Biodiversity for the National Parks

DylanLong

The different species and significant data found.

- There are 5541 different species
- Categories ranging from:
  - Mammal
  - Bird
  - Reptile
  - Amphibian
  - Fish
  - Vascular Plant
  - Nonvascular Plant
- We found both scientific names and common names. For example: Canis Lupus/Grey Wolf
- The data showed us the different conservation statuses which are:
  - Endangered
  - In Recovery
  - Species of Concern
  - Threatened
  - No intervention

Numbers Of Conservation Status

Endangered: 15

Threatened: 10

Species of Concern: 151

In Recovery: 4

No Intervention: 5363

What this means.

There are different levels to the conservation statuses that we saw in the last frame.

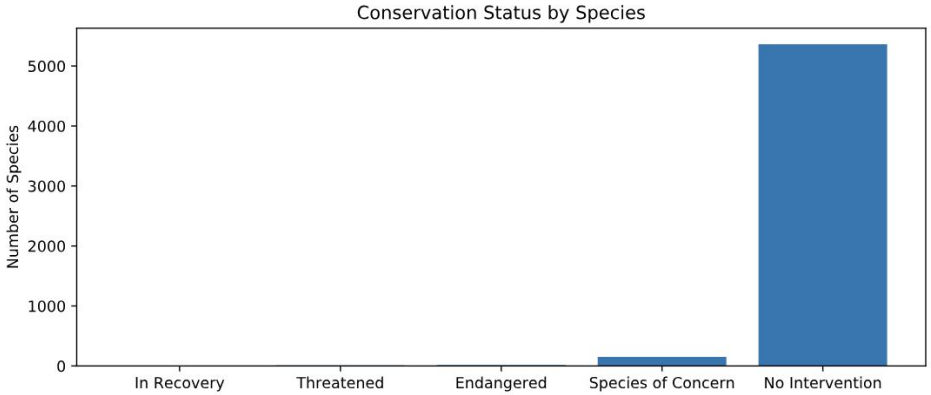
Using this data we can better formulate the different levels of need for each and prioritize more efficiently.

Seeing that the endangered has fifteen different species that need immediate help can help rally people to get motivated to put in the time and effort into saving them.

Showing the other levels can be giant in helping to prevent other species getting onto the endangered list.

With in each level there are a wide variety life that can use our help and this data can be a factor into getting the attention they need.

Conservation Status By Species



Don’t let this graph fool you. It should be a statement of hope. Seeing the number of ‘No Intervention’ will be used to inspire us to get the rest of the species onto that list.

Investigating Endangered Species

Are different types more likely to be endangered?

Shown in percentage of protected.

- Amphibian **8%**
- Bird **15%**
- Fish **8%**
- Mammal **17%**
- Nonvascular Plant **1%**
- Vascular Plant **1%**
- Reptile **6%**

Significant difference in the two leading Endangered Categories?

Using a Chi-Squared test to check if there was a significant difference between the two leading endangered categories being, Mammals and Birds. We found that the difference was actually not significant and could have a difference due to chance or randomness.

A Recommendation For Conservationist

My recommendation for those who wish to help and are conservationist is to prioritize. Use the data provided to help make the necessary decisions to start the work towards helping the species on the endangered list. For instance, create an action plan based off the mammals and birds then from there focus on the plants and fish. Also consider looking into how the ecosystem is affected by each group and if by helping one you may be able to help the other. Overall find what species on the list needs the most help and is the closest to extinction and work towards lowering them to the other tiers and eventually get them to the no intervention list.

SHEEP

w/ foot and mouth disease

In search of

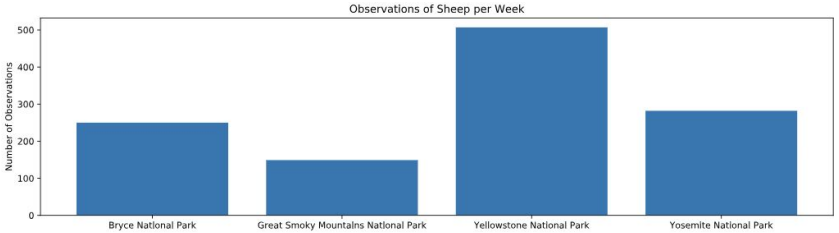
Sheep

In order to find out how many sheep are infected we needed to find the observations of each park.

Our dataframe shows us that there have been the following observations in the following parks:

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

Observations Of Sheep



This shows us the previous data laid out into a bar graph. It shows that there are more sightings or observations of sheep in Yellowstone more then any of the other parks with Yosemite coming in second.

Foot and Mouth Reduction Effort

Finding out how many sheep have foot and mouth disease and being able to detect reductions with in 5%.

There was a study done in Bryce National Park that showed 15% of the sheep had foot and mouth disease. This gave us our baseline percentage. Next we found our minimum detectable effect which was 33%. The sample size we received was 890. This meant we would need to observe 890 sheep in order to get a proper observation. Using this information we can find out how long it would take to check on the sheep. In Yellowstone National Park it would take approximately 1.75 weeks to get a good sample size. In Bryce National Park it would take us about 3.3 weeks to get a good sample size.

With all of this in consideration we could gather enough data to help reduce the disease.