**Coral Collection Methods**

Field work in La Parguera, Puerto Rico August 2021

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Materials

* Diving equipment
* Hammer
* Chisel
* Pruning shears
* Plastic baggies
* Sharpies
* Camera
* Slate
* Zip ties
* Mesh dive bag
* Carabiners
* Cooler or opaque tub that can hold water
* 1.5 ml tubes
* Tweezers
* Ethanol
* DNA later or RNA shield
* Nylon tights
* Freezer or Liquid N
* Tinfoil
* Waterproof paper

Methods

Preparation for dives

1. Label baggies with numbers using a sharpie
2. Stab a zip tie through the edge of each baggie (not the part that will need to hold water) and place all numbered baggies on a carabiner

Methods during dive

1. Once divers are at the appropriate depth, begin swimming around at that depth until a colony of the desired species is found.
2. Take a photo of the numbered baggie next to the colony.
3. Depending on the morphology of the colony collect a piece larger than 1in2 from the edge using the hammer and chisel (massive or platelike colonies), or use the pruning shears to clip the tip of a branch (octocorals or branching colonies).
4. On the slate, record the species, depth and bag number.
5. Remove any organisms inhabiting the underside of the coral frag
6. Put coral frag in baggie and store in the mesh bag for remainder of dive
7. Avoid touching coral with bare hands.
8. Once divers return to the surface, immediately store baggies in opaque cooler/container in order to stop further photosynthesis. Move quickly to get samples back to the lab quickly and attempt to keep them cool throughout the transport.

Lab Methods

1. Label tubes and a piece of waterproof paper with info about each sample
2. Use sterile tweezers to remove the fragment from the baggie
3. Check that all foreign algae and inverts have been removed from the underside of the sample
4. Use hammer and chisel to remove a small portion of each sample and place it in DNA shield / RNA later in the 1.5ml tube.
5. Store tubes in freezer
6. Wrap the remainder of each sample in tinfoil containing the waterproof paper label
7. Store the samples in plastic baggies, then in nylon tights, then in the liquid N