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Statistical Analysis of the Relationship Between Protected Bird Species and National Parks

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Abstract

The ecological diversity of Earth is majorly threatened by habitat loss due to the destruction by human intervention. The conservation status of all identified species are classified into nine categories of varying vulnerability as described by the International Union for Conservation of Nature's Red List. By understanding the vulnerability of specific species, scientists can work to maintain a viable and healthy ecosystem globally by instilling rules and regulations of observed habitats for threatened species. These habitats are identified by surveying potential locations for threatened species and determining the population size at each site. An example of one of these surveys may be found on an organization's website supplying global data, DataOne, which focuses on bird species in the French Broad River Basin of North Carolina during the summer months. Using the values in this data set, variables for both the protected status of the observed species and the national park status of the focused locations were created. This report utilizes statistical analysis to interpret the potential relationship between these two variables. A relationship is expected between the proportion of protected species observed in national parks and those observed outside of national parks. This result would verify that the protected bird species observed can be found more often in national parks, signifying the importance of rules and regulations for these locations to maintain the survival of these species. Future research of these protected species could elaborate on their preferred habitat and instill the need to change the boundaries of national forests.