

The effect of temperature on chickadees

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Introduction

I decided to study Black-capped and Chestnut-backed chickadees observed at our feeding station. These birds are found in mature forests in the Pacific Northwest. They prefer to live in habitats alongside streams, which makes Downy Creek the perfect haven for these bold energetic birds. I wanted to know if the temperature affected the number of birds seen eating at our feeders. I predicted that on colder days, I would observe more chickadees than on warmer ones. I based this prediction on the fact that spiders and insects—the main food of these little birds—are scarce when it's cold, causing the birds to seek food from feeders.

Materials and Methods

I observed the feeders at the bird blind in the wooded area behind the school on 13 days from November to March. Our feeding area included a variety of birdseed in feeders and on the ground, and suet feeders were hung from several trees. On each data collection day, my biology class would write weather information on our bird tally sheets, walk to the bird blind, count birds, and compare data. Then we entered the information on the web site. Each bird watch was about 15 to 30 minutes long and took place in the afternoon around 2:30 P.M.

Results

The greatest number of Black-capped Chickadees seen on an observation day was three. The greatest number of Chestnut-backed Chickadees seen on an observation day was four. I saw Black-capped Chickadees more frequently than I did chestnut-backed. There were no black-capped seen on five days and no chestnut-backed seen on six days. Four of those days no chickadees were seen. The temperature on observation days fluctuated from 6° C to 19° C.

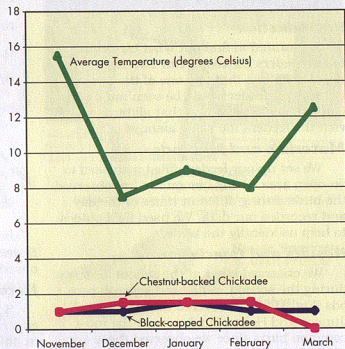
Analysis

As far as I can tell, temperature did not affect chickadee feeding habits at our feeders. They came and went in the same amounts on very cold days as they did on slightly warmer ones. On a day when the temperature was 19° C, the highest observation day temperature, we saw no chickadees. Neither did we see any when it was 6° C, the lowest temperature. There was no definite pattern in my data.

Conclusion

I originally thought that when the temperature was low, I would observe more chickadees than on warmer days. I believed that colder days would bring more chickadees looking for food. There could be several reasons why this outcome did not occur. Students at the bird blind tend to generate large amounts of noise. Also, this year,

Figure 1. Average number of chickadees visiting from November to March in relation to average temperature



our biology teacher placed a cardboard man in the middle of the feeders for an experiment of his own. This could have drastically changed the numbers of birds that would have normally visited the feeders had the intimidating figure not been there. After doing this study for two years in a row and coming to the same conclusion, I realize that factors other than temperature must affect the feeding habits of chickadees. However, I also feel strongly that a longer more extensive study would provide more accurate data. □