Frequency Effects on Marine Systems

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The goal of this project is to discover if there is a frequency that can be used to enhance the growth and activity of marine plants and systems, such as coral reefs. The purpose is to find a frequency that will help the growth and activity of marine plants and systems in Earth's ocean systems in order to help not only grow new reefs, but help to save the ones we have. A similar process is used to help crops on land grow. It is hypothesized that 432 Hz will create the best response within the tank, and translating this experiment to the real world can help combat the issue of losing our coral reefs and natural coral growth in the wild. for this experiment, a salt-water tank consisting of coral frags, aqua-cultured rock, sand and a salt-water anemone were all set up in the tank. A clown-fish was added in the second round of frequency testing to the tank. For each frequency, a day of testing was granted. Each frequency was played for thirty minutes every two hours in a twenty four hour time period. The different Frequencies were played in the tank using a waterproof speaker, wrapped very tightly in a singular layer of cling wrap. The results showed positive reactions in the tanks at 432 Hz and a neutral to positive reaction to 250 Hz. The results of 125 Hz were neutral to negative. The 500 Hz though, as predicted, caused only negative reactions within the tank ecosystem. This project proved the stated hypothesis correct and can and will be very helpful when translated to issues in the real world.

Awards Won: