CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY

Name(s)

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Project Number

S2209

Project Title

Abundance of Sand Crabs in Relation to Core Samples

Abstract

Objectives

Our objective is to monitor the sand crabs throughout the year to indicate where in the swash zone they reside. We hypothesize that sand crabs are typically found in the deeper area of the swash zone rather than in the dryer sand.

Methods

We use the LiMPETS protocol for Sand Crabbing. We start with a 10-meter vertical transect where there are bubbles indicating Sand Crabs in that area. Our transect starts in the dry zone and ends in the swash zone of the beach. We take 10 samples, each one meter apart. We use a clam gun to go 10cm into the sand in order to collect the crabs. Next, we place the sample into mesh bags. When all 10 of the samples are collected, we use a bucket of water to find the Sand Crabs to measure their size and sex.

Results

Our data showed a strong correlation between where in the swash zone, and the population of sand crabs.

Conclusions

Based off of our data, we have discovered that our hypothesis was mostly correct. There is a correlation between ocean depth and abundance of crabs found. However, at core 6 we found that there is a decrease in the abundance of sand crabs and we hypothesize that this is due to waves crashing in that area which makes it an unsafe environment for the crabs.

Summary Statement

The abundance of sand crabs in relation to where they are located along the swash zone, perpendicular to the waves.

Help Received

Hannah Sarver, Stephanie Beck, and Jane Orbuch were all a huge help in getting us started with this project and helping us continue to monitor.