

Do Birds Prefer Warm or Cold Weather?

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Problem Statement

Since November 2007, the 8th-grade science class has been going to the bird blind at Downy Creek to observe birds. People have often complained about it being too cold outside. That got me to thinking; do birds think the same way? Do they tend to stay in their nests when it gets chilly outside? I decided I would need to test this. I would continue to observe birds throughout the months, and analyze my data to determine which type of weather birds prefer: cold or warm.

Hypothesis

When I thought about my question, I reasoned that more birds would come to the bird blind on colder days than they would on warmer days, because of lack of food. That led me to write the following hypothesis: *If it is cold outside, then I will observe more birds at Downy Creek than on warmer days.*

Procedure

When I conducted this experiment, I needed a few materials to help me out. I used BirdSleuth Tally Sheets, a writing utensil to record my information, the WeatherBug information provided by Mr. Kahler on www.tvjja.org

(used to record weather data), a computer to type out my report, *The Sibley Guide to Birds*, and, of course, the bird blind at Downy Creek.

Before collecting my data, I looked online at www.ebird.org to get an idea of what I was looking for, and found out that a few ways to help identify birds are to note their silhouette, field marks, posture, and size. That helped me to know what I should look out for while identifying different birds.

Learn a Term



An animal that is warm-blooded is called *endothermic*. This means that it relies on the body's natural processes to create enough heat to keep it warm. Birds and mammals are the only endothermic animals.

For twelve days I recorded information from the bird blind, and observed all the species of birds for around 20 minutes each time I went. Every time I observed, I also recorded the temperature and number of birds I saw. I then submitted those observations into my eBird account.

My independent variable was the outside temperature, which I recorded from Mr. Kahler's WeatherBug web page. If the temperature was over three degrees Celsius, I would consider it warm. A temperature of three degrees Celsius or lower would be considered cold. My dependent variable was the number of birds I observed. By comparing the number of birds on cold days to the number of birds on warm days, I would discover the answer to my question which asked which type of weather birds prefer.

Results

In order to find the average number of birds I observed on cold and warm days, I had to do a little math. Since I had seven "warm" days and only five "cold" days, I divided the total number of birds seen for each of them by the

number of days (for example, I divided the total number of birds seen on warm days and divided that number by seven) and rounded it so that it would be more accurate. That gave me the average number of birds I saw on cold days and the average number of birds I saw on warm days.

The average number of birds I saw per visit to the Downy Creek Bird Blind on "cold" days was about 23. Meanwhile, the average number of birds I saw per visit on "warm" days was about 30. There were a larger percentage of birds seen on warm days than on cold days.

This gave me information to compare in order to prove or disprove my hypothesis.

Conclusion

My hypothesis stated that when it was below three degrees Celsius, I would see a greater number of birds at the Downy Creek bird blind. My reasoning was that when it is cold, there is not as much food close to the birds' for them to eat, therefore they must travel a little ways away from home in search of food. I figured that the birds may not mind the cold very much, considering that they are endothermic. Because they generate their own heat, they do not require warm weather to maintain a reasonable body temperature. Therefore, I believed I would see more birds at the bird blind on colder days than I would on warmer days, when birds can find food more easily.

According to my collected data, my hypothesis was incorrect. In fact, I saw a lower number birds on days that were three degrees Celsius and cooler than I did on days with a temperature of above three degrees. Perhaps the reason for this was that when it is cold outside there is more moisture in the air, and maybe birds do not enjoy that. Or maybe if I had collected more data I would have gotten a different conclusion. For whatever reason, my reasoning seems to have been incorrect. It would seem that my new hypothesis should be: *If it is warm outside, then I will observe more birds at Downy Creek than on colder days.*

Bibliography

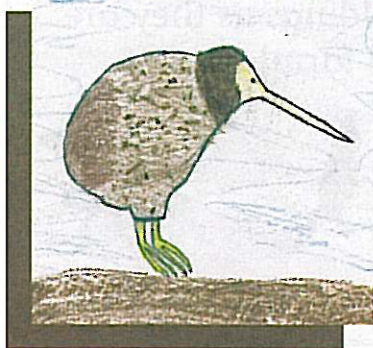
Cornell Lab of Ornithology, All About Birds. Retrieved March 4, 2008, from Web site: www.birds.cornell.edu/allaboutbirds/

Kahler, P. Weather Links. Retrieved November 26, 2007, from WeatherBug Web site: <http://tvja.org/science/weather.htm>

Sibley, David A. (2000). *The Sibley Guide to Birds*. New York: Alfred A. Knopf, Inc.



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