Ants on the Barrier Island

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Abstract

In this study we hoped to answer this question, If we collect ant species on Long Beach Island, will the ants that we collect indoors be invasive species of ants classified as 'pests', or will they simply be wandering individuals from a separate outdoor colony, which poses no real threat to humans? Species were collected and barcoded using Barcode Long Island Protocol. Three different species were positively identified. One of those species was determined to be non-native.

Introduction

In answering the research question stated in the abstract above we set out to catalog ant diversity in the barrier island of Long Beach. We expect to find some non-native species. This is relevant to human health because many ants such as the acrobat ant, can inflict a sting which could be painful or harmful to humans. Other ants can cause an allergic reaction in people. One of such ants is the fire ant which can cause intense pain and itching. Carpenter ants are considered to be the most harmful to humans, as they destroy homes. Due to its long history of human habitation and unique sandy environment, the barrier island may be host to a variety of unique and or introduced species.

Materials & Methods

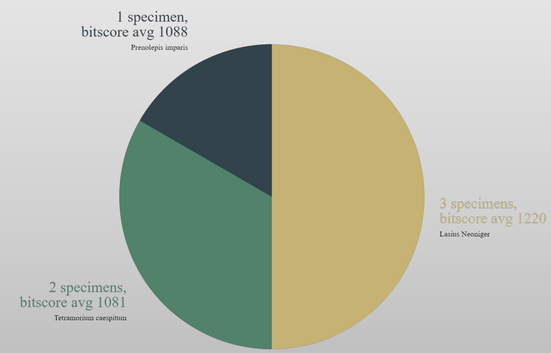
We used microcentrifuge tubes to collect different ants from several different locations around Long Beach, NY in addition to inside homes. Barcode LI protocol was used to identify ants species that we were unable to ID using taxonomic keys.

Results

We were able to barcode 6 different ants belonging to 3 separate species, *Lasius neoniger, Tetramorium caespitum,* and *Prenolepis imparis*. The Prenolepis imparis is not known for being a pest to humans. On the other hand Lasius neoniger is known to be nuisance and is classified as a pest. The pest ants were most likely not wanderers from an outside colony. The third ant *Tetramorium caespitum* is an invasive species from Europe that now populates the Eastern coast of the United States. All though not a pest ant it can also be found wandering into peoples home as it normally lives near in areas populated by humans.

Tables & Figures

- 6 total specimens
- Low mismatch rate
- European species found



Tetramorium caespitum

Prenolepis imparis

Lasius neoniger

Discussion

The results that we found were that there are indeed some non-native species that live on Long Beach Island. Out of the three species that we were successfully barcoded, 1 of them, the *Tetramorium caespitum* or pavement ant, was in fact not native to North America and is thought to have been brought over from Europe by early settlers. A more thorough examination should be completed on the barrier island. This collected was constrained by time and weather variables.

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