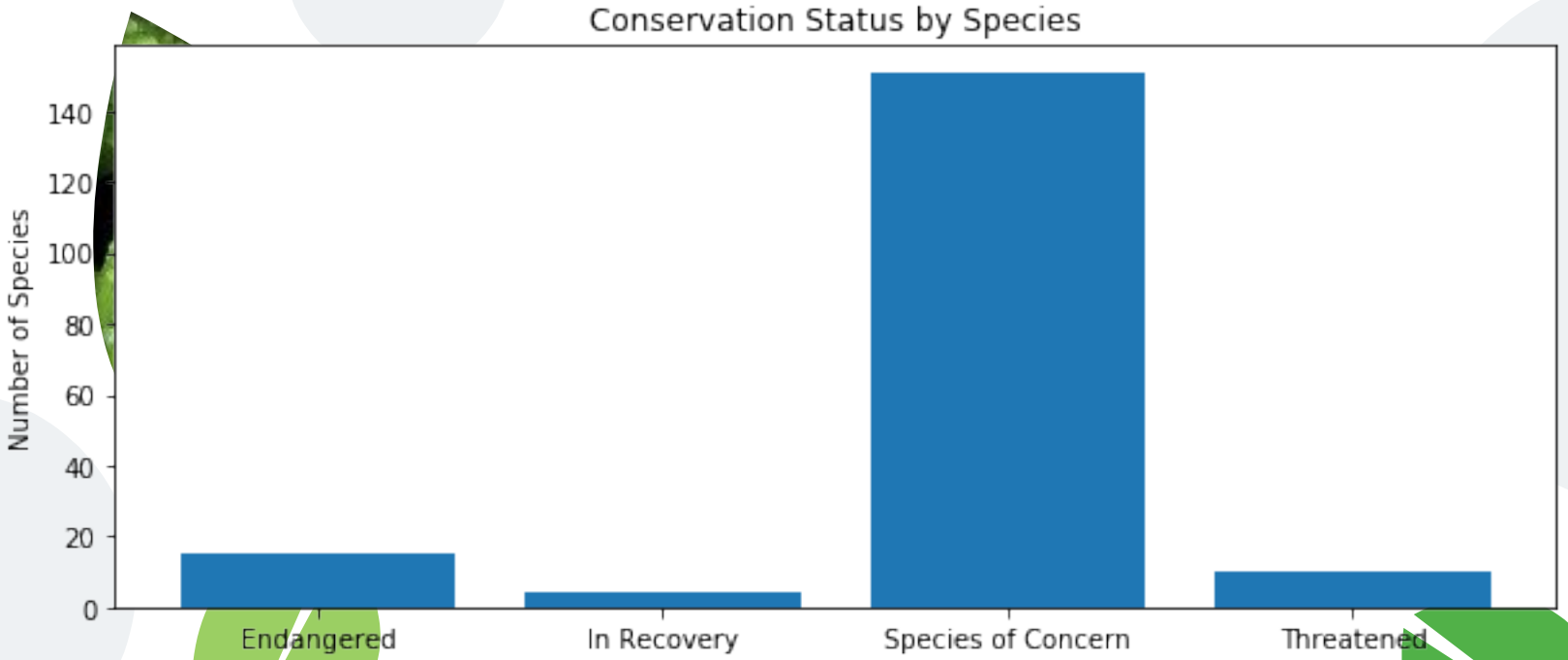
Biodiversity in the National Parks

Investigating Protected Species including Foot & Mouth Disease Reduction

The National Park System is home to more than 5,000 species across 7 classes of animals and plants.

Of those 5,000 species about 180 species require some form of conservation intervention.



Of the 7 categories, Mammals & Birds were most likely to be under some form of conservation intervention.

Summary

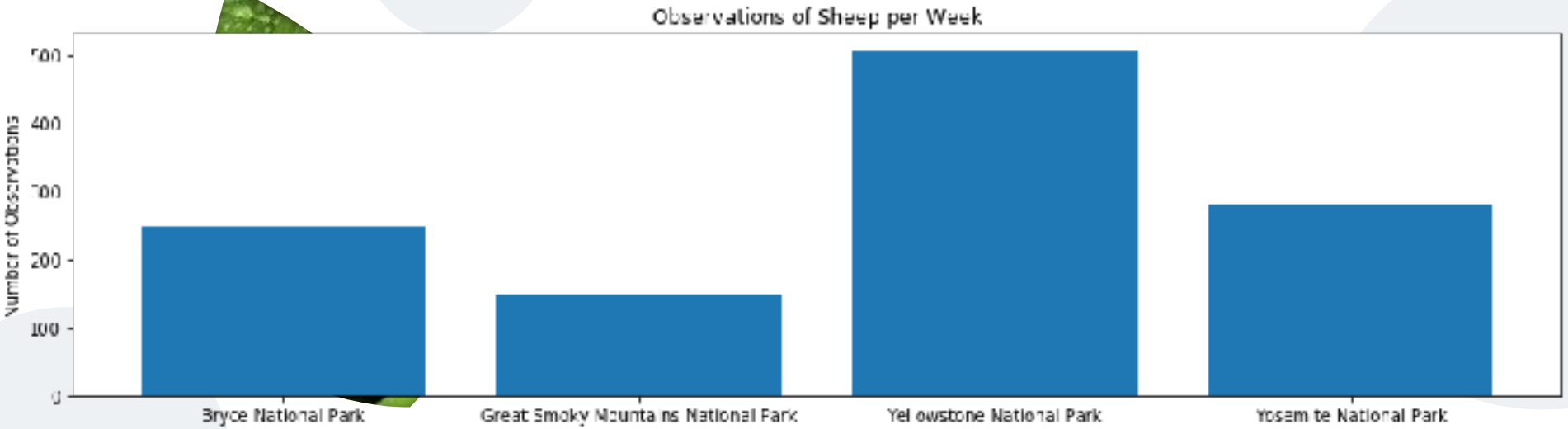
- The degree of biodiversity in the National Parks system is healthy overall.
- Efforts would be directed at a small subset of the animal population with attention to the particular stage:
  - Species of Concern: declining or appear to be in need of conservation
  - Threatened: vulnerable to endangerment 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
- With special consideration for species in the Mammal & Bird categories.

Investigating Foot & Mouth Disease

Our scientists know that 15% of sheep at Bryce National Park have foot and mouth disease. Park rangers at Yellowstone National Park have been running a program to reduce the rate of foot and mouth disease at that park. The scientists want to test whether or not this program is working. They want to be able to detect reductions of at least 5 percentage point.

Inputs

To determine the success of the program, we needed to determine the appropriate sample size for observations. We used a baseline of 15% and the target of 5% reductions and determined the minimum detectable effect to be 33.3%. Using these inputs we arrived at a required sample size of 510 observations.



Based on the number of possible observations, we will initiate efforts at Yellowstone National Park. We anticipate achieving the observations required in one week.


Based on the findings from those observations we will either expand efforts to the remaining parks or adjust our approach.

Thanks!

ANY QUESTIONS?

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