Analysis of Biodiversity At The National Parks

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Conservation Numbers At Parks

Endangered – 15

In Recovery – 4

Species of Concern – 151

Threatened – 10

No Intervention - 5363

Definitions:

Endangered: Seriously at risk of extinction

In Recovery: Endangered before, but currently not in danger

Species of Concern: Declining population or appears to be in need of conservation

Threatened: Vulnerable to endangerment in the near future

No Intervention:

Types of species more likely to be endangered

Category	Not Protected	Protected	Percent Protected
Amphibian	72	7	0.09
Bird	413	75	0.15
Fish	115	11	0.09
Mammal	146	30	0.17
Nonvascular Plant	328	5	0.02
Reptile	73	5	0.06
Vascular Plant	4216	46	0.01

Based on the data, Mammals are more likely to be endangered than Birds.

Endangerment differences between different species

Between Birds and Mammals the P-val(chi-squared test) is 0.68. We reject null hypothesis if P-val is more than 0.05. Which means the difference is not significant between Birds and Mammals.

But between Mammals and Reptiles the difference 0.038. So the difference is significant.

The conclusion is that certain types of tests are more likely to be endangered than others.

Sheep sightings at different parks

DATA

Park Name	Observations
Bryce National Park	250
Great Smoky Mountains Park	149
Yellowstone National Park	507
Yosemite National Park	282

Foot and Mouth Disease Obserations at National Parks

baseline = 15

minimum_detectable_effect = 100*5%/15

sample_size_per_variant = 870

yellowstone_weeks_observing = sample_size_per_variant/507

bryce_weeks_observing = sample_size_per_variant/250

Scientists would have to observe at least 510 sheep, given a baseline of 15% occurrence of food and mouth disease at Bryce National park in sheep. And this takes one week of observations in Yellowstone and two weeks in Bryce National park