

The Effect of Urban Development on House Sparrow Populations

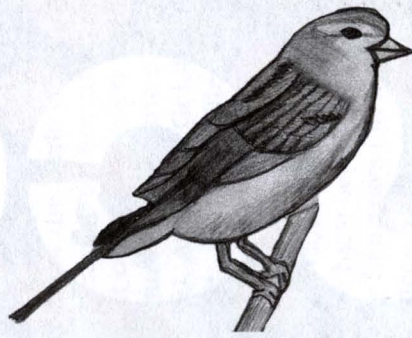
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Introduction

Our class first visited the bird blind at Downy Creek behind our school on November 28, 2006. On that day I saw more House Sparrows than any other kind of bird. This made me wonder why there were so many House Sparrows.

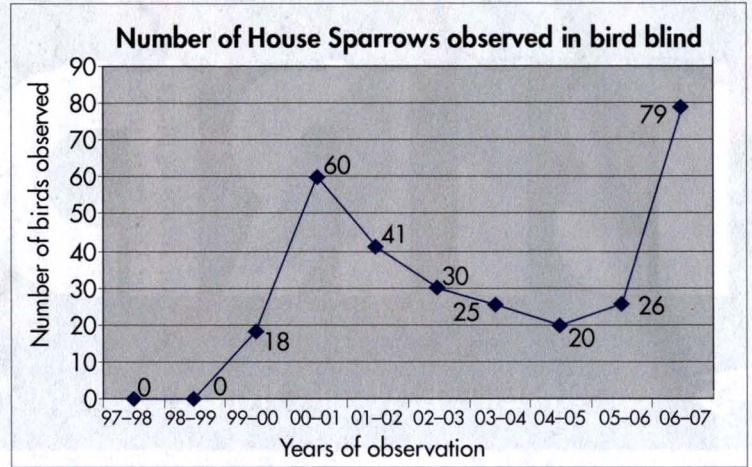
Background

After doing research on House Sparrows I learned that they like to inhabit areas where people live and there are lots of buildings. Currently there are a bunch of homes behind Downy Creek but I knew that there hadn't always been houses there. I thought that maybe the new houses had something to do with the increased House Sparrow population. When I researched House Sparrows I learned that they like to live where there are people. They make their homes in the eaves of buildings and love to eat the seeds people leave for them. When researching House Sparrows I also read that the numbers of House Sparrows are actually declining in Great Britain. Scientists think this is because the birds can't find good places to live and find enough food anymore. This shows that a good environment is necessary for House Sparrow populations to grow.



Bird Sketch

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Hypothesis

My hypothesis was if housing developments are built near wooded areas then the population of House Sparrows will increase. For this project my independent variable was when the houses were built. My dependent variable was the number of House Sparrows seen at the feeders because it was the factor that changed because of the new construction.

Methods

I collected data by observing the feeders at our school's bird blind at Downy Creek 14 times from November through March of 2006-07. Each time I went I took my bird binder and a pencil and I counted the number of birds I saw during a 15- to 30-minute time period. I also recorded the temperature, humidity, barometric pressure, light, wind speed and direction, precipitation, wind chill, dew point, and cloud cover. Although all this data was interesting, for my project I was mostly interested in keeping track of the number of House Sparrows seen at the feeders. Next I went online and looked up and recorded the number of House Sparrows observed at the bird blind at Downy Creek during the same time period for the last ten years. I found that data online at our school web site. Finally I researched property records to find out when the houses went in behind Downy Creek. I found out that information by going to a web site called Portland Maps and typing in different addresses of houses that are near the school. The web site showed when the houses were built.

Results and Discussion

During the time period from November 2006 to March 2007 I counted 79 House Sparrows at the feeders at Downy Creek. Then I compared this year's number of House Sparrows with the data collected at Downy Creek over the last ten years. When I did this I observed several interesting things. First, before 1999 there had not been any House Sparrows seen at the feeders, but by the year 2000 that number had jumped to 60. Also, over the next few years an average number of 38 House Sparrows would be seen at the feeders each year. It looked like the number of House Sparrows had leveled

off, but then the number of House Sparrow took another big jump to 79 in 2006-07.

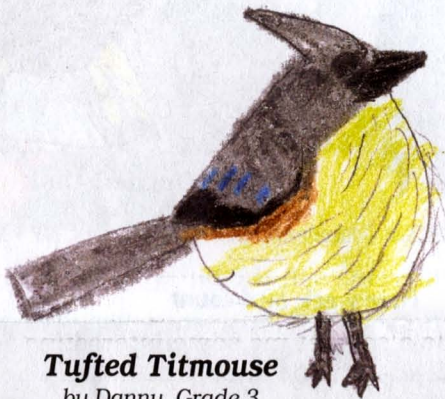
I researched construction dates in the areas near Downy Creek and discovered that there have been two major periods of construction in the area. The first was in 1999-2000 along Shaleen Road in the area directly behind the bird blind. The second began in 2006 along Baseline Road which is also close to the Downy Creek bird blind. This construction is still happening today. The increased building around Downy Creek provides safe places for House Sparrows to make their homes. If you add that to a wooded area, a creek with lots of insects and feeders that have bird seed in them all the time, you have a great environment for House Sparrows.

Conclusion

Originally my hypothesis was if housing developments are built near wooded areas then the population of House Sparrows will increase. When you compare the dates when the first House Sparrows appeared at Downy Creek to the dates when the first housing construction began, it appears as if they match. Also the recent increase in House Sparrow sightings seems to match with the new construction that is occurring around Downy Creek right now. While I cannot say for sure that urban development is causing the population of House Sparrows to increase, the data and my research definitely support my hypothesis.

References

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Blue Jay

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