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United States National Parks and Biodiversity

This project aimed to investigate and characterize the different national parks by biological diversity, focusing on mammals, birds, reptiles/amphibians, fish and vascular plants. Out of the 63 national parks, 60 were included in the analysis due to database availability.

Diversity is defined as, “the state of variety; the condition of having or being composed of different elements”. My analysis showed that national parks in California had the greatest number of species as well as greatest animal density based on park size (acres). The park with the greatest plant diversity was Shenandoah National Park, which is located in Virginia. Both Redwood and Death Valley National Parks had the greatest land animal diversity, both of which can be found in California. The park with the greatest aquatic diversity was National Park of American Samoa, followed by Biscayne National Park in Florida. The National Park of America Samoa actually spans three islands: Tutuila, Ofu, and Ta’u in America Samoa, and the surrounding waters.

Chart, bar chart

Description automatically generated

One limitation to this dataset, is that species presence in the park is logged and recorded by park employees, such as park rangers. Therefore, there could be missing data due to this aspect, however this database provides an excellent source of information to track animals within national parks and to monitor their movements within the different areas. There was limited overlap of species between the national parks, with only some plant species appearing in multiple parks, and no animal species overlapping. For instance the vascular plant species, *salix rotundifolia* (common name least willow), is found within three national parks; all three of which are found in Alaska. Further investigation is needed in order to determine if this is due to geographical isolation or perhaps seasonal migrations.

| **Scientific Name** | **Park Name** |
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| Salix rotundifolia | Katmai National Park and Preserve |
| Salix rotundifolia | Kenai Fjords National Park |
| Salix rotundifolia | Lake Clark National Park and Preserve |