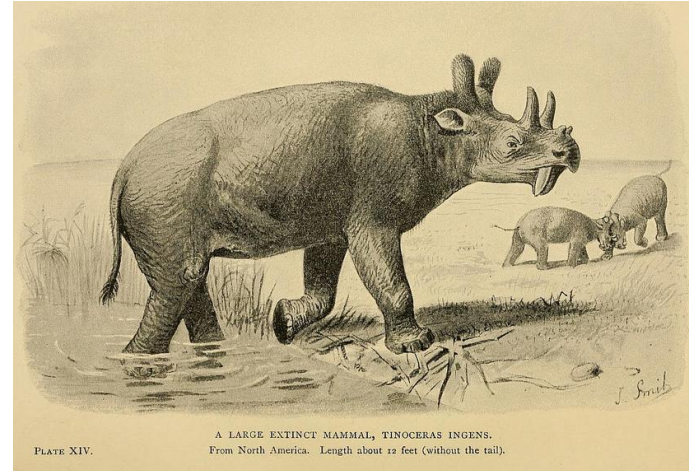


Status of Endangered Species in National Parks



What the Data Show

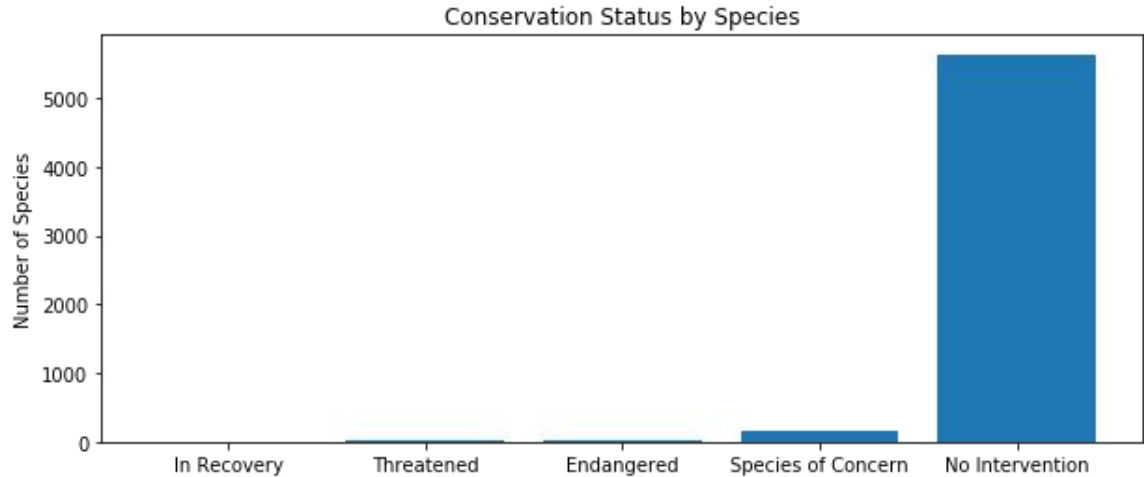
- **7 different species categories**
(Mammal, Bird, Reptile, Amphibian, Fish, Vascular Plant)
- **5 conservation statuses** (None/No Intervention, Endangered, In Recovery, Species of Concern, Threatened)
- **5,824 species**



What the Data Show

Conservation Status of Species

Endangered	16
In Recovery	4
No Intervention	5633
Species of Concern	161
Threatened	10



There are over 5,600 species that need no intervention.
That means they're not on the spectrum of being threatened.

Which species are protected?

category	not protected	protected	percent protected
Amphibian	72	7	8.86%
Bird	413	75	15.37%
Fish	115	11	8.73%
Mammal	146	30	17.05%
Nonvascular Plant	328	5	1.50%
Reptile	73	5	6.41%
Vascular Plant	4216	46	1.08%

Are Mammals the Most Endangered?

It is easy to assume that mammals are the most endangered species. We see it in the news constantly: the polar bear on the ice cap, the last black Rhino in the African desert. But is this true?

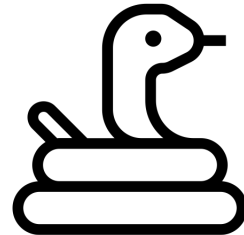
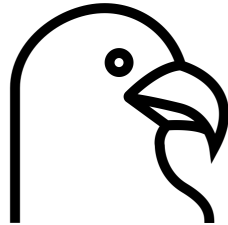


Mammals: Significance Test

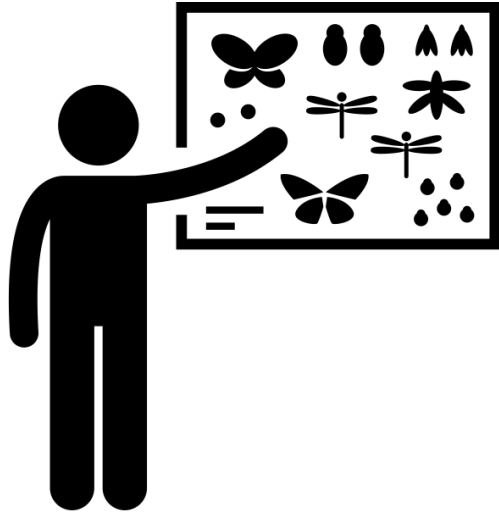
Null hypothesis: Mammals are more endangered than X-species.

- When comparing the percentage of endangered mammals to percentage of endangered birds, the p-value is 0.69 \Rightarrow **reject null hypothesis**
- When comparing the percentage of endangered mammals to percentage of endangered reptiles, the p-value is 0.038 \Rightarrow **significant!**

Mammals are not more endangered than birds, but are more endangered than reptiles.



Endangered Species

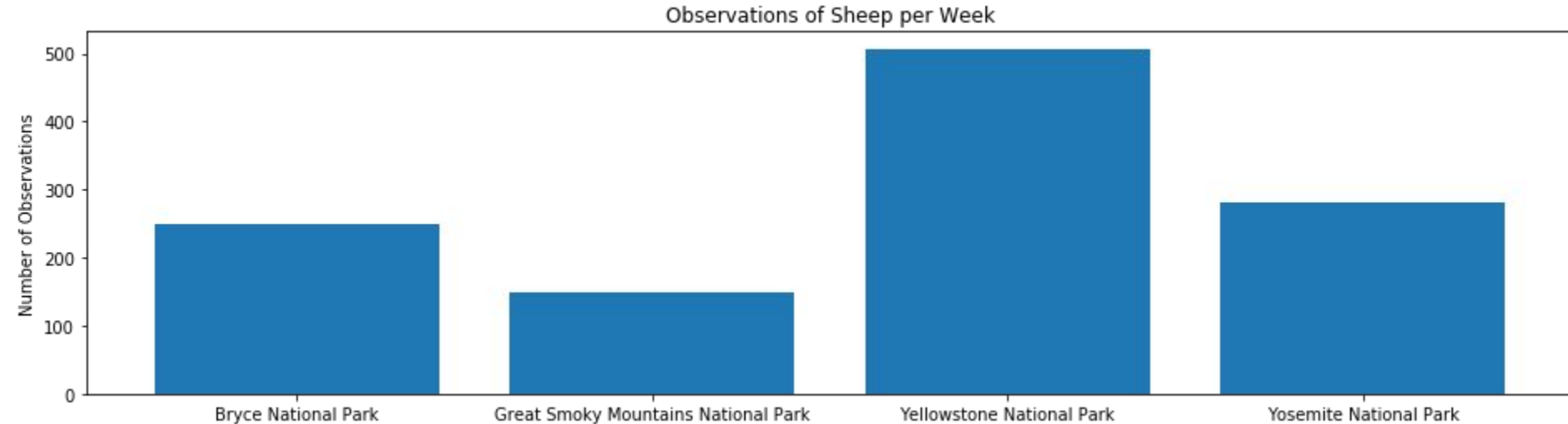


It is a disservice to the biodiversity of national parks to assume that the most endangered species are mammals.

Recommendation: equally distribute resources to research & protect all species that require intervention (or threatened) and further analyze which species are most at risk to be endangered.

Foot Mouth Disease

Foot Mouth Disease affects 15% of sheep at the National Parks. The chart below shows the number of sheep observed at each park.



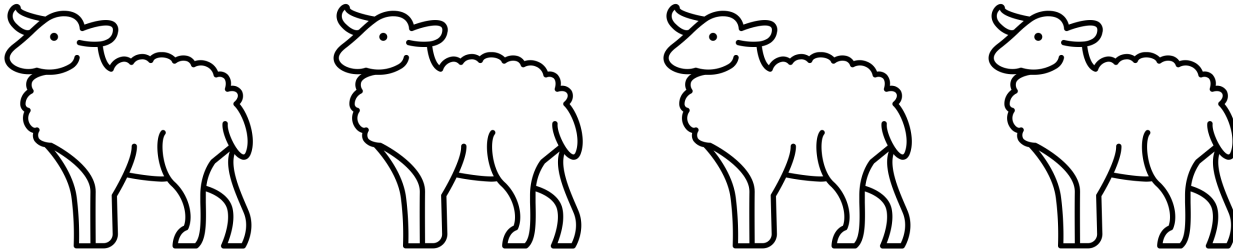
Foot Mouth Disease

How many sheep do we need to observe to see if the latest food mouth disease reduction program is working?

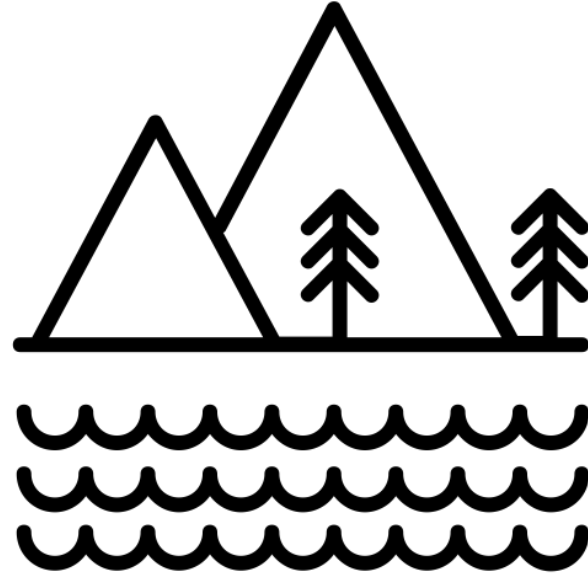
Baseline Conversion Rate: 15%

Minimum Detectable Effect: 33% (~5/15)

Sample Size: **520** → **the number of sheep we must observe at each park**



Thank You



Icons Used: credits

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“Sheep” by Creative Stall via The Noun Project

“Fox” by Creative Stall via The Noun Project

“Bear” by Creative Stall via The Noun Project

“Eagle” by Creative Stall via The Noun Project

“Snake” by Creative Stall via The Noun Project

“Butterfly Specimen Collection” by Gan Khoon Lay via The Noun Project

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“Mountains” by Made by Made via The Noun Project