



Science reports
and original art
for and by students

BirdSleuth
INVESTIGATOR
2019

Dear Students

Birds are fascinating to watch. They sing and fly, they're colorful, and they live so much of their lives where we can see them. Birds give us a chance to observe how nature works in our neighborhoods and schoolyards. One of the easiest places to watch birds is at a bird feeder. When we hang a feeder, we provide a tasty meal for birds and create a reliable place to observe and study their behaviors. That's why this year's National Challenge was all about bird feeding behavior.

In this issue, you'll see young scientists conducting experimental and observational studies to find out how things like the age of seed, the



*Chickadee drawing by Alauna
Grade 7, Minnehaha Academy
Minneapolis, MN, Mrs. Humason*

presence of a wooden owl, the height of feeders, and the temperature affect bird feeding behavior. As you read through the studies, ask yourself how you would set up the study and if the results would be different where you live. We hope you'll be inspired to watch the birds around you, to create art, write stories, and ask questions.

Sincerely,

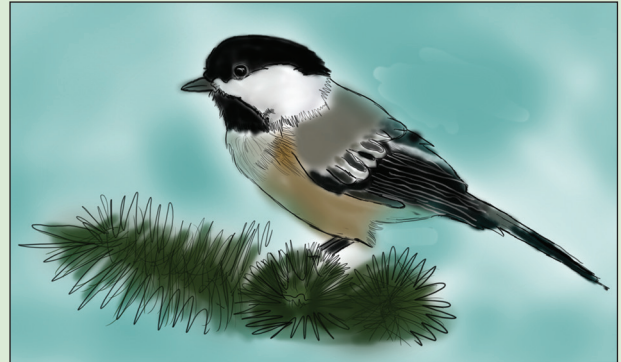
A handwritten signature in black ink that reads "Kelly Schaeffer".

Kelly Schaeffer, editor
BirdSleuth Investigator 2019

Front Cover: by Ayden, Grade 8, Palacios Junior High School, Austin, TX, Matagorda Bay Firdfest



*Red-bellied Woodpecker by Finn, Grade 7, Minnehaha Academy
Minneapolis, MN, Mrs. Humason*



*Black-capped Chickadee by Tiara, Grade 7
Tualatin Valley Academy, Hillsboro, OR, Mr. Kahler*



*Ruby-throated Hummingbird by Nicholas, Grade 5
St. Stanislaus School, Winona, MN, Mrs. Nadeau*

Does the Height of the Feeder Affect Which Feeder Birds Go To?

by Alex, Grade 6
New Canaan Country School
New Canaan, CT
Ms. Frey

Purpose

The objective of this study was to determine if the height of the feeder impacts which feeder the birds go to.

Hypothesis

I thought the birds would go to the higher feeder because they usually stay in trees which are higher.

Variables

Independent Variable: I will be testing if birds go to the feeder depending on the height of them.

Dependent Variable: I will be measuring which feeder the birds go to.

Constant Variables: I will keep constant the time, location, type of feeder and the seeds.

Materials

Two tube bird feeders at different heights, also Black-oil sunflower seeds, data table, and pencil

Methods

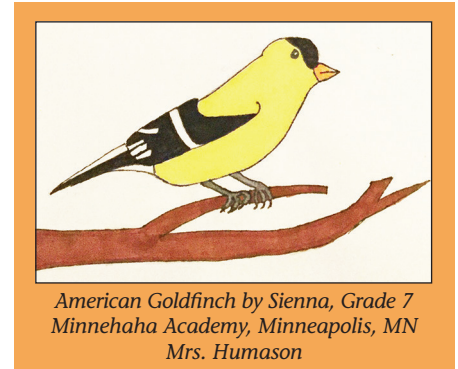
The experiment was conducted outside MS 114. The two feeders were hung in a magnolia tree. One feeder will be high, the other will be low to the ground. The feeders are one meter apart. The type of feeder is a tube feeder. The type of seed is black oil sunflower seed. I will observe in MS 114. I did not use binoculars. I observed for 10 minutes for 10 days. I recorded how many birds went to each feeder.

Results

A total of 10 observations were made at New Canaan Country school outside the science room. As you can see in Figure 1, 56 birds went to the higher feeder. Only two birds went to the lower feeder. As you can see in Figure 2, the only species that went to the lower feeder was the American Goldfinch. Also, Goldfinches were the most common visitors to the higher feeder. Of the species that went to the higher feeder, 18.2% percent were House Sparrows, 10.9% were Tufted Titmice, 12.7% were song sparrows, 32.7% were Goldfinches, 14.5% were House Finches and 10.9% were Blue Jays. I observed six species. Only one species came to the lower feeder. All six species came to the higher feeder. In observation 2, I saw no birds.

Discussion

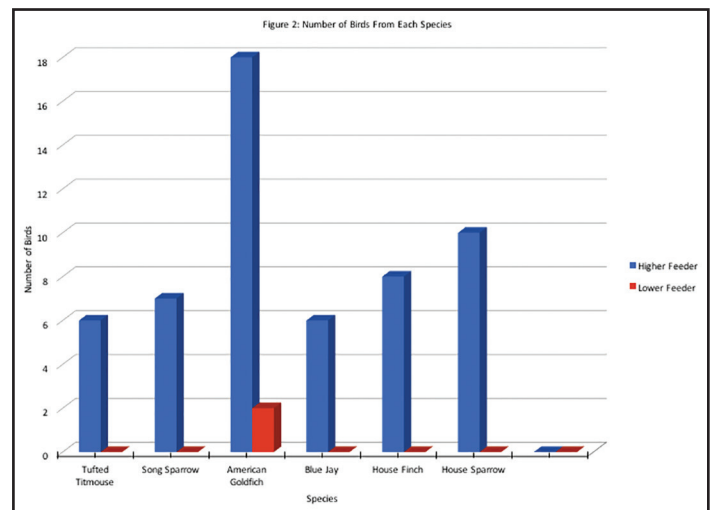
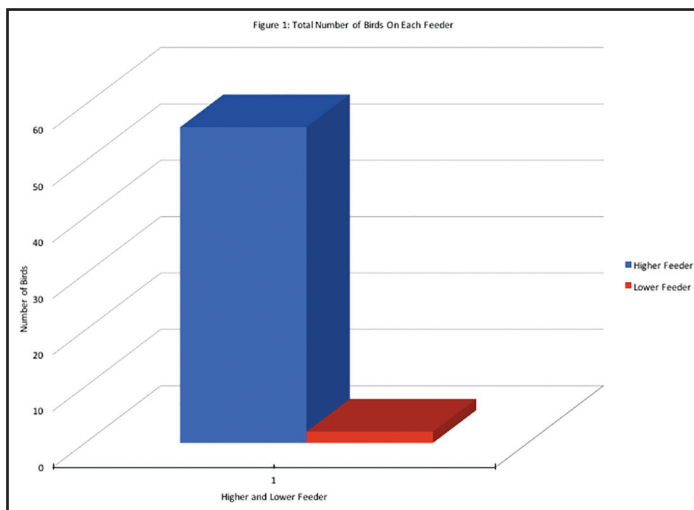
After conducting this experiment I have learned that most birds prefer



feeding at a higher feeder. As you can see in Figure 1, 56 birds came to the higher feeder and 2 birds at the lower feeder. In Figure 2, it shows that only two American Goldfinches came to the lower feeder. The Goldfinch went to the lower and the higher feeder the most times. I think the results turned out as they did because the birds were probably at very high trees, so that is why the birds probably went to the higher feeder.

There were some possible sources of inaccuracy in my study. I was doing my observations at school so it was pretty loud sometimes so that might have affected my study. Other people's feeder was right next to mine so that might have affected my results.

There are some factors that I could improve if I were to do this experiment again. I could have done it home so the seed level was consistent. In addition to that, the environment needs to be quieter. Also maybe use more than two feeders. Finally, I will try to make the feeders farther apart.



To Wait, or Not to Wait?

by Ben, Grade 7
Minnehaha Academy
Minneapolis, MN
Mrs. Humason

Question

Does the freshness of bird seed affect the type of birds seen?

Background Information

Experts recommend changing the bird seed in a feeder every 2 to 3 days. If moisture gets on the seed, it can cause mold and mildew to grow on the seeds that are harmful to the birds. Wet bird seed can form into stiff clumps that are hard for the birds to swallow, and, sometimes, the seeds can germinate and grow inside to feeder.

Experts also say that bird seed will last for about 3 to 6 months if stored in a plastic container in a dry place.

I'm interested in this topic because I would like to know how picky birds are when eating. Will some birds only eat food if its fresh? Will some birds only come when another bird is done eating? Do some birds prefer their food more stale? I would like to know.

Hypotheses

H₁: If the seed is fresh, then a wider variety of species will land at the feeder.

H₂: If the seed is fresh, then smaller variety of species will land at the feeder.

H₀: The age of food will not have a significant effect on the type of birds seen.

Materials

- Black oil sunflower seed (aged and new)
- 2 hanging screen feeders
- A space to hang the feeders
- Time
- Binoculars



Backyard Birds by Robert, Grade 7, Minnehaha Academy, Minneapolis, MN, Mrs. Humason

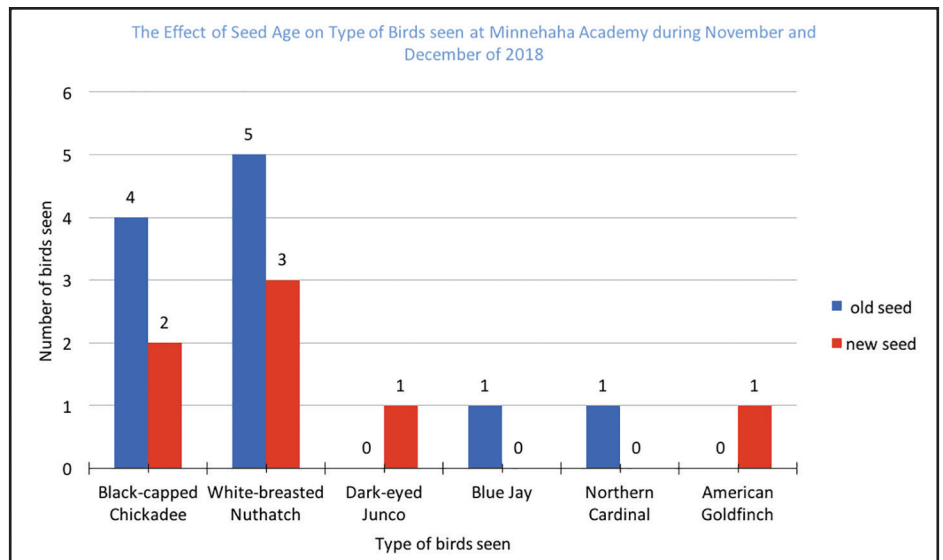
Procedure

1. Fill 1 hanging screen feeder with black oil sunflower seed.
2. Record the number of days since food was purchased.
3. Fill another feeder of the same type with the same amount of black oil sunflower seed.
4. Record the number of days since food was purchased.
5. Hang up both feeders on the same pole.
6. Record what species of bird land at the feeders.

7. Repeat steps 1-4 about once a week for about 8 weeks.

Results

This graph shows the correlation between the bird seed age and the type of birds seen at Minnehaha Academy during November and December of 2018. This data was collected on seven different occasions throughout the months of November and December. The bird seed was either old seed or new seed. Six different types of birds were seen, with a minimum number of



zero birds and a maximum number of five birds. While both ages attracted the same number of species, this data showed that the older seed attracted more birds overall.

Discussion

Based on this data, I can conclude that different species of birds tend to not prefer older seed or fresh seed. This data supports hypothesis H0, which states that the freshness of the seed will not affect the variety of species that come to the feeder. There are some possible sources of error in this data set. One possible source of error is the specific age of

the seed. By calling it “old seed” and “new seed,” the seed age is inconsistent. The age difference between the old seed and the new seed can vary greatly by calling it just “old” and “new”. Recording seed age by purchase date or the age in days would provide more specific data. This data was available, but was not used for this test. Another is the number and location of the trials. This test was only recorded on 7 different occasions in one spot. Doing more tests across a wider area would provide more accurate data. Miscounting of birds was also possible. The results of this data make

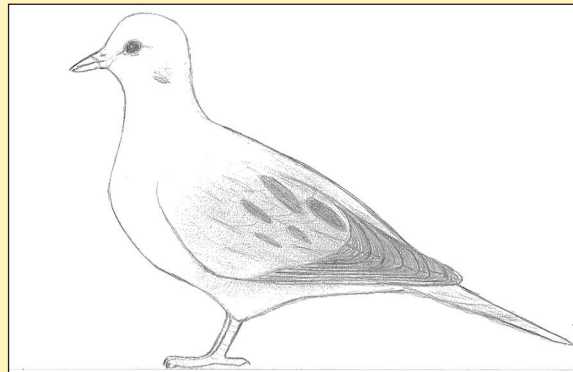
me wonder: does the type of seed affect the type of birds seen? Do different feeder types affect the type of birds seen? Does the time of day affect the type of birds seen?

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Cardinal drawing by Samuel
Grade 7, Minnehaha Academy
Minneapolis, MN, Mrs. Humason



Mourning Dove by Samuel, Grade 8
Tualatin Valley Academy
Hillsboro, OR, Mr. Kahler



Blue Jay by Charlotte, Grade 7
Minnehaha Academy
Minneapolis, MN, Mrs. Humason



Blue Jay by Rosie, Grade 7, Minnehaha
Academy, Minneapolis, MN, Mrs. Humason



Red-headed Woodpecker by Savannah, Grade 5
St. Stanislaus School, Winona, MN, Mrs. Nadeau

How Temperature Impacts Steller's Jays

by Seth and Samuel, Grade 8
Tualatin Valley Academy
Hillsboro, OR
Mr. Kahler

Introduction

Have you ever wondered why some days you see more birds than others? Could the temperature cause the changes? We wondered about that, so we decided to do an experiment to see if temperature changed how many Steller's Jays we saw. As birds are warm blooded, they use food to maintain their body heat. Our hypothesis is that if the temperature is less than or equal to 7°C then we will see more Steller's Jays at the bird blind.

Steller's Jays can be seen all year long on the west coast of the United States, Canada, Mexico and the southern part of Alaska. Their scientific name is *Cyanocitta stelleri stelleri*. They can be easily identified by their large black tuft of feathers on top of their head. They have mainly a black head and neck and a blue back, breast and tail. Normally they weigh 120 ± 20 grams and are 30 to 34 centimeters long. Male and female Steller's Jays look the same. Their diet consists of little bugs, seeds, nuts, berries, and food they steal from other animals and people.

Materials and Procedures

The materials we used for our study were the following: our school's weather station, the bird blind, our field guides, bird binders, bird seed, and our binoculars. The most important material was our bird binders. Our bird binders are filled with special tally sheets for recording information like the weather, the birds we see, temperature, and more useful information to help us keep track of our work.

When we entered class, we came



Steller's Jay by Samuel, Grade 8, Tualatin Valley Academy, Hillsboro, OR, Mr. Kahler

with a pencil, our National Geographic Field Guide to the Birds of North America, and our bird binders. At the start of class Mr. Kahler (our science teacher) would go over the weather information, which we acquired through the school's weather system. As he stated things like the temperature, precipitation, barometric pressure, cloud cover, and more, we would write the information down on our tally sheets. Then we would pick up binoculars and walk across the ball field, and down to the bird blind. The bird blind is similar to a shed with an open window and benches so our class could sit down and admire the birds without disturbing them. It was placed in front of a group of bird feeders in a small forested area behind our school that contains a small creek. We usually stay at the bird blind for about 15-20 minutes. After we had collected all our data, we put it into tables and graphs. We graphed the information we had collected in Excel. After graphing the data, we analyzed it and made a conclusion.

The independent variable in our experiment is temperature. We cannot change the temperature and we want to know if it will affect

the dependent variable. We will be comparing the temperature to the number of Steller's Jays.

The dependent variable is the number of Steller's Jays. The jays may be responding to the change in temperature. They will need more energy if the temperature is colder, causing them to eat more and by doing so come to the bird feeders more.

Results

We collected data on 24 days. The first 12 days were in 2018 and the second 12 were in 2019. The temperature data is rounded to the nearest degree. The most Steller's Jays we saw was 5 on a day when the temperature was 15 °C. We saw no jays on days when the temperature was 7, 6, 17, 11, 16 °C. We saw the birds 18 out of the 24 days we collected data. The last five times we collected data we saw no jays.

The population of Steller's Jays is very small. The data on the graph does not show trends. The average number of jays is 1.2 in addition the median and mode are 1. If the data is split up by year the mean (average) for the first year is 1.41 and the second year the average is 1. Last school year, 2017-2018

INVESTIGATIONS

had more Steller's Jay sightings at the bird blind than the second year 2018-2019. We are referencing data we collected from the 2017-18 school year while doing reports on other birds.

Conclusion

Based on the data we gathered the temperature does not suggest an effect on the number of Steller's Jays. So, the data we gathered does not support our hypothesis. We did not take into account the other things that could also affect the number of Steller's Jays we see. We believe that the difference in number of Steller's Jays we observed was caused by the combination of many variables including temperature, precipitation, length of day,

barometric pressure, and other factors. To better see if the temperature affected the jays, we would need an environment that did not change anything but the weather.

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- Steller's Jay Overview, All About Birds, Cornell Lab of Ornithology. (n.d.). Retrieved January 25, 2019, from https://www.allaboutbirds.org/guide/Stellers_Jay
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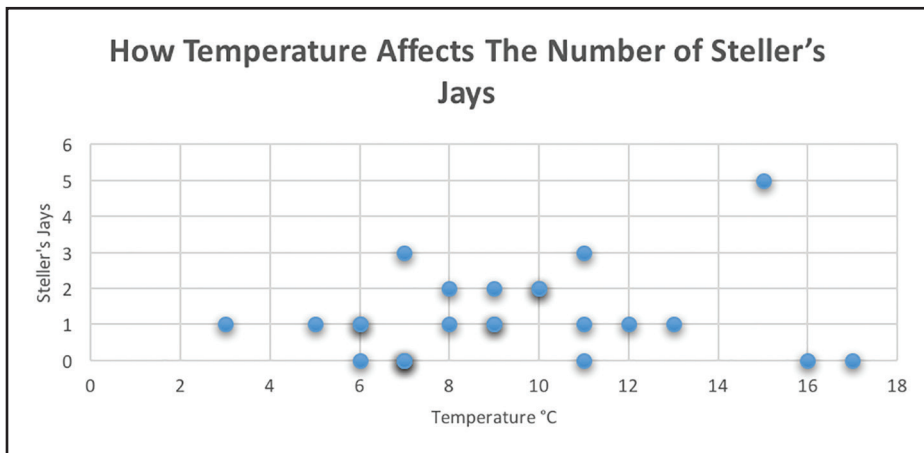


Steller's Jay by Liliana, Grade 8
Tualatin Valley Academy
Hillsboro, OR, Mr. Kahler

Date	19-Nov	20-Nov	26-Nov	27-Nov	28-Nov	6-Dec
Temperature C°	15	12	9	8	10	11
Steller's Jays	5	1	1	1	2	3
Date	10-Dec	11-Dec	12-Dec	15-Dec	18-Dec	2-Jan
Temperature C°	6	8	10	3	9	6
Steller's Jays	1	2	2	1	1	0
Date	5-Jan	7-Jan	9-Jan	16-Jan	17-Jan	19-Jan
Temperature C°	5	6	7	7	13	7
Steller's Jays	1	1	0	0	1	0
Date	23-Jan	24-Jan	26-Jan	28-Jan	29-Jan	30-Jan
Temperature C°	17	9	7	11	11	16
Steller's Jays	0	2	3	0	1	0



Blue Jay by Rebecca, Grade 6
Woodfield Academy, Macon, GA
Mrs. Alderman



White-breasted Nuthatch by LeYan, Grade 5
St. Stanislaus School, Winona, MN, Mrs. Nadeau

Do Fewer Birds Come If There Is a Wooden Owl On The Feeder?

by Caroline, Grade 6
New Canaan Country School
New Canaan, CT
Ms. Mackey

Purpose

The purpose of this experiment was to see if fewer birds came if there was an owl on the feeder.

Hypothesis

I thought that fewer birds would come if there was an owl on the bird feeder because the owl is bigger than the birds and I thought the birds would be scared of it.

Variables

Independent: presence or absence of the owl

Dependent: number of birds and species seen

Constant: same bird feeder, same owl, same time of day, same tree, same amount of food, put owl in the same place every time

Materials

bird feeder, wooden owl, bird food, a pencil, and my data table

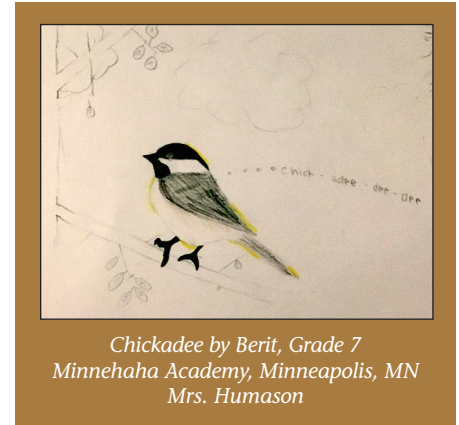
Methods

The experiment took place in Darien, CT. The feeder was placed in a tree next to a window, with a driveway nearby. The feeder was hung on a branch 6 feet from the ground. The feeder that was used was a tube feeder and the food was black oil sunflower seed. One of the feeders had a wooden owl about five feet away.

Observations were made from a window that is close to the tree with the feeders on it. Observations were made 2-3 times a week. They were made at around 4:30 pm for 10 minutes each observing time. The study ran for 4 weeks. The number of birds and species seen were recorded.

Results

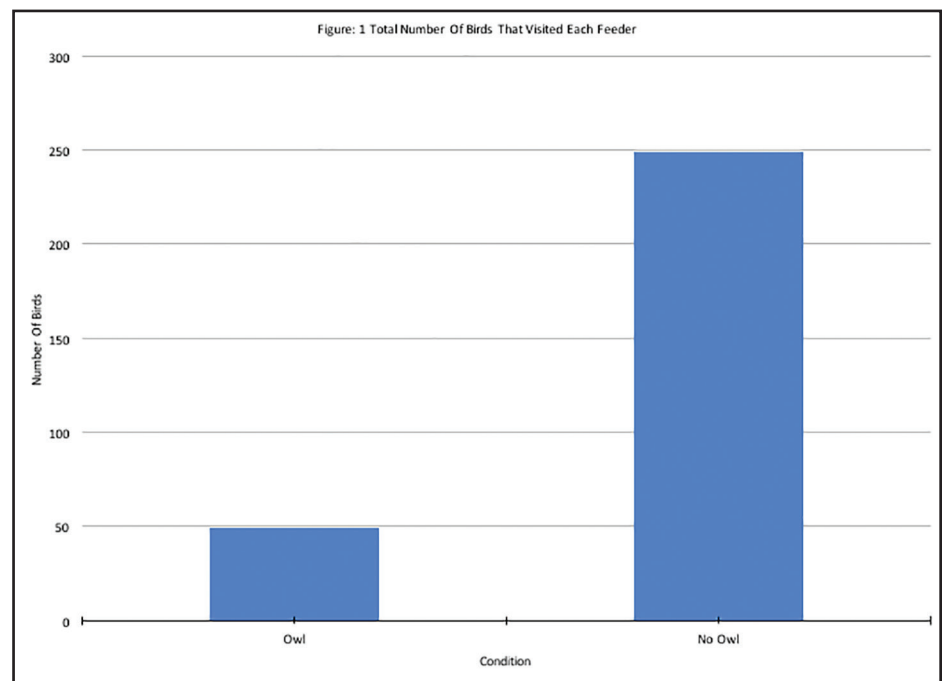
A total of 9 observations were made at the tube feeder in Darien, CT outside of my house. Figure 1 shows that more birds came to the feeder with no owl. A total of 249 birds visited the no owl feeder and a total of 49 birds visited the owl feeder. Figure 2 shows that more species came to the feeder without the owl. I saw 80 Black-capped Chickadees on the feeder without the owl. I also saw 20 Dark-eyed Juncos on the feeder with the owl. More Black-capped Chickadees and Dark-eyed Juncos went to the feeder with the owl than Mourning Doves. Of the birds I saw at the feeder with the owl, 46.5% were Dark-eyed Juncos. There were more Black-capped Chickadees than White-throated Sparrows and Dark-eyed Juncos at the no owl feeder. Of the birds I saw at the no owl feeder, 44% were Black-capped Chickadees. I saw birds during all of my observations. On day 2, my dog was around the feeder and barking. On most days, there were squirrels on the feeder without the owl. On day 7, it was rainy.



Discussion

After conducting this experiment, I have learned that most birds seem to prefer the feeder with no owl. As you can see in Figure 1 the no owl feeder had 249 birds and the feeder with the owl only had 49 birds visit. According to Figure 2, all of the species I saw went to the no owl feeder more than the owl feeder. I saw the most Black-capped Chickadees at the no owl feeder and I saw the most Dark-eyed Juncos at the owl feeder. I think the birds preferred the feeder with no owl because they were scared of the owl because it is a bigger bird.

(cont.'d on page 10)



National Challenge Winner

Why Are the Black-capped Chickadees Falling in Population at Our Feeder?

by Cameron, Grade 5
Hebron Station School
Hebron, ME
Mrs. Eusden

Introduction

Have you ever been bird watching before? If you have then would you agree that birds are pretty fascinating? A change in the number of Black-capped Chickadees we are seeing is happening and I'm trying to figure out why. In the fifth grade classroom at Hebron Station School in Hebron, Maine we are noticing less and less Black-capped Chickadees at our feeders outside our classroom. Also, the Black-capped Chickadee is the Maine state bird, so I hope we can find out why this species' population is falling. One reason is maybe there's not enough food at our feeders so they are trying to find a different place to feed. Another thought I have is maybe they're just decreasing in population in general and that would not be good. Maybe their predators are just killing them. The possible predators are a hawk, owl, or a shrike according to an article published in *Education Resources* magazine. Also in the article ABC Birds it states that cats kill 2.4 billion birds each year in the United States.

Hypotheses

According to an online All About Birds website article, "The Black-capped Chickadee hides seeds and other food items to eat later. Each item is placed in a different spot and the chickadee can remember thousands of hiding places." My first hypothesis is that maybe they have hidden enough food for a couple of years. Another possible hypothesis is that they have found a better

feeder and have migrated. Perhaps all these possibilities are what is reducing this species' number of feeder visits at our classroom site over the past 10 years from 2009-2019.

Data

The data that my classmates and I collected from November 2018 through April 2019 combined with previous years was pretty shocking. How we collect data is we go with the biggest group of one species we saw in one day so we don't count the same bird twice. Then I added up all the Project FeederWatch Black-capped Chickadee data for the ten years. In 2009-2010 we saw about 115 in all. In 2010-2011 we saw an increase in them; we saw 149 birds. Then the data started to go down. We saw 140 in 2012-2013, and 105 in 2013-2014 which was a big downfall. We saw 97 Black-capped Chickadees in 2014-2015. And 74 in 2015-2016. In 2017-2018 we saw a total of 62. Lastly, in 2018-2019, we saw 84. According to this data, we have seen 61 less in 2018-2019 than we saw in 2010-2011. Why are we seeing less and less? The graph below shows a slight increase in 2018-2019.

Results After Research

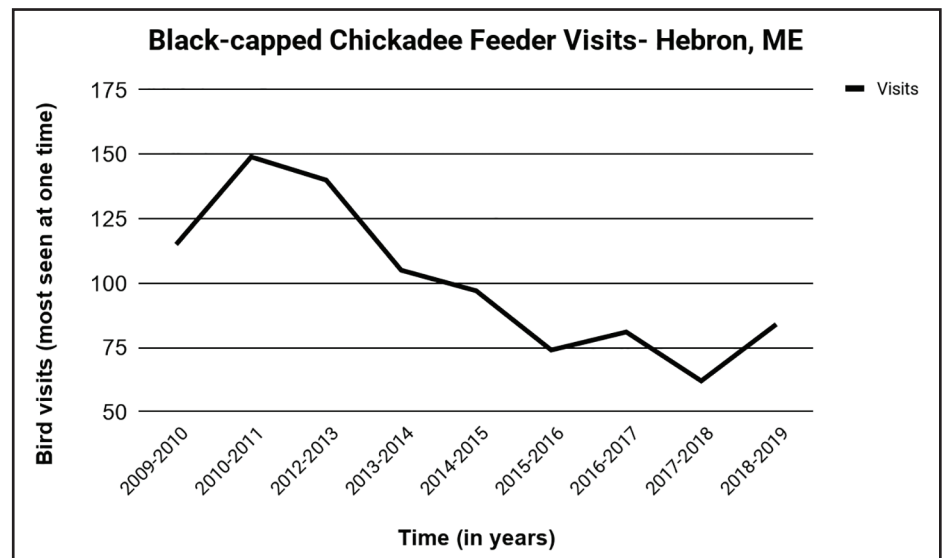
One of my hypotheses was that the Black-capped Chickadee could be migrating to a different place. I found out that theory was not possi-



Black-capped Chickadee eating at a feeder.

ble. According to the article, "10,000 Birds", Black-capped Chickadees do not move very far from a location [or migrate]. It says "because they don't migrate," referring to Black-capped Chickadees and that means they don't migrate. Also, I thought of another theory after reading "*The Sibley Guide to Bird Life and Behavior*," by David Allen Sibley. It writes, "Some species, such as the Boreal and Black-capped Chickadees, stage irregular irruptive movements in which they travel many miles south of their typical winter ranges." Maybe that is happening to the Black-capped Chickadees that normally spend their winters in Hebron, Maine. This irregular migration is supported by the data in my graph. In "*The Sibley Guide to Bird Life and Behavior*," by David Allen Sibley it states, "Chickadees and titmice eat mainly caterpillars, spiders, and insects, including

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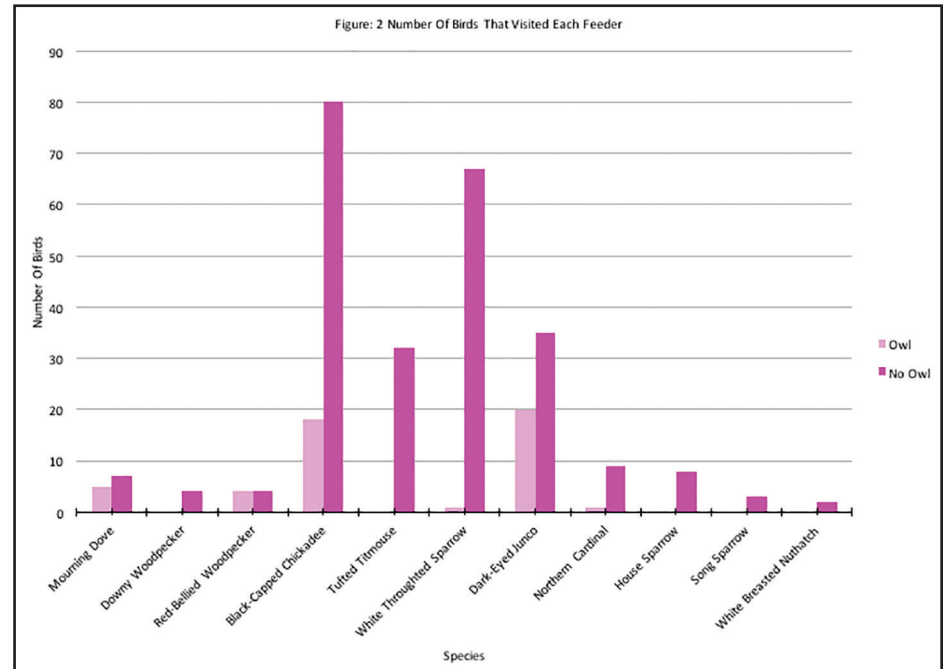
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There were a number of things that could have made my data inaccurate. The amount of seed varied from observation to observation. This can make my data inaccurate because the birds might have gone to the feeder with more food. The inconsistency in temperature could make inaccurate data because if it is warm the birds are not going to come out to the feeder and if it is cold they are. The squirrels seemed to only go to one feeder and that could have scared the birds away from that feeder. Also, my dog was barking a lot and the feeder was next to a driveway. This noise could have scared the birds away too.

There are also some things that I could improve if I were to do this experiment again. I would do more observations so my data could be more accurate. This would make my data more accurate because I could be even surer with more data that the birds liked the feeder without the owl better. I would move my

feeders closer together so I would know for sure that they don't like either location better. I would also fill both feeders before each observation so I know the birds aren't just going to the feeder with more food. It would be interesting if I

used cracked corn seed instead of black oil sunflower seed to see if more birds come. I am also wondering if more birds would come if I put a squirrel on the feeder instead of an owl.



(cont.'d from page 9)

their eggs and larvae, but they also eat sunflower seeds, and berries." All of our feeders have only sunflower seeds in them so maybe the Black-capped Chickadees are just getting bored of the same food. I know I don't like the same food too many times in a row. Also we have a feeder with suet. We have in all one feeder with suet and five feeders with sunflower seeds.

Conclusion

In addition, I hope we can figure out why this decrease in the population at our feeder is happening. Once again, the difference in Black-capped Chickadee data from now in 2019 and our highest point was nine years ago in 2010-2011, with 65 birds. It is really disappointing to see our Maine state bird falling in population. Hopefully, we can fix the decrease and the slight increase we saw

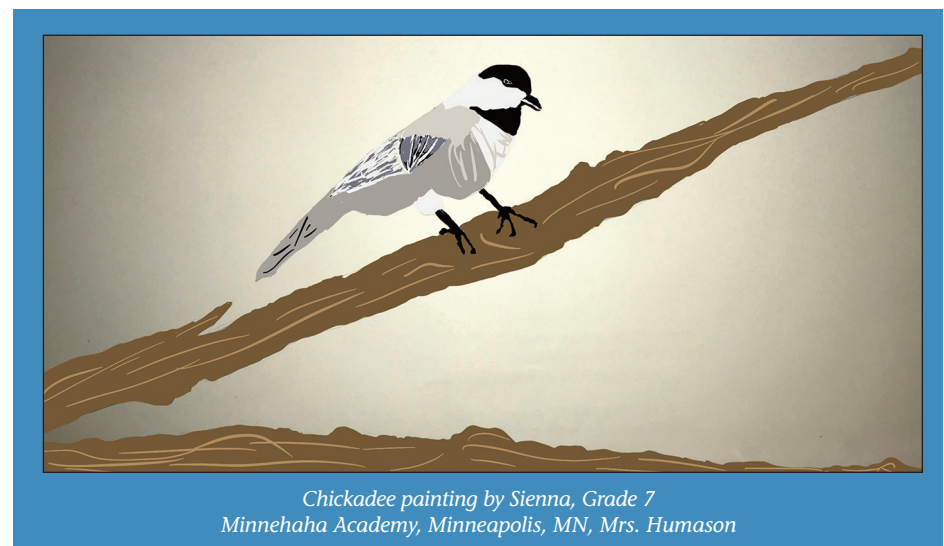
this year will keep happening. Even if it's baby steps it will still improve.

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The Sibley Guide to Bird Life and Behavior by David Allen Sibley. Pages 426-429 used.



Which Birds Go Higher Up Our Tree to Eat?

by Bray, Grade 6
New Canaan Country School
New Canaan, CT
Ms. Mackey

Purpose

The purpose of this experiment was to see which bird species go higher up the tree by placing one feeder near the top and the other near the bottom.

Hypothesis

I thought that Blue Jays and Northern Cardinals would go to the highest feeder and House Finches and sparrows would go to the lowest feeder because Blue Jays and Northern Cardinals seem more daring and brave than the House Finches and sparrows. Also, I usually saw more Blue Jays than other species near the top of the tree.

Variables

Independent variable: The height of the feeder

Dependent variables: The number of birds and the species

Conditions to Keep Constant:

- The placing of the feeder
- Time of observation
- Food in the feeder
- Observing from the same spot
- Type of feeder

Materials

A tube feeder, black oil sunflower seed

Methods

This experiment took place outside of the NCCS middle school science classroom. To document the information a pencil and a bird list were used. The feeders were hung on a tree outside the window. The area has one tree with mostly no leaves on it. One feeder was placed near



Blue Jay by Tyler, Grade 7, Minnehaha Academy, Minneapolis, MN, Mrs. Humason

the bottom of the tree and a different one was placed near the middle of the tree. The feeders were tube feeders filled with black oil sunflower seeds.

The observations were made inside from a window facing the tree. Observations were made from 10:20 am to 10:30 am. The observations would go on for 10 minutes, 3 days a week, for 4 weeks. The information being documented was the number and species of birds going to either the higher or lower feeder.

Results

A total of ten observations were made at the two green tube feeders on the New Cannan Country School campus outside of the middle school science classroom. Figure 1 shows that more birds visited the higher feeder than the lower feeder. A total of 57 birds visited the higher feeder and a total of 7 birds visited the lower feeder. Figure 2 shows the number and species of birds that went to the lower feeder and higher feeder. It shows 6 different bird species visited the higher feeder and 3 species visited the lower feeder. The percentages of birds that visited the higher feeders were 2.1% Song Sparrows, 41.7% House Finch, 4.2% Tufted Titmouse, 22.9% American Goldfinch, 12.5%

House Sparrow, and 16.7% Blue Jay. The percentages of birds that visited the lower feeder were 14.3% Black-capped Chickadee, 71.4% American Goldfinch, and 14.3% Northern Cardinal. During observations 1,2,9 and 10 no birds were seen at either feeder. During observations 1,2,4,5,7,8,9 and 10 no birds were seen at the lower feeder. On observation 1 it was raining. Observation 10 was the coldest with a temperature of 26 degrees. Observation six was really windy.

Discussion

After conducting this experiment most birds seemed to prefer the higher feeder to the lower feeder. As you can see in Figure 1, 57 birds visited the higher feeder and 7 birds visited the lower feeder. While most birds followed this pattern, Figure 2 shows that the Northern Cardinals and Black-capped Chickadees preferred the lower feeder to the higher feeder. House Finches preferred the higher feeder the most. American Goldfinches preferred the lower feeder the most. I believe that the majority of the birds preferred the higher feeder because it was easier to get to considering they are already in the air when flying.

(cont.'d on page 12)

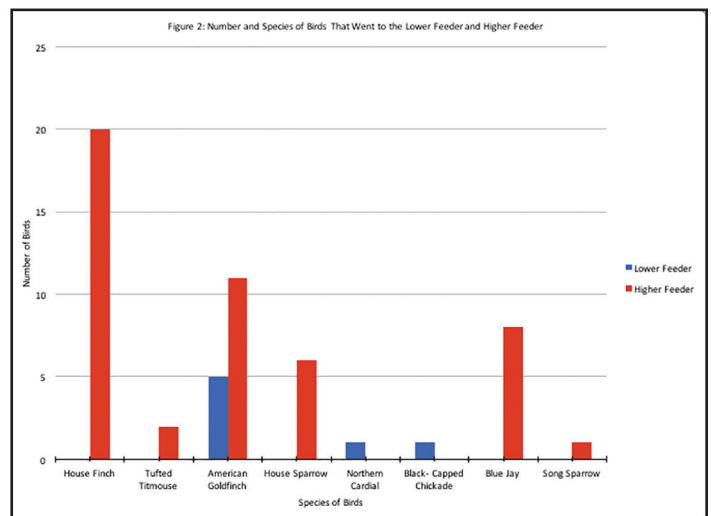
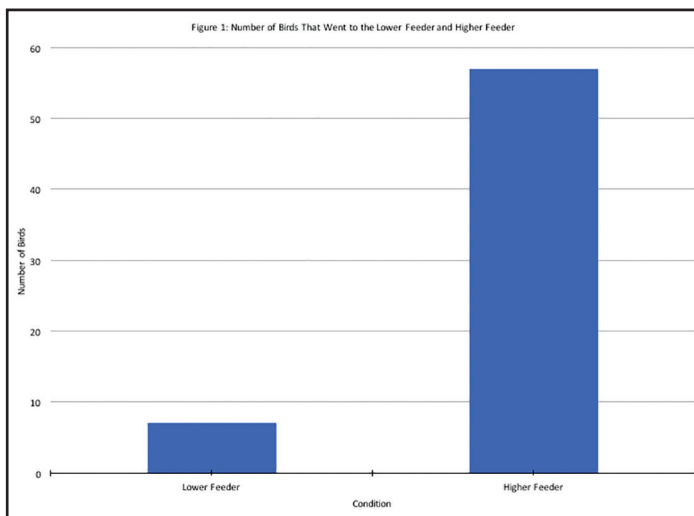
(cont.'d from page 11)

There were some possible inaccuracies in my study that may have caused the data collection to be incorrect. For example, the weather was different every day. On day 1, it was raining hard and no birds came. Also on day 6, it was really windy and only a small number of birds came. Another example would be that I did not come to my observations at the same time every day and missed all the birds feeding at an earlier time. Also, birds could have a temperature prefer-

ence and maybe didn't come on the days I was observing because of the varying temperature. Another example was when other observers were being distracting or making a lot of noise that was scaring away the birds. My last example is wildlife scaring away the birds such as squirrels and chipmunks.

There are some factors that I could improve if I were to do this experiment again. For example, I could've been in a quieter location with fewer distractions so birds didn't get scared away. Also, there could've been few-

er feeders surrounding my feeder so that the other feeders didn't take all the birds. Additionally, I could've done more observations so I could get more data and then make my outcome even more set. I also could have been in a more wooded area that isn't directly next to a parking lot. If I were to do more research I would like to see what would happen if I had put the higher feeder higher than it was or if I had put my feeders on the other side of the tree near the bushes.



by Haylie, Grade 2
Markham Elementary School
Austin, TX, Matagorda Bay Birdfest

American Oystercatcher

These drawings, including the front cover, are some of the winners of the Matagorda Bay Bird Fest's annual Youth Art Contest.



by Andre, Grade 10
Tidehaven School
Austin, TX, Matagorda Bay Birdfest



by Lesley, Grade 5
E. Rudd Intermediate School
Austin, TX, Matagorda Bay Birdfest

Bird Poems

by Oletha, Grade 7
Minnehaha Academy
Minneapolis, MN
Mrs. Humason

Birds

White, Black
Dark, Light
Which bird will we see tonight?
The morning comes,
Birds at bay
Which bird will we see today?
Robins, Eagles
Birds galore.
Certain birds at the DQ door!
It's getting dark,
The birds take flight,
Which birds will we see tonight?

American Eagle

Pride, Freedom, Peace, Love.
The American Eagle,
represents our values.

American Goldfinch

by Rocio and Grace, Grade 7
Minnehaha Academy
Minneapolis, MN
Mrs. Humason

A yellow pastel
Painting the sky
Singing day and night
Sparrow sized
Blackened eyes
Turning dark into light
Sharpened call
Short and stout
So yellow is the male
Black cap Wing bar
Long and pointy tail
Female's color
Not so bright
But the male becomes the same
In the winter, not that nice.
American Goldfinch
Beautiful bird
Don't have to be big to be great
American Goldfinch
Beautiful bird
Brightens up my day

Bird Haikus

by Ellis, Grade 7
Minnehaha Academy
Minneapolis, MN
Mrs. Humason

Minnesota Loon

Black, white, and speckled
Their mournful cries break the dawn
Signals a new day

A Minnesotan spring

Robin on the branch
Hummingbird flutters and darts
Welcome sign of spring

Bald Eagle Nest

A width of eight feet
And a grand depth of thirteen
The proud eagles nest



Bald Eagle by Evie, Grade 7
Minnehaha Academy, Minneapolis, MN
Mrs. Humason

Springtime

by Rubina, Grade 3, Homeschool, Aloha, OR

Winter is gone.
Now, spring is hatching.
It finally breaks free of its egg.
Mother Nature comes to the nestling.
Spring looks up into her junco eyes,
Begging for nourishment.
She feeds it with the seed of gentle care,
Refreshes it with the water of growth,
And protects it from the hawks of cold.
Mother Nature teaches it to live their way.
Spring learns flying, hopping, and chipping from Mama.
After weeks of food from Mom,
Spring learns to forage on its own.
It finally grows into a full Summer,
Ready to live their way.



Mountain Bluebird by Jade, Grade 3
Mark Fine Elementary School, Las Vegas, NV
Ms. Murtaugh

Mountain Bluebird

by Presley, Grade 3
Mark Fine Elementary School
Las Vegas, NV
Ms. Murtaugh

The Mountain Bluebird sounds like...
Someone scuffing their foot on the tile
My brother raging at Fortnite
Forks scraping on glass
A dog whining
Someone failing to play a recorder



CREATIVE CORNER



Bird drawing by Jack, Grade 7
Minnehaha Academy, Minneapolis, MN
Mrs. Humason



Song Sparrow
by Walter, Grade 8
Tualatin Valley Academy
Hillsboro, OR, Mr. Kahler



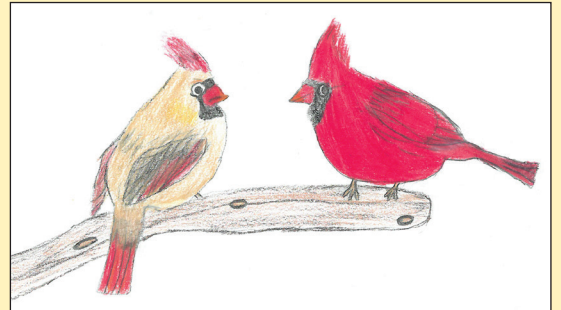
Cardinal drawing by Bryan, Grade 3
Essex Middle School, Essex, VT, Mrs. Dunn



Cooper's Hawk by Avery, Grade 4
Woodfield Academy, Macon, GA
Mrs. Alderman



Blue bird drawing by Solomon
Grade 7, Minnehaha Academy
Minneapolis, MN, Mrs. Humason



Pair of Cardinals by Evelin, Grade 7
Minnehaha Academy, Minneapolis, MN
Mrs. Humason



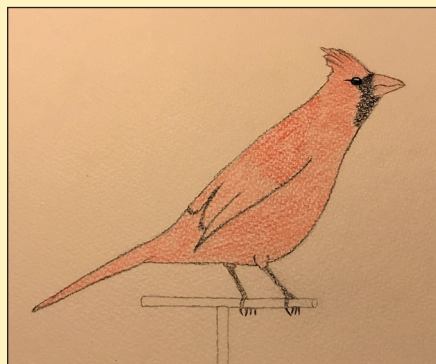
Chipping Sparrow by James, Grade 4
Woodfield Academy, Macon, GA
Mrs. Alderman



Scarlet Tanager by Navarre
Grade 7, Minnehaha Academy
Minneapolis, MN, Mrs. Humason



Mourning Dove by Ophelia, Grade 7
Minnehaha Academy, Minneapolis, MN
Mrs. Humason



Cardinal drawing by Ben, Grade 7
Minnehaha Academy
Minneapolis, MN, Mrs. Humason



Willow Ptarmigan by Sovina, Grade 3
Mark Fine Elementary School, Las Vegas, NV
Ms. Murtaugh



by Aziz, Kindergarten
Green Acres School
North Bethesda, MD
Ms. Kaufmann



by Gracie, Kindergarten
Green Acres School
North Bethesda, MD
Ms. Kaufmann



by Kai, Kindergarten
Green Acres School
North Bethesda, MD
Ms. Kaufmann

Bird Nest Collages



by Zelda, Kindergarten
Green Acres School
North Bethesda, MD
Ms. Kaufmann



by Melek, Kindergarten
Green Acres School
North Bethesda, MD
Ms. Kaufmann

The **Cornell Lab** 
K-12 Education

BirdSleuth INVESTIGATOR

Volume 8, Fall 2019

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BirdSleuth Investigator is a publication of works by students participating in K-12 Education, an education program at the Cornell Lab of Ornithology. K-12 Education resources are designed to promote science literacy through hands-on indoor and outdoor science learning experiences and student participation in citizen science.

To learn more about
K-12 Education resources,
visit birds.cornell.edu/K12

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Cornell University



Black and White Warbler by Bella, Grade 5, St. Stanislaus School, Winona, MN, Mrs. Nadeau



The Cornell Lab 
K-12 Education

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