

# **Biodiversity in U.S. National Parks**



## **Project Review**

## Introduction



This project aims to demonstrate a method for analyzing biodiversity data from the National Parks Service by examining species in four U.S. national parks. It focuses on identifying endangered or threatened species and assessing the need for their protection. The analysis provides insights for park specialists and related professionals to better understand the extent of the issue and explore effective conservation strategies. The findings may also inspire further research on preserving biodiversity in U.S. national parks. The project involves analyzing two datasets containing information on various species inhabiting these parks

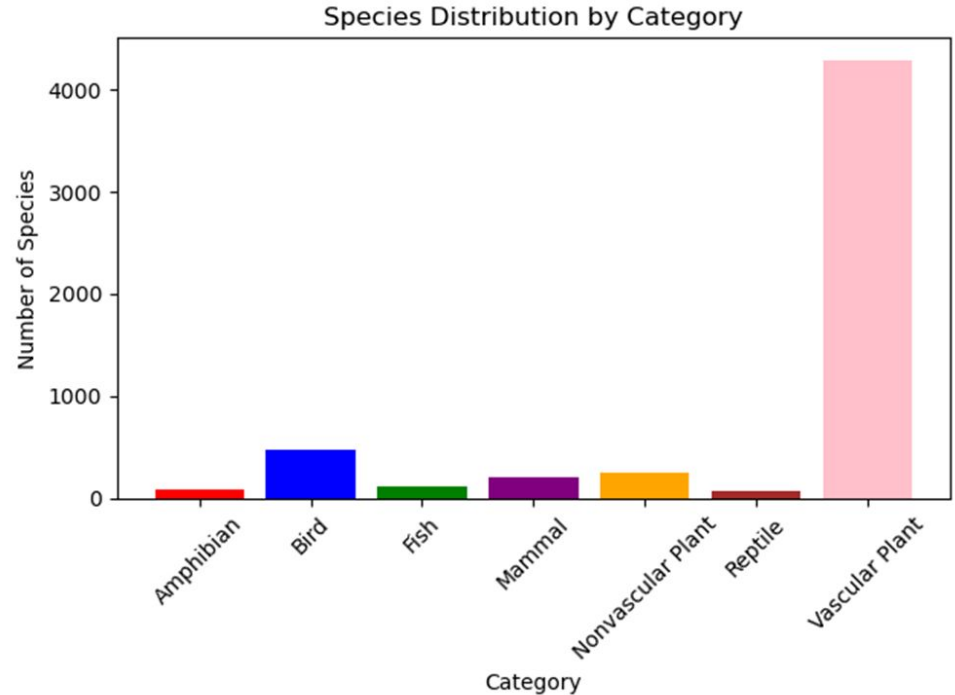
# Project goals

This project focuses on providing National Park Service biodiversity analysts with accurate visual information to help conserve species at risk of extinction. Key results will include understanding species distribution, total numbers, and their conservation status across the parks. The main questions answered during the analysis of available data are the following:

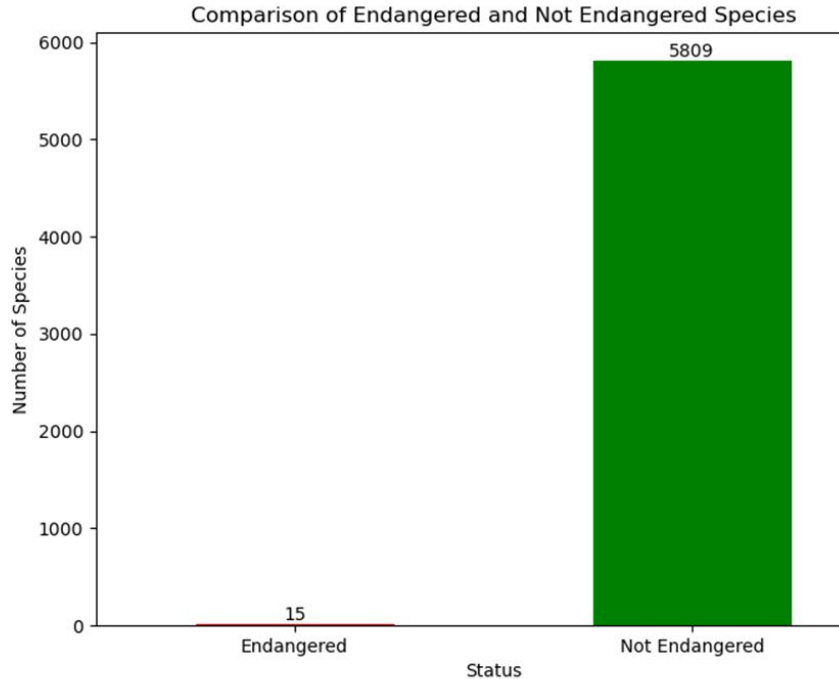
1. Which species inhabiting 4 US national parks?
2. How large is the number of endangered species? How many endangered species are there, relative to the total number of all species in general, in national parks?
3. Is the biodiversity of the parks under threat as such?
3. Do all parks have endangered species?
4. Which specific species of animals and plants in national parks are endangered?
5. What categories do endangered species belong to?
6. What was the total number of species by category that were studied?
7. How many species in national parks have this or that nature conservation status?

## Which species inhabiting 4 US national parks?

In the process of analysis, the number of creatures in each category was also counted. This allows us to feel the order of the numbers and will help us better navigate in our further calculations



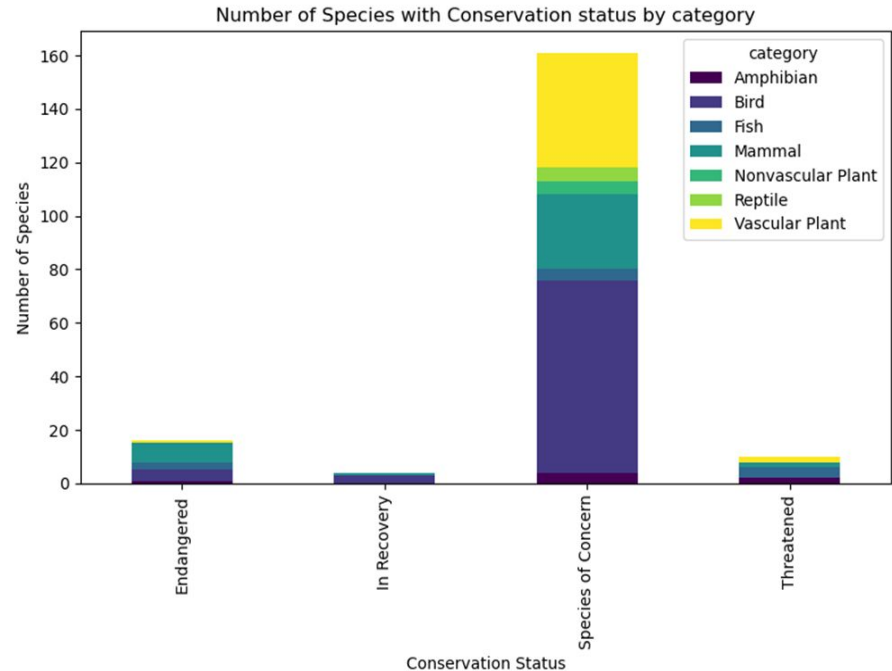
**How large is the number of endangered species? How many endangered species are there, relative to the total number of all species in general, in national parks?**



As it is presented on the diagram, only the 15 unique species of 5824 in total from our dataset (species) are endangered in all 4 national parks in U.S.

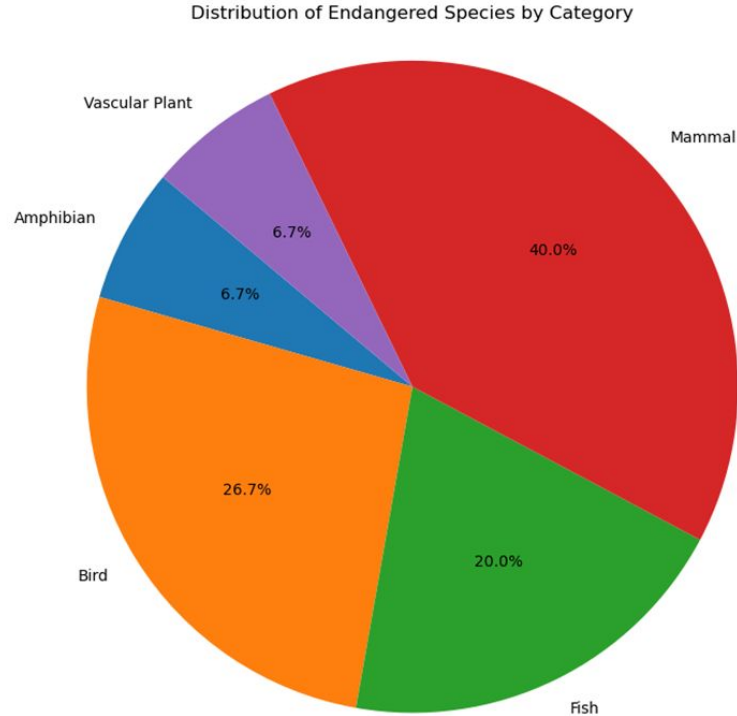
# How many species in national parks have this or that nature conservation status?

This diagram shows the number of species in every category that have a conservation status. Here it is also possible to track the proportion between certain categories of species are endangered. It could be observed the content of each conservation status

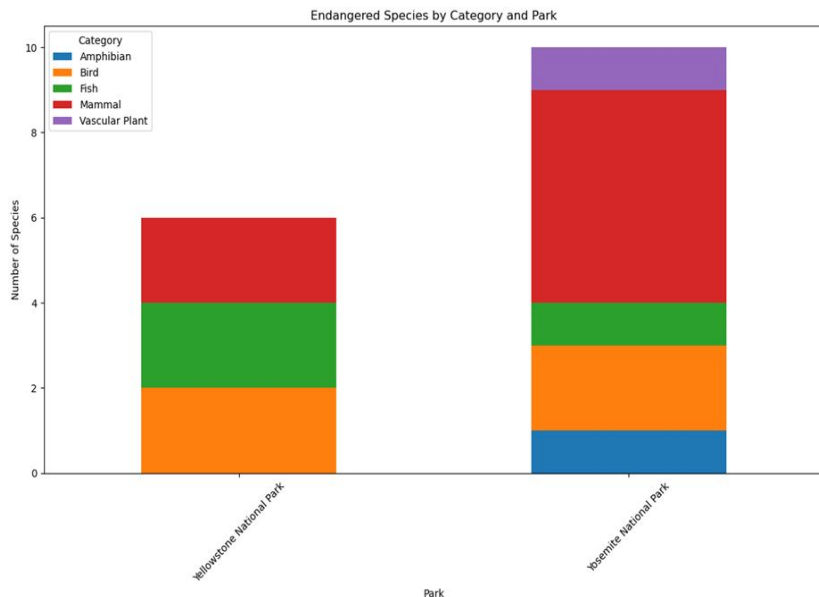


## What categories do endangered species belong to?

The next step will be to look at the percentage distribution of endangered species, depending on the category they belong to



# Do all parks have endangered species?



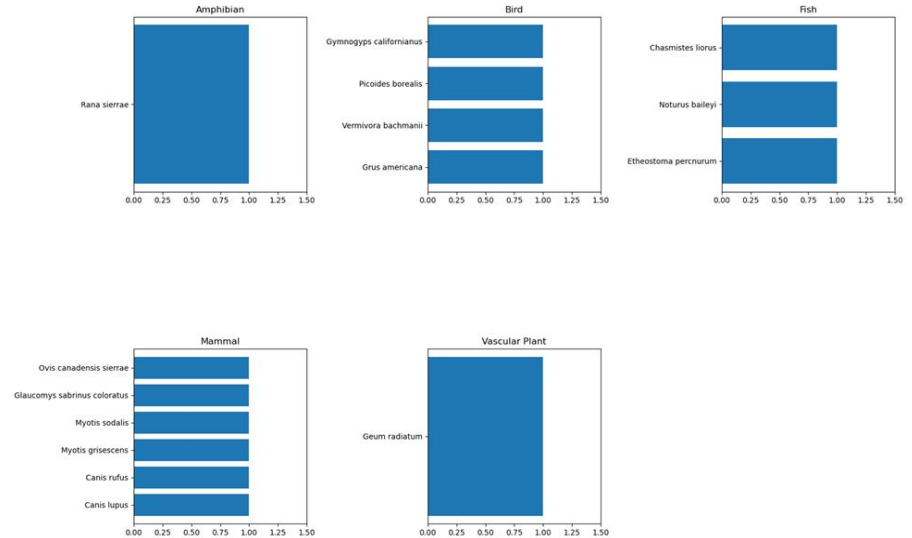
On the presented diagram it is easy to see that the problem of endangered species does not exist in each of the four investigated national parks. The Great Smoky Mountains National Park and the Bryce National Park that are not presented in the table, but they are displayed in data sets. At the same time as the Yellowstone National Park and the Yosemite National Park are contain data about endangered species



# Which specific species of animals and plants in national parks are endangered?

On the diagram of endangered species, which is broken down into categories and displayed by a separate figure, we can easily see which specific species require special attention of national park specialists. Six species from category of mammals and four species of birds are clearly displayed here, which quantitatively stand out among other endangered species

Endangered Species by Category in separate diagram



## Is the biodiversity of the parks under threat as such?

The project generated several data visualizations, allowing for an assessment of biodiversity in four U.S. national parks, with a focus on endangered species and their habitats. It was found that while the overall percentage of species with protected status is low, certain species require urgent conservation efforts. The analysis highlighted that mammals and birds are the most threatened categories, though some parks, like Great Smoky Mountains and Bryce, show no immediate extinction risks, potentially due to either data limitations or effective conservation measures. The study suggests that further research with extended timeframes and larger datasets is needed to better understand trends, impacts, and factors influencing biodiversity and to develop more effective preservation strategies



# THANK YOU

FOR YOUR ATTENTION!

Detailed Report you can find here:

<https://github.com/AnnaShtadler/Data-Analysis-Biodiversity-in-National-Parks.git>

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