Bird spotting and rarity data

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Data selected

Initially I was hoping to use The North American Breeding Bird Survey, Analysis Results 1966 - 2022. A giant dataset which not only provides reliable data on bird populations but is also useful for prediction due to its emphasis on breeding pairs. However the dataset was really large, clunky, and difficult to work with. So I switched to utilizing the NCRN Bird Monitoring Data 2007 - 2017. This data set is not nearly as extensive but was much more streamlined. I was hoping to utilize this for some prediction but unfortunately that failed as the sex of the spotted bird was very often undetermined.

Findings

Instead the analysis of this data was of common and rare bird sightings. The notebook provided, coupled with the slides, shows the spotting trends for the five most commonly spotted birds: Cardinals, Buntings, Field Sparrows, Goldfinches, and Chipping Sparrows. As well as a larger bar graph for the rarer finds.

The common birds section is nothing I found particularly surprising. The Cardinal especially is one which I see on my walks fairly frequently. So its prevalence in this data is unremarkable. When first looking at this data, the only thing that was interesting was that the spotting rates jumped up drastically from 2014 to 2015. This jump was so significant that when analyzing this data, I felt as though I had to separate them into two entirely different data sets going forward. As to why this data appears to be so drastically different, it appears that the spotters changed or rotated out after 2014. The only other explanation would be an unprecedented bird migration however it holding consistently for all remaining three years is not likely.

The identification methods for all birds was also rather interesting. As the late group visually spotted 3533 birds between 2015 and 2017. While the early group only spotted 112 birds between 2007 and 2014. That averages out to only 14 birds being spotted visually per year for the early group. Meanwhile the late group had a visual spotting average of 1177 birds per year. That is a ratio of 14:1177 which is an absurd ratio. The only observers who were present in both are: Conor Higgins, Elizabeth Tymkiw, and Kyle Horton. All of these individuals did increase how many birds they where spotting. Early average was ~74, from 2015 till 2017 the average increased to 805 per year. I was not able to conclude certainly as to why this massive discrepancy exists in the dataset.

Rare birds was a more simple analysis. The findings for this however where also strange as many of the rarest birds to spot are not endangered or even particularly rare. The commmon raven, for instance, was spotted a mere 7 times over a decade. Meanwhile the population of this particular bird is around 7.7 million in the Americas. Additionally, the

bird has a conservation status of least concern. This however can be explained by the observation sight being out of the way of common landing spots for the Common Raven. Regardless truly rare birds did not appear much on this study. Though confirmation of this is difficult as the conservation status is not a part of the survey.