CAPSTONE OPTION 2: BIODIVERSITY FOR THE NATIONAL PARKS

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Codecademy Introduction to Data Analysis

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SUMMARY OF DATAFRAME

- The dataframe has four key columns.

- Category is the family, scientific_name includes the genus and species, common names and conservation_status.

- Four categories for conservation_status with missing values representing species with no active interventions. Summary table showing number of species within each category to the right.

- Large number of protected bird species, followed by vascular plants and mammals.

Conservation Status	Number of Species
Endangered	15
In Recovery	4
No Intervention	5363
Species of Concern	151
Threatened	10

ARE CERTAIN TYPES OF SPECIES MORE LIKELY TO BE ENDANGERED?

- Chi-Squared Test for Significance

- Count of species and status suggests that mammal is more likely to be endangered than bird but result not statistically significant.

- Result for test between mammals and reptiles is statistically significant with p-value of 0.038.

- Overall results suggest that certain types of species are more likely to be endangered than others.
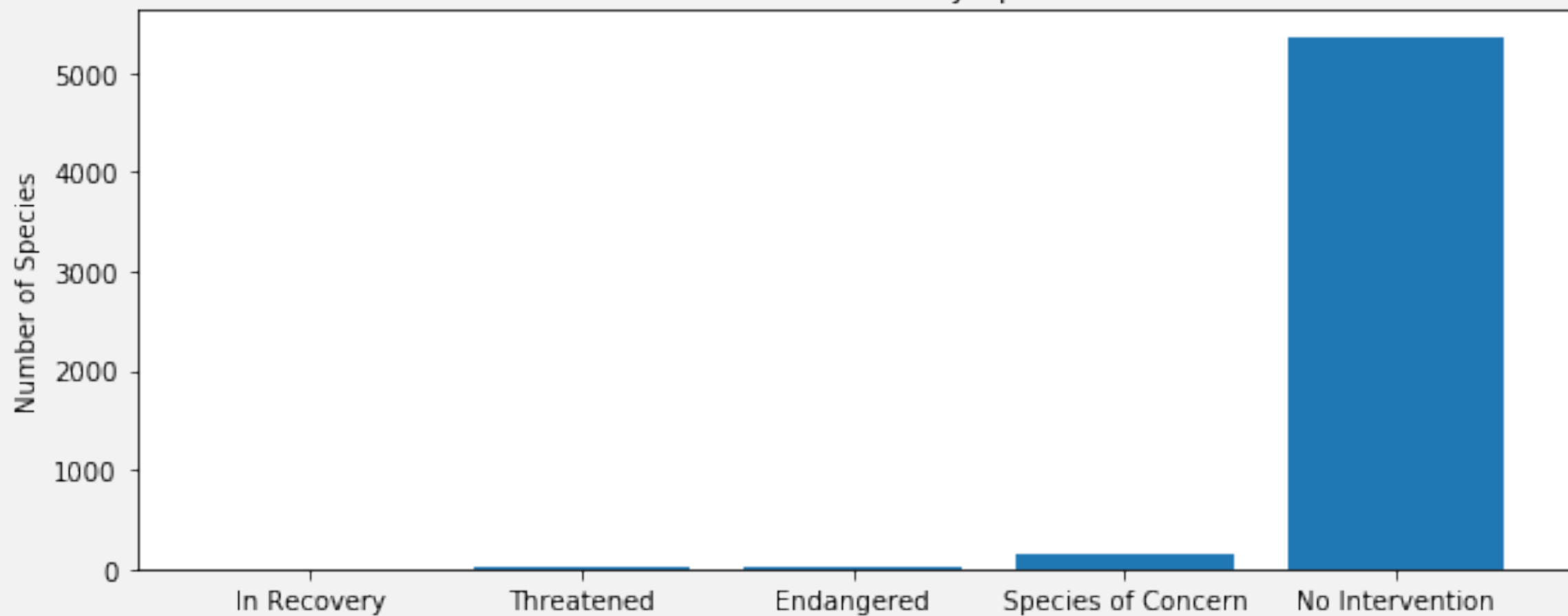
RECOMMENDATION FOR CONSERVATIONISTS BASED ON YOUR SIGNIFICANCE CALCULATIONS

- Further research required into other combinations as results suggest that certain types of species are more likely to be endangered than others.

- Interventions recommended for species that are endangered.

- Species within categories that are more likely to be endangered to be reviewed in light of results.

- Potential to save species from threats that are more likely to be endangered through interventions.

A SECTION DESCRIBING THE SAMPLE SIZE DETERMINATION THAT YOU DID FOR THE FOOT AND MOUTH DISEASE STUDY

- Sample size determination exercise conducted to establish number of observations required to test program success rate.

- Target reduction of at least five percentage points.

- Baseline of recorded cases of disease affecting 15% of sheep population at Bryce National Park.

- Sample size determined to be 890 observations.

- 1.8 weeks required for Yellowstone National Park.

- 3.6 weeks required for Bryce National Park.

- Highest number of observations recorded at Yellowstone National Park.

Conservation Status by Species

Observations of Sheep per Week