We returned to Pickles Reef for the 2016 MAHS Field School. Pickles Reef lies about 6 miles off shore from Key Largo in the Florida Keys National Marine Sanctuary.
The mapping technique we use is baseline trilateration. It’s a simple, accurate, and replicable procedure.

We stretch a long tape measure down the center of the site, like the one marked by the red arrow in the picture.
Then we take two measurements to each feature we want to include in our site map.
baseline

One....
The measurements can then be reproduced on a site map at any scale.
As usual, we practice with a run through on dry land before going into the water the first time so we can talk about things to be sure the students understand the process and how to carry it out.
OK, here we go. Time to get wet.
This is the site map as of 2015. In the lower right are the remains of a metal wreck.
Adjacent to the metal wreck is a distribution of cement barrels that we now think were thrown off of another ship that grounded on the reef in a separate incident.
The field school concentrated on mapping details of what we believe to be the bow end of the metal wreck. They also made drawings of disarticulated features that may help determine what kind of vessel this is and just what happened to it.
There are many broken plates at the bow end of the wreck that we think are hull plating. The mapping is aimed at determining which pieces are articulated, or still attached to the vessel, and which ones are scattered fragments that are no longer in place.
We also took a closer look at the frames and hull plates attached to the keel assembly, the I-beam on the far right marked by the red arrow.
This is an overhead or plan view. The keel assembly runs left-right across the top part of the image and the frames are perpendicular. We recorded detailed measurements to compare against other structural features.
The site is a complicated mix of debris, and it takes careful and painstaking work to document things sufficiently to figure it all out.
There is widely scattered debris to the north and west of the metal wreck and barrel group.

We spent some time collecting additional data on what may be a bulkhead, Feature 7, and several large pieces of hull plating nearby (upper left on the map).
Taking measurements of Feature 7.
Evenings are spent plotting the data collected during the day’s dives.
Detailed feature drawings can be added to the site map using the trilateration data and scale drawing techniques taught in the class.
On the way back to Key Largo on the last afternoon, we made a short dive on *El Infante*, an 18th-century Spanish ship, part of the Plate Fleet of 1733 that was wrecked in a hurricane. It’s a popular, shallow dive for recreational divers. Most of what remains today is ballast stone and lower hull timbers.
The timbers lie beneath the stone in some areas.
A surprising number of timbers survive, given the shallow depth, warm water, and modern diver traffic.
The organizations involved in the project this season included:

MAHS – Maritime Archaeological and Historical Society, Washington, D.C.

NOAA / Florida Keys National Marine Sanctuary

Florida Bureau of Archaeological Research
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