Behavior of the Lesser Antillean Bullfinch (*Loxigilla noctis)* in Dominica

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ABSTRACT

The Commonwealth of Dominica has high biodiversity of birds. One of the most abundant species of *Aves* present on the island is *Loxigilla noctis,* otherwise known as the Lesser Antillean Bullfinch. The main purpose of my project was to observe the behavior of the bullfinches near the Springfield station to get an idea of how males interact with other males, females to males, and females to females. All of the directions (North, South, West and East) of Springfield were tested to see which area was the most copious with the bullfinches. In addition, different fruits and times were tested to optimize the data collected. The observations showed that the bullfinches were very active in the morning and early afternoon. Activity increased when mangos were used. No interactions of male to male were observed in the three week period, several female to male and female to female behaviors were observed. Although I began with the intentions of observing only their behavior, I noticed a few differences in their chirping pattern.

INTRODUCTION

Dominica is considered the "The Nature Island of the Caribbean" because of its varied flora and fauna. Due to this fact, the island of Dominica has of 188 different bird species that include accidental, endemic and introduced species. Among the numerous species, one of them is *Loxigilla noctis* which is located in the family *Emberizidae* of the order Passeriformes and in the subfamily of *Emberizinae.* The bullfinch is a Lesser Antillean endemic that is an abundant resident breeder in all habitats (Evans & James 1997). They can be found in all different types of inhabitants, anywhere from dry forest to rainforests. However, their primary habitat is considered to be secondary forest. The bullfinches display sexual dimorphism; Males are black coated with reddish throat and lore while females are different shades of brownish gray (Schulenberg 2010). The immatures were very similar to the females in terms of color; however the females have a prominent red mark on their wings that is easily visible from the ventral side. Since I was not

always able to sit close and see the ventral side, the main feature I used to distinguish the immature and the female was the size difference. I formed a hypothesis by assuming that they would be highly territorial by sex. I formed a second hypothesis that stated the bullfinches would be territorial depending on who entered the feed site first.

MATERIALS AND METHODS

To optimize the data collected, several aspects had to be considered into the methods. Since I was observing behavior, I wanted to maximize the bullfinch count to watch the largest amount of behaviors during my observation times. To begin my observations, I tried North, South, West and East of the Field station to find the best location. Once the best side was chosen, I tried different fruits in the bait mix to see which mix the bullfinch would be most attracted to. This bait mix consisted of seeds from the pet store, peanut butter and a fruit. I then proceeded with experimenting with different times of the day to choose the time when the bullfinches were the most frequent. I sat for one to two hour periods to observe them and I wrote down the time they came into sight, behavior and the time they left the site. I began by recording my observations with a digital recorder. I found this method more arduous than simply using a pen and paper to write down my observations, so I switched to pen and paper after the first few observations. After the testing means were optimized, I repeated the optimal time (7 A.M.-2 P.M.), food (Seeds, Peanut Butter and Mangos) and location (West side of the station). On the west side of the station, I picked three feeding spots: One placed under the patio on the corner, and the other two placed on the bottom of two separate pots about 10 feet apart from each other. I labeled these locations The Corner, Pot # 1 and Pot # 2.

RESULTS

The observations I got in the three week period varied, but I was able to observe several repeated behaviors. After my first observation of a male and female sharing the feed, my first hypothesis was disproved. One repeated behavior was that if the bullfinches came in a pack, no matter what sex, they shared the food; I observed groups of two, three and even four (rarely). If they did not come in a pack, depending on who landed at the feed first, he/she claimed and defended the area. If the first bullfinch happened to be a male, a female would occasionally appear within a minute and feed with the male. Never was a female followed by a male.

I noticed three difference chirps in the bullfinches. There was the standard quick and high pitched four short "quip" notes that I used as one of the means of identifying the species. This pattern changed into the next chirp which was a lower pitched slower quip which was displayed when they felt threatened. Lastly, there was the chirp of the young; this was even higher pitch than the standard chirp. The way the second chirp was identified was on three different occasions. One occasion was right after breakfast, when the bullfinches would gather. The first bullfinch that landed at the feeding site would lower its chirp and intimidate the next one that would try to come by.

Another interesting observation was that mature bullfinches feed the immatures. The immature would make an even quicker and higher pitched chirp than the standard bullfinch chirp with its mouth open while the mature female or male would grab some food and feed it to the immature. Although this behavior is present in many species of the birds, this act displayed that mature bullfinches of both sexes cared for the young.

DISCUSSION

This project was much more interesting as it progressed. The behavior was an intriguing side of bird watching. I was not able to see any male to male interaction, and this may be due to

the fact that more females were present near the field station where I did most of my observations. I found this very fascinating but since my time was short on the island and since I inquired this information on the third week, I was not able to observe and come up with a conclusion to this question. There were plenty of female to female interactions in which the females would share the food but kept a small distance. I believe there was no particular reason why they kept a small distance because they only shared the food if they came to the feed station together. There were few occasions where I observed from the stream house down the street from the field station, but the field station proved to be much more successful in collecting data.

On the occasions where the female would follow the male, it almost seemed as if the male was scouting out the area for the female. This was captivating because the female would jump to the almost same location where the male had previously been standing before moving to his new position. This behavior was repeated several times during my observation times.

The bullfinch chirps were particularly remarkable because before the project, I was not aware that one species of birds made different chirps. The lower pitched chirp that the bullfinches would vocalize was when they felt threatened. In humans, a lower voice is generally more intimidating and more macho than a high pitched voice. Applying this to the bullfinches, it can be said that they "lowered their voice" to intimidate the threat and scare them away.

THANKS

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