Do Dark-eyed Juncos Show Up More in the Morning or in the Afternoon?

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Problem

How would the time of day affect the number of Dark-eyed Juncos we see when we do FeederWatch?

Hypothesis

If the time we took the data was during the afternoon, then I would expect to see more Dark-eyed Juncos than during the morning. The reason why I think so is that usually the afternoon temperature is higher than in the morning. So probably most of the birds including juncos would prefer coming to the feeders in the afternoon to the morning.

Procedure

When the class was ready, we recorded all the weather data for that day, then we watched birds and identified what we saw.

Independent Variable

My independent variable is the time we took the data. A little more specifically, it is whether it is during the morning or in the afternoon.

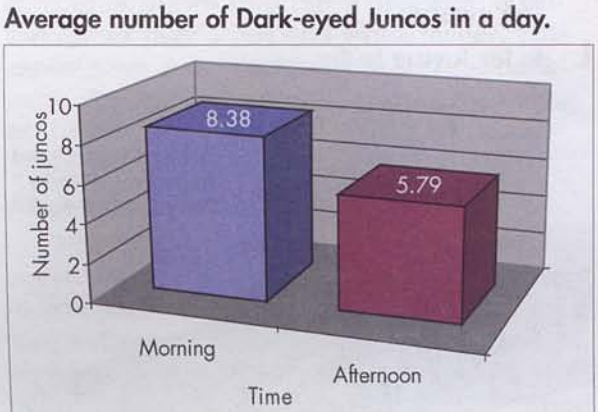
Dependent Variable

In my study, the factor changed by the independent variable would be the number of Dark-eyed Juncos seen.

Results

By making the graph with the data, I could tell more juncos were observed during the morning. The average number of juncos seen during the afternoon was 5.79 and during the morning it was 8.38. I thought the result would be related to the temperature in some part. When a little higher temperature appears during the afternoon, maybe juncos prefer higher temperature to the lower. But it was not like I thought. Here is a good example showing it very clearly. According to my data, the lowest temperature observed since 2001 was -7°C (Jan. 5, 2004) when it was snowing hard. However, 30 juncos were seen on this day, which is the highest number of juncos recorded in my data.

Average number of Dark-eyed Juncos in a day.



Conclusion

Many different factors may have caused this result, such as precipitation, wind, barometric pressure, etc. One of the possible explanations for why this happened could be that, during the morning (when it's usually colder), juncos feel colder and they lose their body heat easily. When this happens, juncos need to eat so they come to the feeders more than they do in the afternoons (when it's usually warmer). This allows juncos to take care of themselves well without using extra effort to keep their body warm by getting foods from the feeders. I couldn't prove my hypothesis right. But I think this should be retested in more situations, such as with different temperature and time differences.

Bibliography

"Classroom Birdscope Submission Guidelines" Classroom FeederWatch 30/Jan/2005 **www.birds.cornell.edu/cfw/home.html**

"Morning vs Afternoon" Cornell Laboratory of Ornithology 2001 **www.birds.cornell.edu/classroomBS/Research/2001/morning_afternoon.html**

Student Reports 13/Feb/2005 **http://tvja.org/science/student_reports.html**

Which is the Odd Feeder?
by Maggie, Grade 5
Oak Street School, Clifton Park, NJ
Ms. Chiravelle and Ms. Lier

Feeder Start Time and Bird Visitation

by Ashley And Victoria, Grade 7
Homer Junior High School, Homer, NY
Mr. Barry

For our project, we set out to see if more birds would come to the bird feeders if we started feeding birds in September rather than in November as in previous years. Our hypothesis was that more birds would come this year because we put bird feeders out in September rather than in November.

This year, we watched birds at the same feeders, in the same location, at the same time of day, and the same amount of time each day as in previous years. Since the amount of days watching birds differed each year, we used mean values for our data.

Our hypothesis ended up being somewhat true. This year's and last year's aver-