The Foraging Habits of Common Terns, Least Terns & Black Skimmers in RBESNA

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Introduction:

By monitoring the fishing habits and fishing success of common and least tern populations in the Rockaway Beach Endangered Shorebird Nesting Area (RBESNA), we can better understand the forage fish populations in New York City.

Objectives:

This project's purpose was to observe and record the foraging dynamics of terns and skimmers that nest in the RBESNA so as to better understand the fish populations and habitats these birds depend on during their breeding season.

Methods:

- We monitored terns for 20 minute intervals at three sites along the boardwalk, recording the species and direction of Least terns, Common Terns, and Black Skimmers flying in and out of RBESNA, as well as whether or not birds were carrying a fish.
- We photographed birds carrying fish when possible, and examined photos later to identify fish species.
- We performed follow-up investigations at Jamaica Bay at three locations, recording the numbers and locations of these species foraging on bay and seining for fish.

Figure 1

Study Species:

Common Tern *Sterna hirundo*

Sand Lance *Ammodytes spp.*

Black Skimmer *Rynchops niger*

Bay anchovy *Anchoa mitchilli*

Least Tern *Sternula antillarum*

Atlantic Silverside *Menidia menidia*

Figure 2

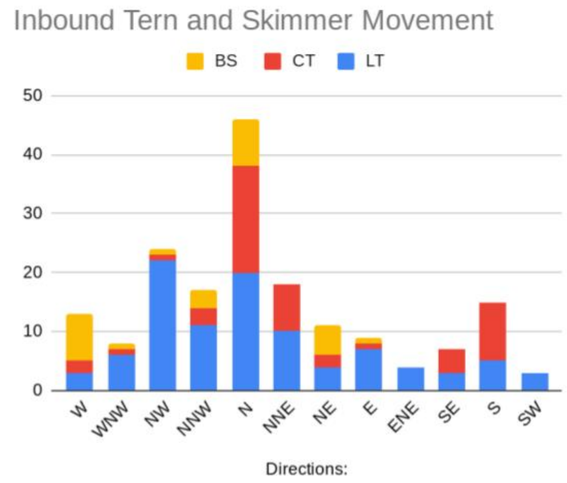
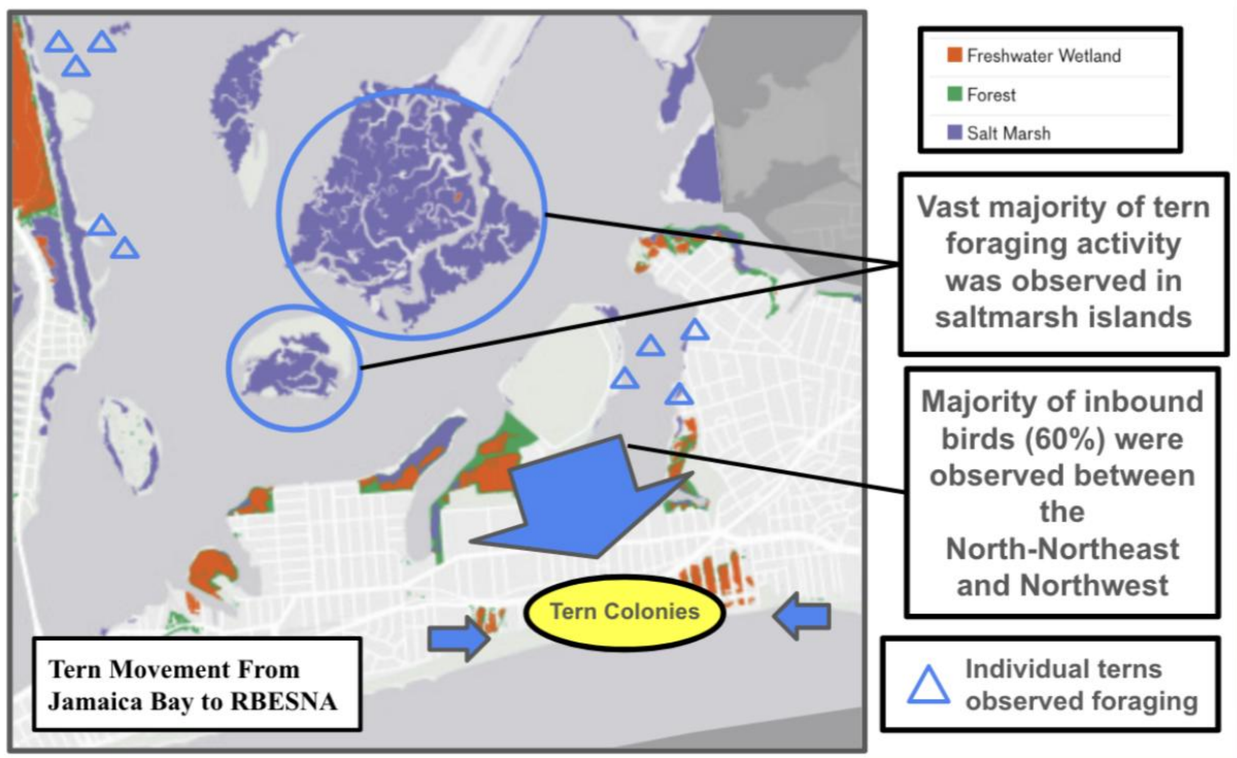


Figure 3



Results:

We observed that the majority of terns carrying fish into RBESNA from the bay were flying from the North and Northwest while a smaller percentage were carrying in fish from the East and West.

In our observations on the bay, we observed that the vast majority of terns were foraging in the saltmarsh islands northwest of RBESNA, as indicated on the map. This pattern held regardless of tide and weather conditions.

Conclusions:

Common, Least Terns and Black Skimmers nesting in RBESNA rely heavily on fish populations associated with the salt marsh islands of Jamaica Bay. Although the sample of clear photographs was too small to identify all prey species with confidence, bay anchovies (*Anchoa mitchilli*) and Atlantic silversides (*Menidia menidia*) appear to make up a significant portion of their diet. Sandlances (*Ammodytes* spp.) and juvenile Atlantic menhaden (*Brevoortia tyrannus*) are also important prey for bird foraging.

References:

- Cornell Birds Of The World
-NYC Natural Areas
- Fish Base