

Do Dark-eyed Juncos Like Rain?

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Introduction

On one Sunday morning, I looked out the window. I saw it was a rainy day. I usually eat a bagel for breakfast, but I noticed that we were out of bagels. So, I had to go to the market to buy some bread. QFC mall is near my house, so I usually walk, but this time I felt like I didn't want to go out because it was a rainy day. I wondered if birds feel the same as me. Do they not want to go out on rainy days too? I wondered if birds go out on sunny days rather than rainy days. Or do they like rainy days better and so go out more often then?

I stated my question: I wondered if birds show up more often at feeders on sunny days or rainy days. But I wanted to be more specific, so I chose the Dark-eyed Junco. I would like to discover whether the junco prefers sunny days or rainy days by counting the number of these birds at the feeders, and noting the weather at the time.

Hypothesis

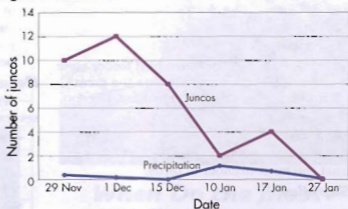
Thinking about my problem and observing the Dark-eyed Junco, I have formed my hypothesis: if it is a sunny day then there will be more birds than on a rainy day. My independent variable is the number of juncos, and my dependent variable is the amount of rain. In addition, my null hypothesis will be if it isn't a sunny day or rainy day then there will be same number of birds.

Materials and Methods

I will need a sheet of paper and binoculars, and any kind of bird book that tells all the kinds of birds and has pictures of what they look like. I prefer to use *Birds of North America* published by National Geographic, so that I may distinguish between juncos and birds that look like juncos. On a sheet of paper I will write the date and the amount of precipitation, and the number of birds. And I will need a rain gauge to record how much rain falls each day, or I can use www.weather.com/services weather site.

To attract the birds, I will provide seeds, a little bird feeder, and a tree with branches, like a nature spot so that they can be comfortable in their environment.

Figure 1. Juncos observed vs. rain



Look at Figure 1: you will see two lines. The lines tell us about the number of juncos and the amount of precipitation. If the lines were close together, my hypothesis would be proven false. But since the lines are far apart (except for January 27, 2006) my hypothesis is proven true. For the main part, I was seeing an increase of juncos corresponding to decreases in the amount of precipitation. (Number of juncos are in inverse proportion to the amount of rain.)

Conclusion

The pattern of the data collected proved that my hypothesis is correct. I have demonstrated that when there are rainy days the number of juncos is lower than on sunny days.

When I was in Korea, I learned that after the rain, the temperature is often higher than during rainfalls. So I thought, I wonder if during times of higher temperature, the juncos would be more active. So maybe the rain is also related to temperature. Maybe that is why many Dark-eyed Juncos show up on sunny days. □

References

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- George Simons. "Birding." Stokes Birds 2002. 10 Mar. 2006 www.stokes-birdsathome.com/birding/behav/behavpages/behav110.html.
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fortable in their environment.

Each time, after I finish observing and recording, I will use Microsoft Excel and enter my data. On the last day that I observe, I will finish recording and made a graph using Excel.

Result & Analysis

Through observing, collecting, and looking at the data, I observed a pattern. On days when there is little or no rain fall, there are many juncos, but when there is some rainfall there are few juncos. I noticed the pattern didn't seem to apply on January 27, 2006.



Cedar Waxwing Eating Berries

by Christine, Grade 5

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Ms. V. Griffin



Yellow Warbler

by Leah, Grade 7

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Mrs. Hess