Coral and Sponge Interactions

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- Sponges help consolidate broken/unstable reefs, keeping carbonate present and reinforcing reef structure
- Overgrowth of sponges can suffocate reefs, leading to the deterioration of shallow reefs and the emergence of entirely sponge reefs
- Temperature variation/increase in temperature greatly affects sponge growth, leading to higher surface area of sponges
- pH variation leads to significant harm to coral reefs, causing conditions for sponge growth to increase
- It is unknown if predation has a significant/lasting effect on sponge growth/population

Data needed

- Multiple sensors to measure temperature variations (a few measurements each day)
- Same amount of pH sensors in same area taking a few measurements per day
- Place sensors around reef on Coconut island where sponge populations are present
- Let sensors run for weeks/months at a time
- Cameras monitoring predation

Prospective Results + Tools Needed

- Temperature and pH variations should directly correlate to sponge population activity

- Waterproof enclosures (about $30 each)
- Cameras (about $60-$150)
- Temperature sensors (about $150-$250 each)
- pH sensors (about $150-$250 each)

Estimated total price- $2,600