

Feeding Habits and Behaviors of Dominican Hummingbirds

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Abstract

The feeding times and behavior of Purple-throated Caribs (*Eulampis jugularis*), Green-throated Caribs (*Eulampis holosericeus*), and Bananaquits (*Coereba flaveola*) were observed for this project. Eight hummingbird feeders filled with a sugar water mixture were hung in the upper and lower terraces below the Archbold Tropical Research and Education Center, Springfield, Dominica on bamboo poles or in trees. The only acts of territorial aggression seen were by Bananaquits towards other Bananaquits. Two feeders seemed to have been claimed by Green-throated Caribs, as there were no other species that used those feeders. Bananaquits were the dominant species seen overall. Purple-throated Caribs were rarely seen and Antillean Crested Hummingbirds were not seen at all.

Key Words: Purple-throated Carib, Green-throated Carib, Bananaquit, feeders

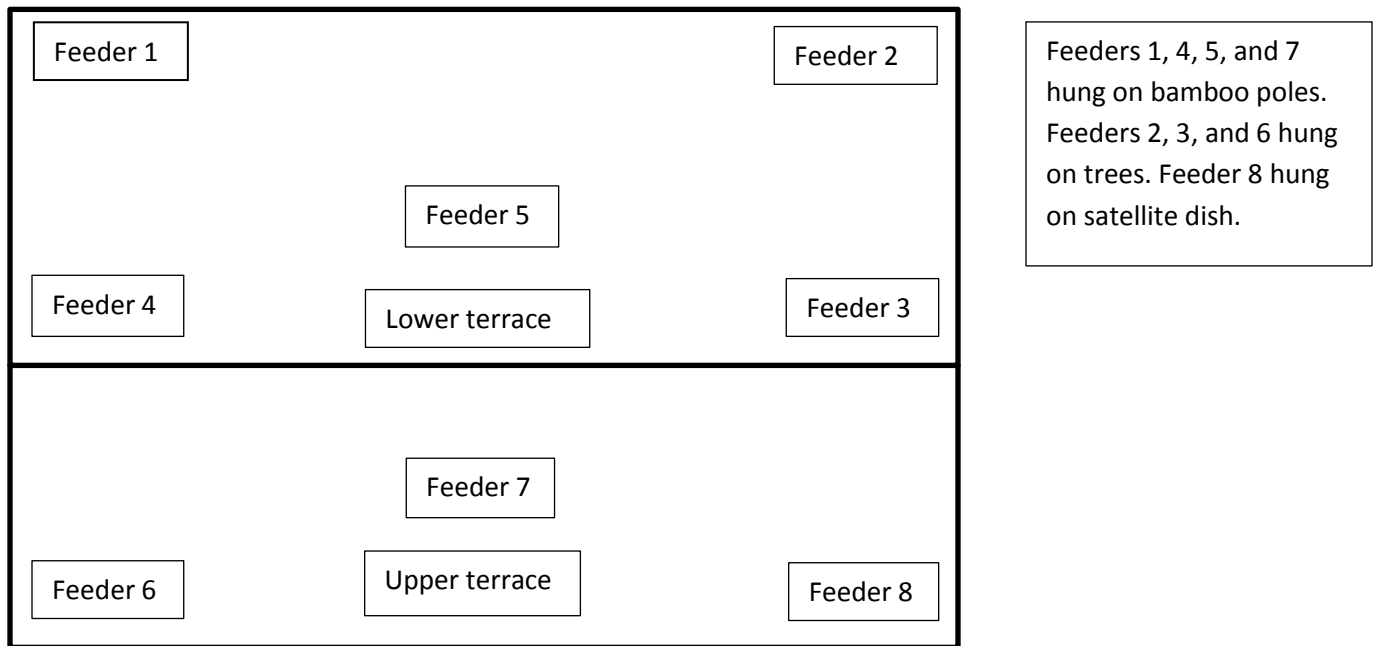
Introduction

The island of Dominica, also known as the “Nature Island of the Caribbean”, is home to several species of hummingbirds (Evans, 1990). The three that are most common at the Springfield Station are the Green-throated Carib (*Eulampis holosericeus*), Purple-throated Carib (*Eulampis jugularis*), and the Antillean Crested Hummingbird (*Orthorhyncus cristatus*). The Purple-throated Carib can be identified by its significantly more curved bill and the bright purple or red patch on their throat that appears in the sunlight. It is the largest of the three species (Johnson, 2011). The Green-throated Carib can be identified by its green head and back and the blue patch on its breast (Cornell Lab of Ornithology, 2009). The Antillean Crested Hummingbird is the smallest of the three, with the male being slightly bigger than female. The males have a black underside and a crest on their head, while the females have a pale gray underside and no crest (Johnson, 2011). The Bananaquit (*Coereba flaveola*) is often commonly found on the same food sources as hummingbirds. Their crown is black and their underside is yellow (Hayden, 2002). The purpose of this project was to observe the length of time that each of these species fed and their behavior at a series of feeders.

Methods & Materials

In order to attract the hummingbirds, sixteen cups of water were heated up and mixed together with four cups of sugar to make a 4:1 water to sugar ratio. This mixture was poured into eight hummingbird feeders. Eight different locations were scouted out in the lower and upper terraces below the Archbold Tropical Research and Education Center, Springfield, Dominica. Five feeders were hung in the lower terrace and 3 were hung in the upper terrace. There were not ideal tree placements to hang the feeders on, so several shoots of bamboo were cut with a handsaw and driven into the ground. Another smaller shoot of bamboo was secured to the top of the long shoot in order to make a place for the feeders to hang. Each feeder was hung

approximately six feet off the ground. During observations, fifteen minutes at a time were spent at each feeder. The feeders were observed for a total of six hours. The date, time of the start of the observation, feeder number, species that fed, time it spent feeding, and any unusual behavior was recorded.



Results

The results showed that feeder 1 and feeder 3 were used only by Green-throated Caribs. Feeders 2 and 4 were the only feeders used by Purple-throated Caribs, although those feeders were not dominated by that species. Feeders 5, 6, and 8 were used solely by Bananaquits. Bananaquits also dominated feeders 2 and 4. No species was observed using feeder 7. Feeder 4 was used most with an average feeding time of 87.78 seconds. The Antillean Crested Hummingbird was not observed using any of the 8 feeders during this experiment. The only territorial behavior observed was by Bananaquits towards other Bananaquits.

Descriptive Statistics

Dependent Variable: Feeding

Feeder	Species	Mean	Std. Deviation	N
1	1	.00	.000	3
	2	2.33	4.041	3
	3	.00	.000	3
	Total	.78	2.333	9
2	1	1.00	1.732	3
	2	6.00	10.392	3
	3	147.00	64.552	3
	Total	51.33	78.881	9
3	1	.00	.000	3
	2	8.00	5.568	3
	3	.00	.000	3
	Total	2.67	4.873	9
4	1	4.00	6.928	3
	2	3.67	6.351	3
	3	255.67	121.698	3
	Total	87.78	139.927	9
5	1	.00	.000	3
	2	.00	.000	3
	3	9.67	16.743	3
	Total	3.22	9.667	9
6	1	.00	.000	3
	2	.00	.000	3
	3	34.00	58.890	3
	Total	11.33	34.000	9
7	1	.00	.000	3
	2	.00	.000	3
	3	.00	.000	3
	Total	.00	.000	9
8	1	.00	.000	3
	2	.00	.000	3
	3	96.67	113.068	3
	Total	32.22	74.379	9
Total	1	.63	2.499	24
	2	2.50	5.099	24
	3	67.88	104.913	24
	Total	23.67	67.584	72

Species 1=Purple-throated Carib

Species 2=Green-throated Carib

Species 3=Bananaquit

Mean=mean feeding time in seconds

N=number of observations (15 minutes each)

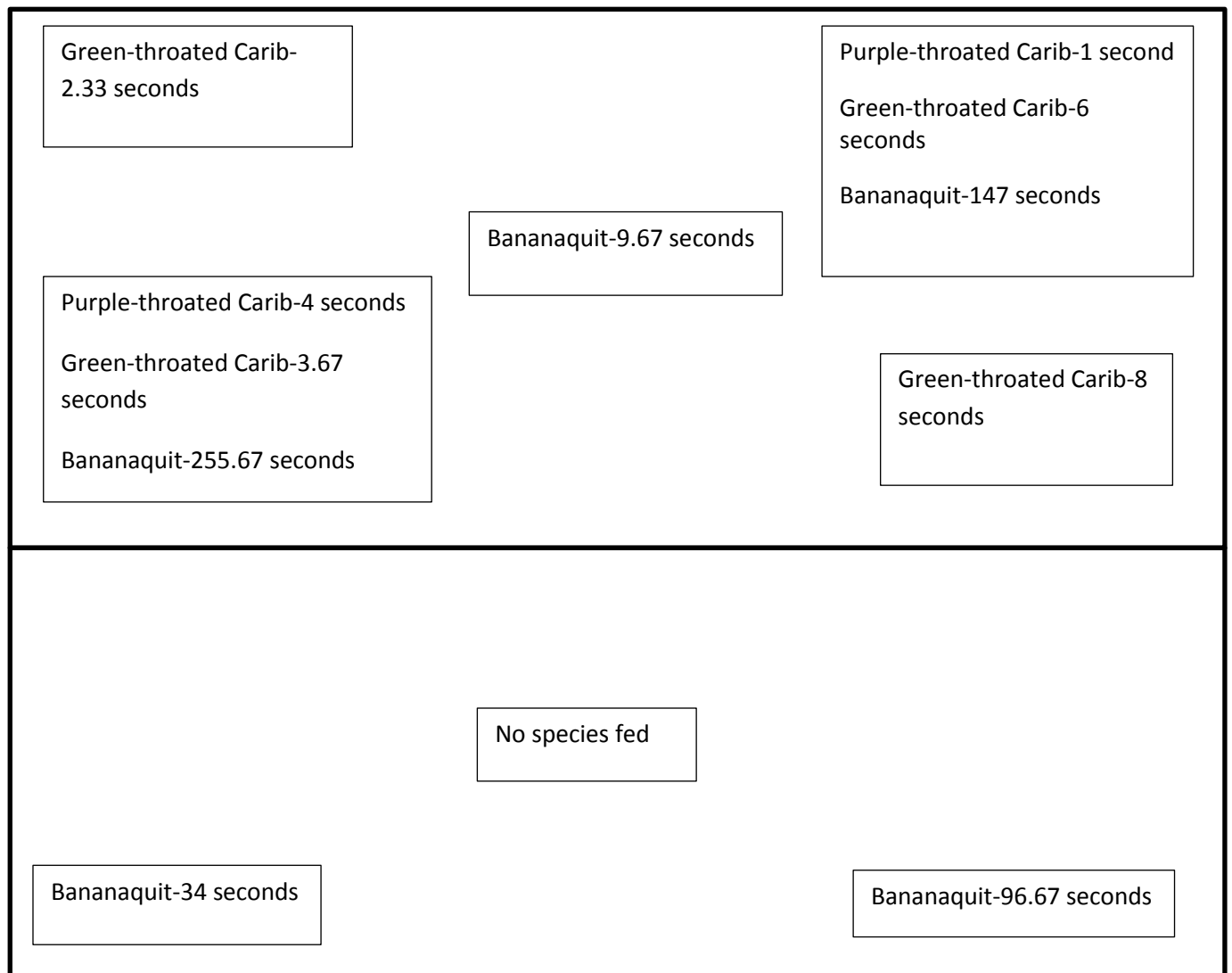


Figure 2-Layout of feeders with the average feeding time of the species that fed on each.

Discussion

Only Green-throated Caribs fed at feeders 1 and 3 indicating that there was probably an established territory close enough to the feeders that the feeders fell within the hummingbirds' ranges. It was concluded that a nest was nearby both of the feeders. However, no acts of protective aggression were observed at these sites. Surprisingly, very few Purple-throated Caribs were observed at the feeders. Being the largest of the hummingbirds around the field station, it was expected that that would be the dominant species. The Bananaquit unexpectedly dominated

all of the feeders except for feeders 1, 3, and 7. This species fed for far longer periods of time than the other two species. No hummingbird was ever seen trying to chase off a Bananaquit. However, many hummingbirds were seen feeding on flowers from the same tree that the feeders were hanging on or close by trees. This could be because there were enough resources in the area and the birds did not feel the need to compete for food. Feeder 7 was not fed on by any species. This feeder was located in an open area without any vegetation near it. This suggests that the birds may prefer feeding around protective vegetation rather than exposed in the open. Further research could be conducted to test this hypothesis.

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