

## Findings from the Field

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### Maine Birds Choose Camouflage Feeder Over Fluorescent Orange Feeder

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## Abstract

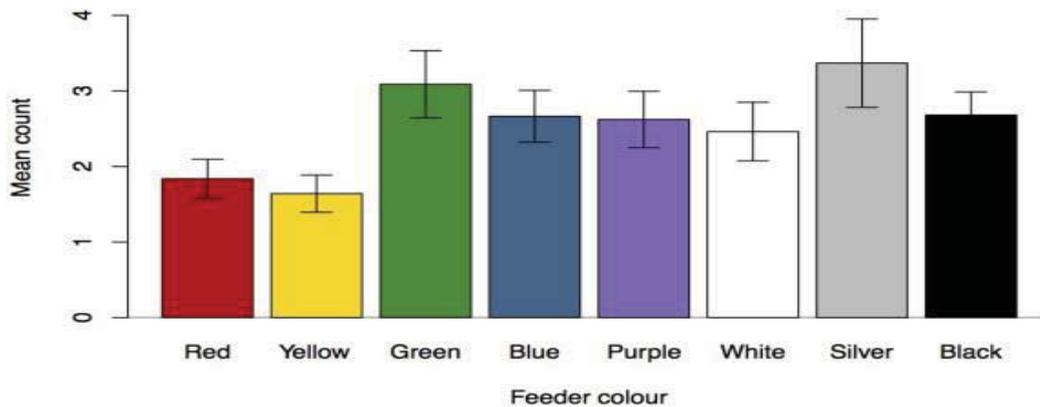
In this science paper, I wanted to figure out if birds preferred bright orange coloring or muted tones. My experiment gives an insight to which colors attract birds and which they see as danger. To create my experiment, I took two identical feeders and filled them with the same seed. Then I covered one feeder in bright orange duct tape and the other in camouflage. I hung the two feeders on the same tree, took them down each science class, and weighed them to find out how much seed had been eaten. I discovered that the camouflage feeder was eaten from more, while the orange feeder was emptied at a slower pace. Like the experiment conducted by *Morrell Labs*, I found that my color popularity matched their results.

## Introduction

A bird feeder can be more attractive to birds depending on its color. Brighter colors catch bird's attention, but their instinct may make them think it's a threat. With a darker, camouflage color, birds might overlook it, but on the other hand, birds won't see it as a threat.

*Morrell Labs* conducted an experiment in which scientists took eight identical feeders and painted the metal lids and bases each a different color per feeder— red, yellow, green, blue, purple, black, silver, and white. The feeders were hung in a row with three scientists recording their sightings for 185 hours during winter and they spotted 7,535 birds in all. The scientists created a bar graph using the means of each number of visits to each color feeder. Red got a mean of about 1.8 visits, yellow got a mean of about 1.6 visits, green got about 3.2, blue, black, and purple got about 2.7, white got about 2.5, and silver got about 3.4 visits. You can see that the shiny silver got birds attention, and so did green. Red and yellow, however weren't as attractive.





By conducting an experiment, I was able to answer my essential research question; do bright colors attract birds or do birds see it as danger? My hypothesis is bright colors will attract birds because they aren't that smart, and I conducted my experiment in a location that isn't hazardous to birds.

I conducted a similar experiment to *Morrell Lab's*, where I took two identical feeders and put strips of blaze orange duct tape on one and camouflage tape on the other. I put the feeders at the same height and only a few feet apart. As often as possible, I weighed how much seed was left in each feeder and recorded the data. This allowed me to answer my hypothesis. The orange feeder stood out from a distance compared to the camouflage feeder. The brightness could have been seen as danger to some birds or attractive and welcoming to others.

## Methods

To find out whether bright colors attract or scare birds, I wanted to use identical feeders, but differently colored to find which the birds prefer.

Materials List:

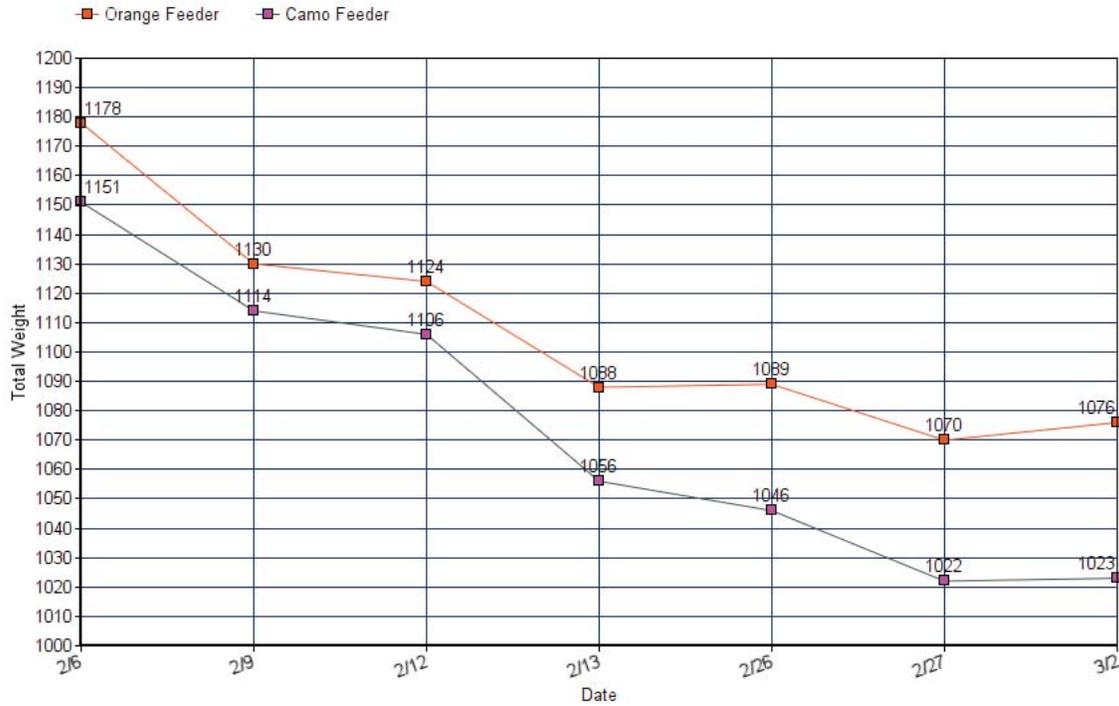
- Two identical bird feeders
- Bright orange duct tape
- Camouflage duct tape
- Electric scale
- Enough seed of the same variety to fill both feeders

I took two feeders that were the same model and color, and covered one in bright orange duct tape. The brightness of this feeder will either attract bird's attention or scare them away. I took the other feeder and covered it in a camouflage-patterned duct tape. The muted tones of this feeder will either make birds feel safer or make them ignore the feeder entirely. Then I filled both feeders to the brim with seed. I hung the two feeders on branches of a small tree in front of my school.

Each science class, I took the feeders down and weighed them with, one feeder at a time. After weighing and recording the weight of one feeder's remaining contents, I would repeat the process for the other feeder

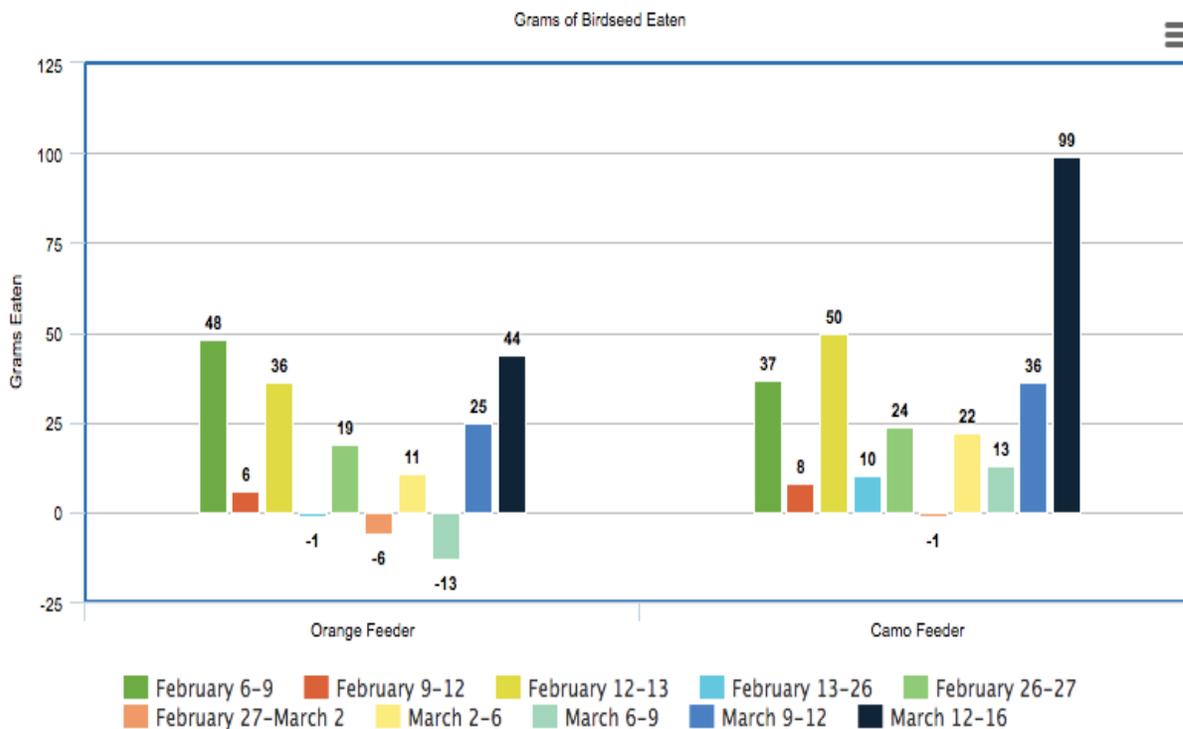
## Results

In my science journal, I would write the date and the total weight of each feeder each time I weighed the remaining seed. This graph shows the data I collected.



In my graph, you can see that both feeders had a started with a steep drop in weight, with the orange feeder dropping at a faster rate than the camouflage feeder at first. From February 12 to 13, the difference between the weights of the two feeders shone through. Over February break (from the 13<sup>th</sup> to the 26<sup>th</sup>), the weather affected the orange feeder, making it heavier, while the camouflage feeder still lost weight despite the weather. More snow affected the weight of both feeders from February 27<sup>th</sup> to March 2<sup>nd</sup>. The range of the orange feeder weights is 102 grams and the camouflage feeder range is 128.

Time Span	Orange Weight Difference	Camouflage Weight Difference
February 6-9	48 grams	37 grams
February 9-12	6 grams	8 grams
February 12-13	36 grams	50 grams
February 13-26	+1 grams	10 grams
February 26-27	19 grams	24 grams
February 27-March 2	+6 grams	+1 grams
March 2-6	11 grams	22 grams
March 6-9	+13 grams	13 grams
March 9-12	25 grams	36 grams
March 12-16	44 grams	99 grams



This table and graph show the same data. The orange feeder had three different outliers in which the snow *added* weight to the feeders. With the camouflage feeder, the weather affected it just once. It also had a major outlier with a difference of 99 grams. The average difference from the orange feeder's differences is 21.3 grams. The average of the camouflage feeder's differences is 29.8. Therefore, the camouflage feeder is more popular than the orange feeder.

## Conclusion

By conducting my experiment, I was able to answer my essential question; do bright colors attract birds, or do they see it as danger? My hypothesis was that birds would see the bright orange and go to the feeder because bird's brains do not have nearly the power as humans, so I figured they'd get excited seeing the bright colors.

However, as you can see in my first graph, more seed was eaten from the camouflage feeder than the orange feeder in total. Despite a few outliers when snow affected my data, and the surprisingly large drop in the camouflage feeder's weight—a drop of 99 grams, my data was the best in my class. I could tell that the camouflage feeder was more popular because its average weight difference is higher than the orange feeder's.

Going back to the *Morrell Labs* experiment, silver and green were the most visited feeders, and the red and yellow feeders were least. My data I collected makes sense because mixing red and yellow makes orange, and camouflage has bits of green and grey in it.

Even though my experiment was taken using bird feeders, my finding can be used to lure and scare birds away in the wilderness. If a scientist wanted to keep birds away from their garden, they could put red, yellow, and orange colors around it. On the other hand, if a scientist wanted to attract lots of birds to study and make drawings of, they could add some green and camouflage material around their property.