**Photographing and Measuring Coral Calices**

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Materials

* Stereo microscope
* Microscope light
* Microscope camera
* Ruler or measuring device
* Lab Computer with OMEX ToupView Software
* Computer with ImageJ

Microscope set up

1. Turn on stereo microscope and microscope light
2. Set up scope with black side of plate showing and ruler in view
3. Place sample in view and focus to eyes
4. Switch microscope view to the camera by pulling on the silver knob. This will cause one of the eyepieces to go black.

Computer Set up & photographing

1. Open OMAX ToupView
2. Plug in Omax camera to laptop
3. Make sure that ruler and sample are
   1. In view
   2. In focus
   3. Not over or under saturated (adjust light as needed)
4. Take a photo by clicking the “snap” button
5. Take at least three photos of the sample with varied views. This is especially important when the sample is not level. Make sure all parts of the skeleton are focused in at least one photo
6. Save photos to the desktop, label the photo with the sample name
7. Upload photos to the drive

Measuring Calices

1. Open imageJ
2. Randomly select 3-10 calices
3. Use image j or another tool (Coral Point Count V3.5) to measure
4. Septa width and length (can be done with photo)
5. Calice width and length (can be done with photo)
6. Calice area
7. Calice circumference
8. Collumnella Area
9. Calice spacing: mean distance to nearest 3 other calices
10. Calice density: Number of calices present within a randomly placed square