

Feeding Habits of the Lesser Antillean Bullfinch

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Dominica Study Abroad

Summer 2009

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Abstract

This project was designed to study the feeding habits of the Lesser Antillean Bullfinch (*Loxigilla noctis*) and the extremes they will go to in order to obtain food. The project formed ideas on how the Bullfinch learns to obtain food that may be beyond their reach and how the male and female interact with each other when around food. Observations were also made on how the Bullfinches ate naturally instead of just based on set variables.

The project revealed that the females are the ones who will go to extremes in order to obtain food, while the male eats what is easy to access.

Introduction

The Lesser Antillean Bullfinch (*Loxigilla noctis*) is fairly well distributed in all habitats found on Dominica. The Bullfinch can be found throughout the West Indies on islands such as Antigua, Guadalupe, Anguilla, Martinique, Montserrat, Grenada, Saint Kitts, and Nevis. The male Bullfinch is mostly black with a black bill and red on the chin, throat, and just in front of the eyes. There is also a faint reddish tint between the vent and the undertail of the male. The female, however, is a brownish-olive color with gray underneath, a yellow/brown bill, and orange undertail coverts. The Bullfinch constructs a dome-shaped nest with a side entrance, usually in a tree, grass, or bush. The nests may also be found under roofs of houses. They usually lay 2-3 white eggs that have fine red spots. Breeding usually takes place from February to August (Arlington 2005).

The study of the Bullfinch occurred at the Archbold Tropical Research and Education Center because of the abundance of both males and females. Bullfinches tend to congregate around areas where food can be found, and Springfield Station is a great place to study them

because of the amount of leftovers from visitors as well as the variety of fruits, seeds, grasses, and insects.

This project was designed to test how Bullfinches obtain food, what type of extremes they will go through to get the food, and how the male and female interact together. Since both males and females seem to scavenge for food, I hypothesize that the males and females both will find any way possible to obtain food.

Materials

For my experiment I used bread, string, 2 paper bags, a zip lock bag, and a stopwatch.

Methods

First, I crumbled up a piece of bread and spread it on the ground near the veranda and on one of the tables inside of the veranda. I observed the sex of the bird, the time it took them to find the food, and what the bird did to get the food or if there was any interaction within the species. I wrote all of this information into a data sheet. Next, I tied a piece of bread to one of the chains hanging from the veranda's roof. I wrote down the same type of observations. Then, I put 2 pieces of bread into a paper bag, cut a hole around 2 inches in diameter into the side of the bag, and hung the bread to one of the chains by a piece of string. Once again, I wrote down my observations. Finally, I put 2 pieces of bread into another paper bag without a hole and hung the bag from the veranda. Since there weren't many birds that tested that bag, I decided to put a piece of bread into a zip lock bag to see if they would take the bread from that instead. I wrote down all of my observations into my data table. I observed each variable 4 times in order to get more accurate data. However, since the Bullfinches did not seem to care for the bread that was in a bag with no hole, I was only able to observe them 3 times.

Results

After using several variables to test the eating habits of the Lesser Antillean Bullfinch and observing their actions, I found that the female Bullfinch will go to extremes to gather food, but the male will only eat whatever is available and easily accessible. The following table contains my observations and data recorded:

| Trial Number | Experiment Type | Sex | Time Access to Food | Observations |
|---------------------|-----------------------------|------------|----------------------------|--|
| 1 | Bread alone on ground | M | 2.46 Seconds | He jumped around, then grabbed the food off of the ground. |
| 2 | Bread alone on ground | F | 4.56 Seconds | She chirped at me, grabbed the crumb, and flew away. |
| 3 | Bread alone on ground | P | 2.12 Seconds | Female chirped at male while he grabbed food. |
| 4 | Bread alone on ground | P | no time | Shared crumbs; one took bites, and then the other took bites. |
| 5 | Bread hangs on string alone | F | 54.59 Seconds | She tried to climb down chain and string to get to bread. |
| 6 | Bread hangs on string alone | P | 10.43 Seconds | Male hovered, and then watched female work her way down string to bread. |
| 7 | Bread hangs on string alone | F | 5.63 Seconds | She flew onto string and inched way down to bread. |
| 8 | Bread hangs on string alone | F | 1.19 Seconds | Female flew right onto bread. |
| 9 | Bread in bag with hole. | P | 27.43 Seconds | Male watched as female tried to find hole, but was unsuccessful. |
| 10 | Bread in bag with hole. | F | 51.47 Seconds | Female found hole, ate bread, and dropped a few pieces. |
| 11 | Bread in bag with hole. | F | 11.56 Seconds | Female grabs pieces of bread, flies to table to eat. |

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|----|------------------------------------|---|---------------|---|
| 12 | Bread in bag with hole. | F | 16.94 Seconds | Female picks out bread and eats on table. |
| 13 | Bread in bag without hole. | F | 16.91 Seconds | Made her way down to bag, pecked at once, gave up. |
| 14 | Bread in bag without hole. | F | 20.23 Seconds | Poked 2 holes into top of bag, but didn't get to bread. |
| 15 | Bread in ziplock bag without hole. | F | 2.63 Seconds | Landed on chain, looked at bread, and flew away. |

*F=Female, M=Male, P=Pair

When the bread is on the ground or spread around on a table, males and females will both eat the crumbs. Many times the males and females would eat the crumbs together. Picture 1 and picture 2 both depict a male Bullfinch and a female Bullfinch eating a banana that was sitting on one of the tables on the veranda. Both will eat any food that is lying around.



Picture 1:



Picture 2:

However, if a piece of bread is out in the open yet hanging by a piece of string, only the female attempts to take a piece of the bread. The male may see the bread, but will not attempt to take any. Picture 3 shows a female Bullfinch eating part of the bread that was hung on the veranda.



Picture 3:

During some of the trials, the female took a longer time to figure out how to get the bread, but as time went on, she was able to learn the easiest way to obtain the bread. Once the bread was placed into a paper bag with a hole in its side, the female Bullfinch found her way to the hole so that she could take bread from the bag. The male, once again, never attempted to fly up to get bread. Picture 4 shows a female eating bread from the bag.



Picture 4:

The final trial was to put bread into a paper bag without a hole to access the food. Even though the female attempted to obtain bread by poking at the top of the bag, she was never successful, and gave up after around 20 seconds. After observing this behavior, I thought the reason may be because the Bullfinch could not peck her way through the bag, so I changed the bag to a zip lock bag, thinking it would be easier to break. However, the female only attempted to break through the zip lock bag once. The male, again, did not even attempt to obtain bread from the hanging bags. Picture 5 shows one of the females attempting to break through the bag without a hole.



Picture 5:

Discussion

What I was able to conclude after my experiment with the Bullfinches was that the females are more willing to go to extremes in order to obtain food than the males are. The females also seem to learn quickly how they can obtain the food. It seems that some of the data I collected came from the same female. The first time she took bread from the string, it took her 10.43 seconds to figure out. The second time she came back, she figured out how to get to the bread within 5.63 seconds. The third time she came back for bread, she landed right onto the bread instead of working her way down the string like the first two times. The males will steal food from the table or anything that is easily accessible, but if there is some sort of threat, they will not attempt to take food. Even while observing the birds in their natural habitat, the females are the ones who are more active in foraging. For instance, two female Bullfinches were eating blades of grass that had seeds on the ends. Since the grass was taller than them, they would flutter up, grab the grass blade, pull it down to hold underneath their foot, and then peck off all of the seeds to eat. However, the males would hang around the veranda and eat any crumbs from our lunches, or would eat fruit that had already been peeled. Even when the food was easy to obtain, the males were very cautious. One little movement near them would send them flying away. Together, the males and females ate in harmony. At times, the female appeared to “nag”

the male while he ate food from the ground, but other times they would share the same piece of food. The female seems to be the more dominant bird out of the two.

There are other ways to find more information on the eating habits of the Lesser Antillean Bullfinch. If anyone should continue this experiment, they could easily test these birds with other foods such as fruit, vegetables, seeds, or even things such as peanut butter or jam. The person could hang each item side by side and see which food the Bullfinch is more attracted to. The person could also test if the Bullfinch will go to more extremities to obtain one of the foods over the other. Another way to test them would be to see whether or not the male Bullfinch will take food from the brown paper bag if it is placed on the ground.

Acknowledgements

I would like to thank Dr. Lacher and Dr. Woolley for being patient with me while I tried to figure out what exactly I wanted to do with the Bullfinches, and also for buying me bread in town that went moldy within a week. I would also like to thank the other Dominica students who were forced to put up with my bread hanging above their heads, sorry!

Works Cited

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