our Parks

Where we sit and how we can focus our efforts.

We’re using data from the National Parks Service

Are certain types of species more likely to be endangered?

Let’s review the data

With Just These Four Categories of Data...

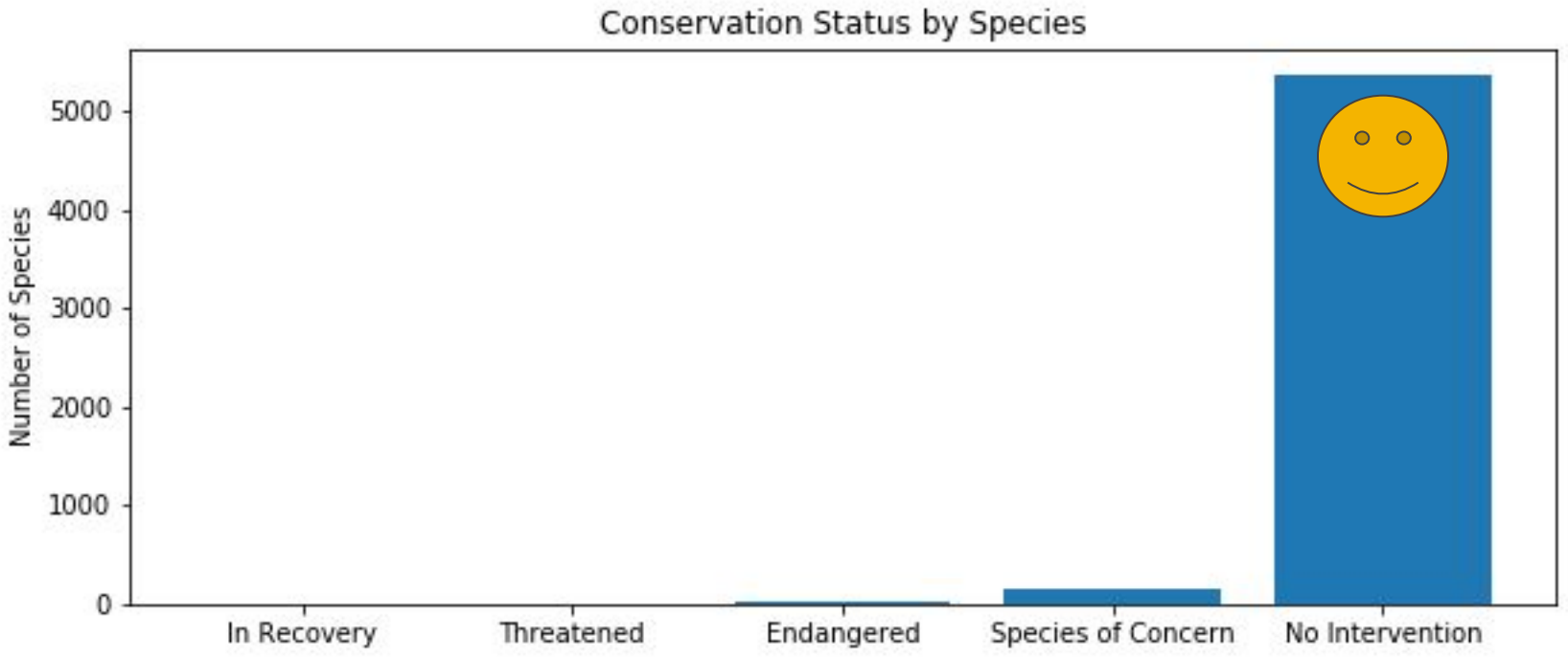
- Species Type
  - Amphibian Bird
  - Fish
  - Mammal
  - Nonvascular Plant
  - Reptile
  - Vascular Plant
- Scientific Name
- Common Name
- Conservation Status

… We Are Able To Tell The Following Stories

Some Types of Species **are** significantly More Likely to be endangered than others.

A Large Majority of species require **no intervention**.

The Number of Species Requiring No Intervention is Remarkably High



Mammals and Birds are Most Likely to have a Protected status

17%

… of **Mammal** species are in a protected status.

15%

… of **Bird** species are in a protected status.

** Significance was concluded using multiple Chi Squared tests. The difference between Birds and Mammals was insignificant while the difference between Reptiles and Mammals was Significant.

What should we do?

Focus Efforts on Mammals and Birds

To get the most from the investment put into recovery efforts, we recommend allocating the most resources toward Mammal and Bird Conservation Efforts.

Scientists are interested in Sheep Movement and Location

They sent us additional data to analyze that includes:

- Scientific Name (for comparison)
- Park Name
- Observations

The Largest Population of Sheep is in Yellowstone National Park

Sheep per park in the last week:

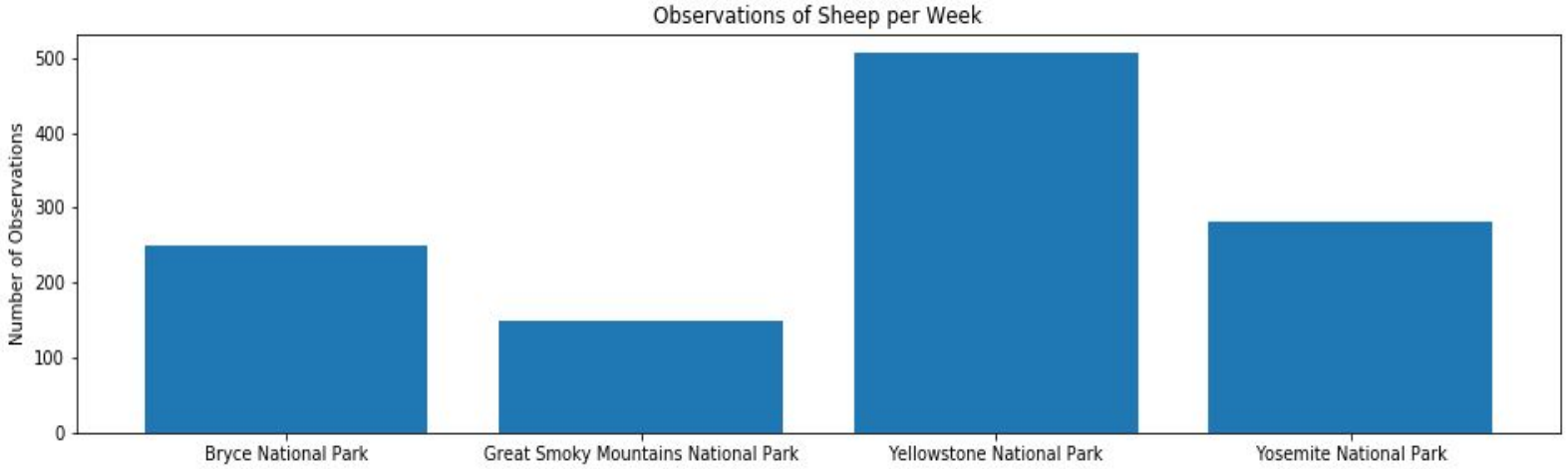
Yellowstone National Park - **5073**

Bryce National Park - 2501

Great Smoky Mountains National Park - 1492

Yosemite National Park - 282

A Visual Representation - Sheep Per Week



Sample Size of 870 for Foot and Mouth

How do we measure whether the scientists efforts proving to be effective?

- Last Year 15% at Bryce National Park had Foot and Mouth.
- Statistical Significance at 90%
- Minimum Detectable Effect Requested is 5 Percentage Points
    - 5 / 15 (baseline) = 33% Minimum Detectable Effect

How Long Should We Observe For?

Sample Size / Population = Necessary Duration

3.48 Weeks

Bryce National Park

~1.72 Weeks

Yellowstone National Park

Let Data Drive the Way We Work and Think

From **Data Backed Conclusions**

With **Minimal Data Provided**

We have the **power** to make **meaningful changes**

Thank you