

Capstone Option 2: Biodiversity for the National Parks

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Species: describing the data

- Category
- scientific_name
- common_names
- conservation_status

	category	scientific_name	common_names	conservation_status
0	Mammal	Clethrionomys gapperi gapperi	Gapper's Red-Backed Vole	NaN
1	Mammal	Bos bison	American Bison, Bison	NaN
2	Mammal	Bos taurus	Aurochs, Aurochs, Domestic Cattle (Feral), Dom...	NaN
3	Mammal	Ovis aries	Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)	NaN
4	Mammal	Cervus elaphus	Wapiti Or Elk	NaN

Species

- How many different species are in the species DataFrame? 5541
- What are the different values of category in species? : 'Mammal', 'Bird', 'Reptile', 'Amphibian', 'Fish', 'Vascular Plant', 'Nonvascular Plant'
- What are the different values of conservation_status? : nan, 'Species of Concern', 'Endangered', 'Threatened', 'In Recovery'

Species: significance calculations

- Significant difference between Reptile and Mammal

```
contingency = [[30, 146],  
               [5, 73]]  
chi2_contingency(contingency)  
  
(4.289183096203645, 0.03835559022969898, 1, array([[ 24.2519685, 151.7480315],  
         [ 10.7480315,  67.2519685]]))
```

Yes! It looks like there is a significant difference between Reptile and Mammal !

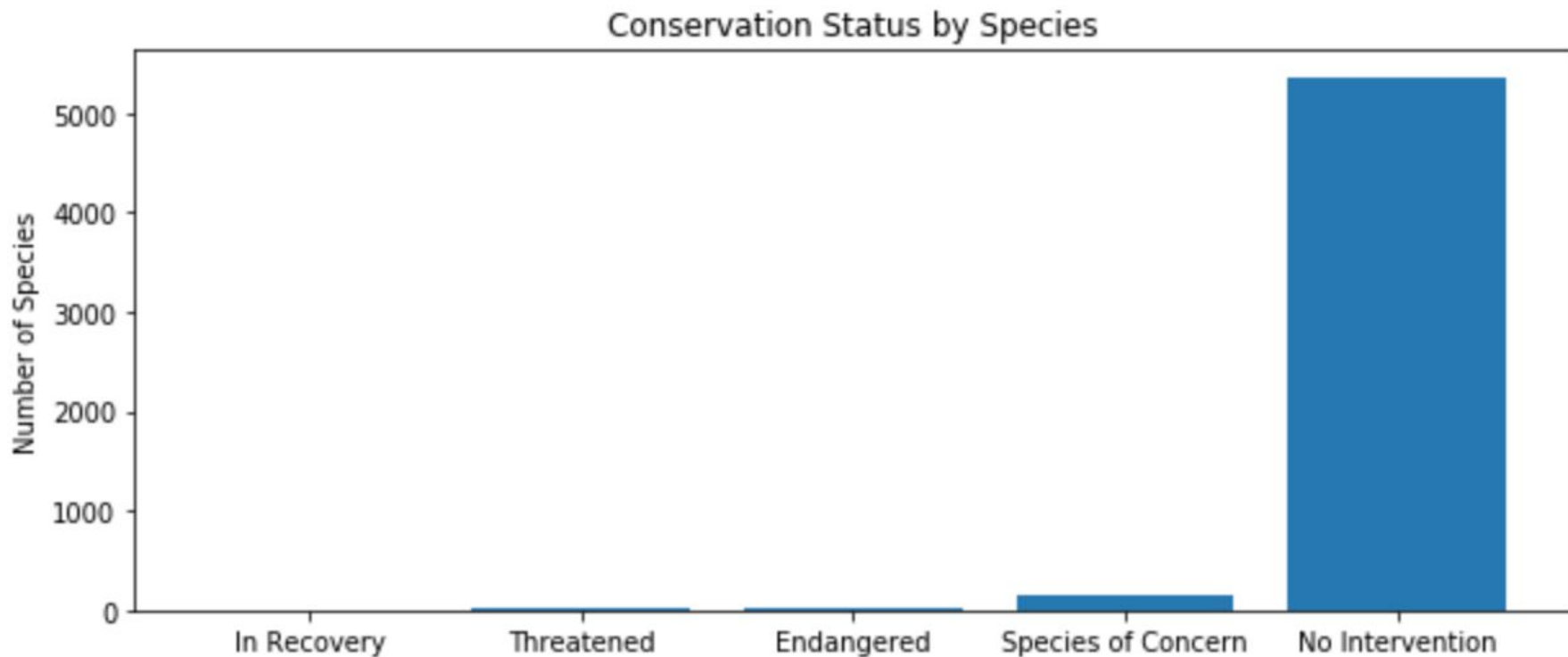
Species: a recommendation

- Reptile are more be endareged, so you need put on this category more efforts than an others like birds.

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Species: graphs



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