

# Investigating Protected Species





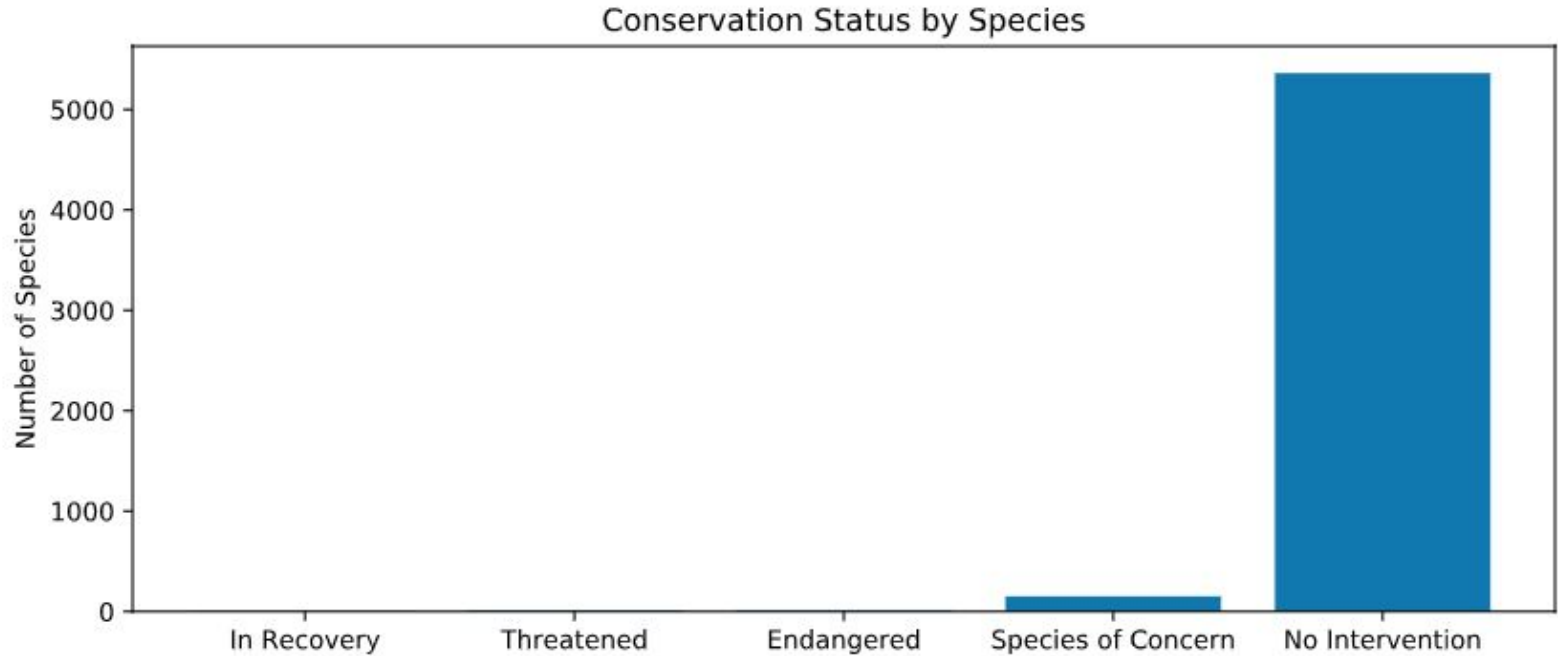
# Species in Our National Parks



## Species Data Collected

- Category (mammal, reptile, etc.)
- Scientific name of each species
- Common name of each species
- Species conservation status

# Conservation Status by Species



# Species of Concern

While the vast majority of species receive no intervention efforts, there are a number species with declining populations:

- 151 species are **species of concern**
  - *Declining population or appears to be in need of conservation*
- 10 species are **threatened**
  - *Vulnerable to endangerment in the near future*
- 15 species are **endangered**
  - *Seriously at risk of extinction*
- 4 species are **in recovery**
  - *Formerly endangered but currently not in danger of extinction*

## Species Protection Status by Category

Category	Not Protected	Protected
Amphibian	72	7
Bird	413	75
Fish	115	11
Mammal	146	30
Plant (nonvascular)	328	5
Plant (vascular)	4216	46
Reptile	74	5

## Conclusions

- Based on Chi Square tests, reptile species are significantly more likely to be endangered than mammal species
  - Recommend increasing protections for reptile species



# Determining Sample Size for Foot and Mouth Study





# Calculating Sample Size

Calculating required sample size requires:

- Baseline conversion rate (15%)
  - 15% of sheep at Bryce National Park have foot and mouth disease
- Desired statistical significance percentage (90%)
- Minimum detectable effect (15%)

**Recommended sample size: 870**