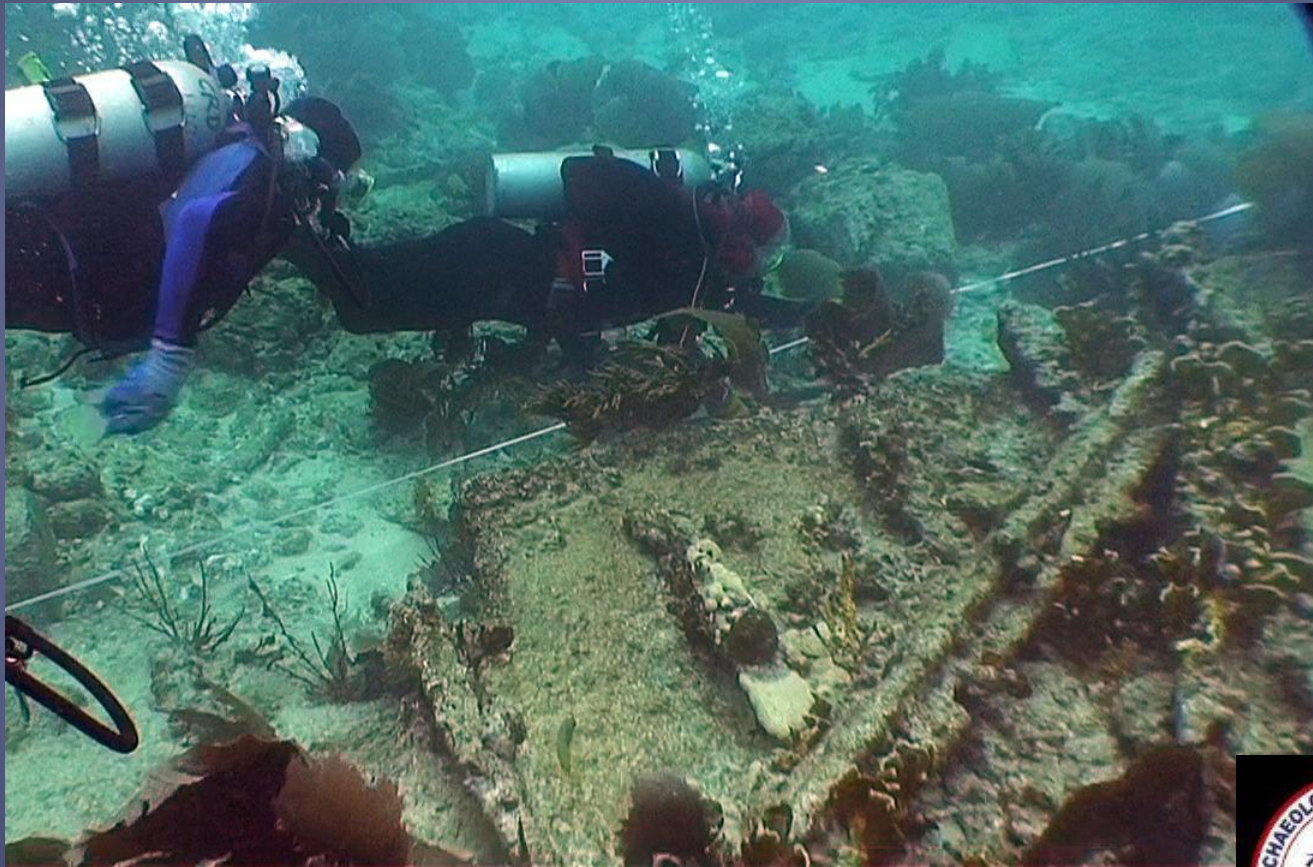


UNDERWATER ARCHAEOLOGY

Pickles Reef

Florida Keys National Marine Sanctuary



MAHS Survey and Field School 2012



In June of 2012, we returned to the Florida Keys and the Florida Keys National Marine Sanctuary off Key Largo to continue research begun in 2010.



The Field School began as usual with a dry land walk through of trilateration mapping. The trainers are keeping a watchful eye on the students practicing trilateration on the beach by the hotel.

Check out the ominous looking sky behind them. More on that in a moment.



Looks like they agree – it's over there.



A demonstration of plotting the trilateration data.



Dive operations were again conducted through Conch Republic Divers, in Tavernier.

Below and left, preparations on the boat. The sky doesn't look much better than it did earlier.



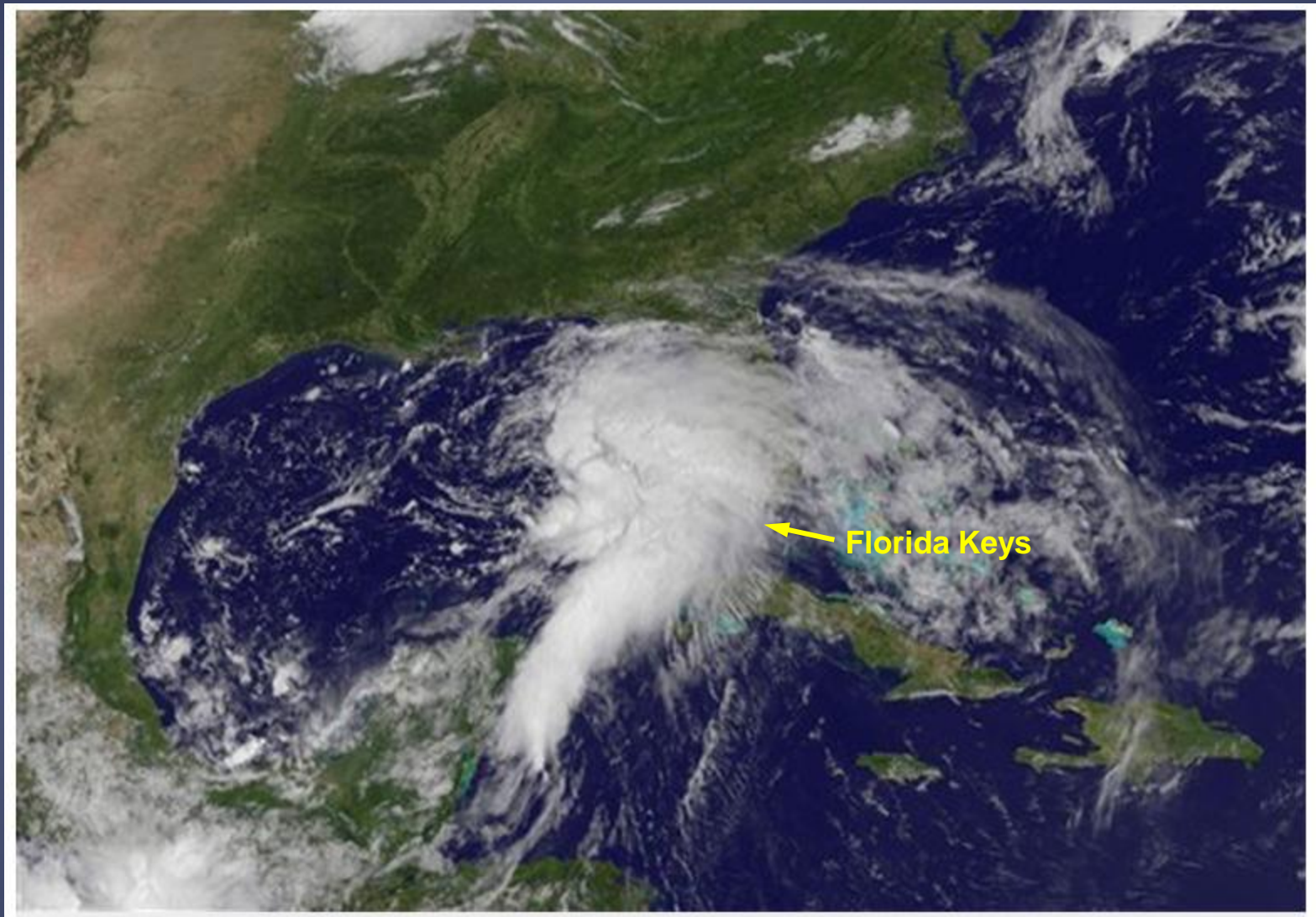


Discussing the dive plan on the trip out to the site. The weather is not cooperating. You can barely see the horizon for the rain.

The diver in the foreground looks unconvinced that this is really a good idea.



This was the source of the clouds and the rain – Tropical Storm Debby.
Florida and the Keys are buried in there somewhere.



Right about here.



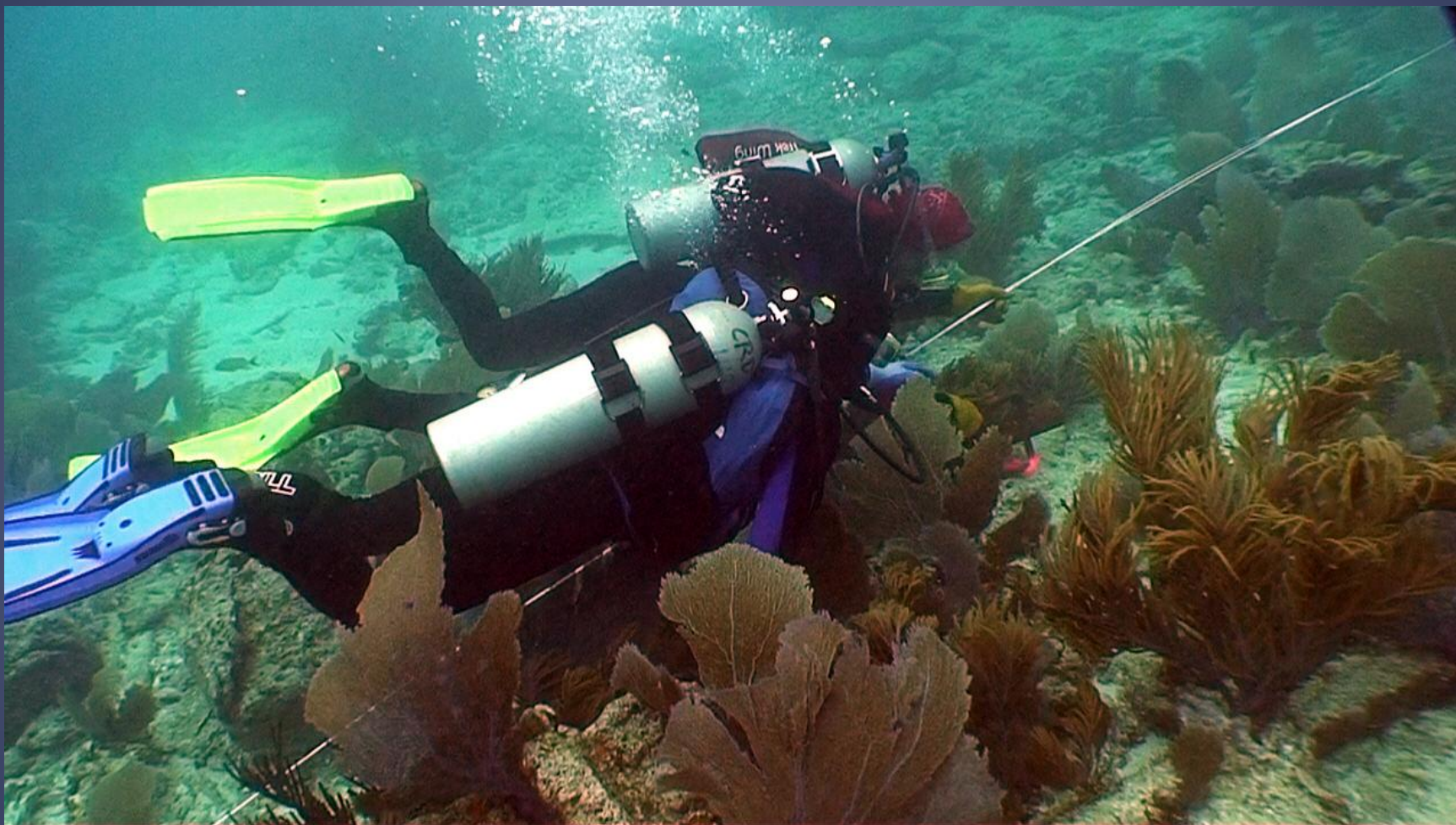
By the time we arrived at the site, the seas were running 3 to 4 ft. Because the reef is so shallow, 10 to 20 ft, the swells caused a significant surge on the bottom. The sea fans in this picture are leaning pretty far to the left. Keep your eye on the coral in the center of the picture and click to the next slide.



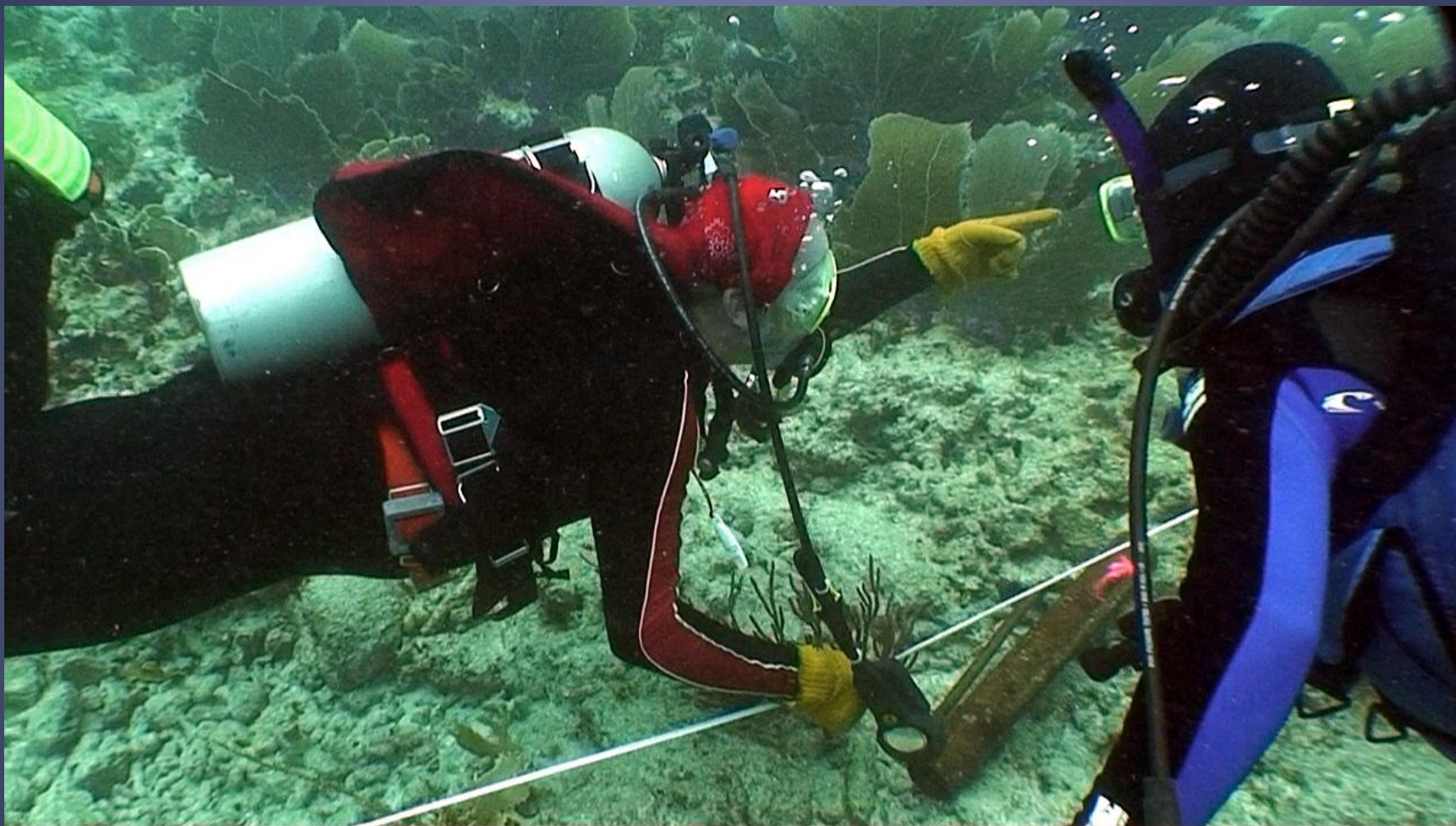
A couple of seconds later and the same fans were laid far over to the right. That's the same piece of coral in the center of the photo. Click back and forth between the slides for the effect of the wave action.



Good buoyancy and trim help keep you stable, in spite of the surge.



The baseline needed to be re-set. We reset the datum point and ran the baseline tape out on the original compass heading.



We could not relocate the secondary datum, so we shortened the line and concentrated on mapping features near the origin, at the zero-end of the line.



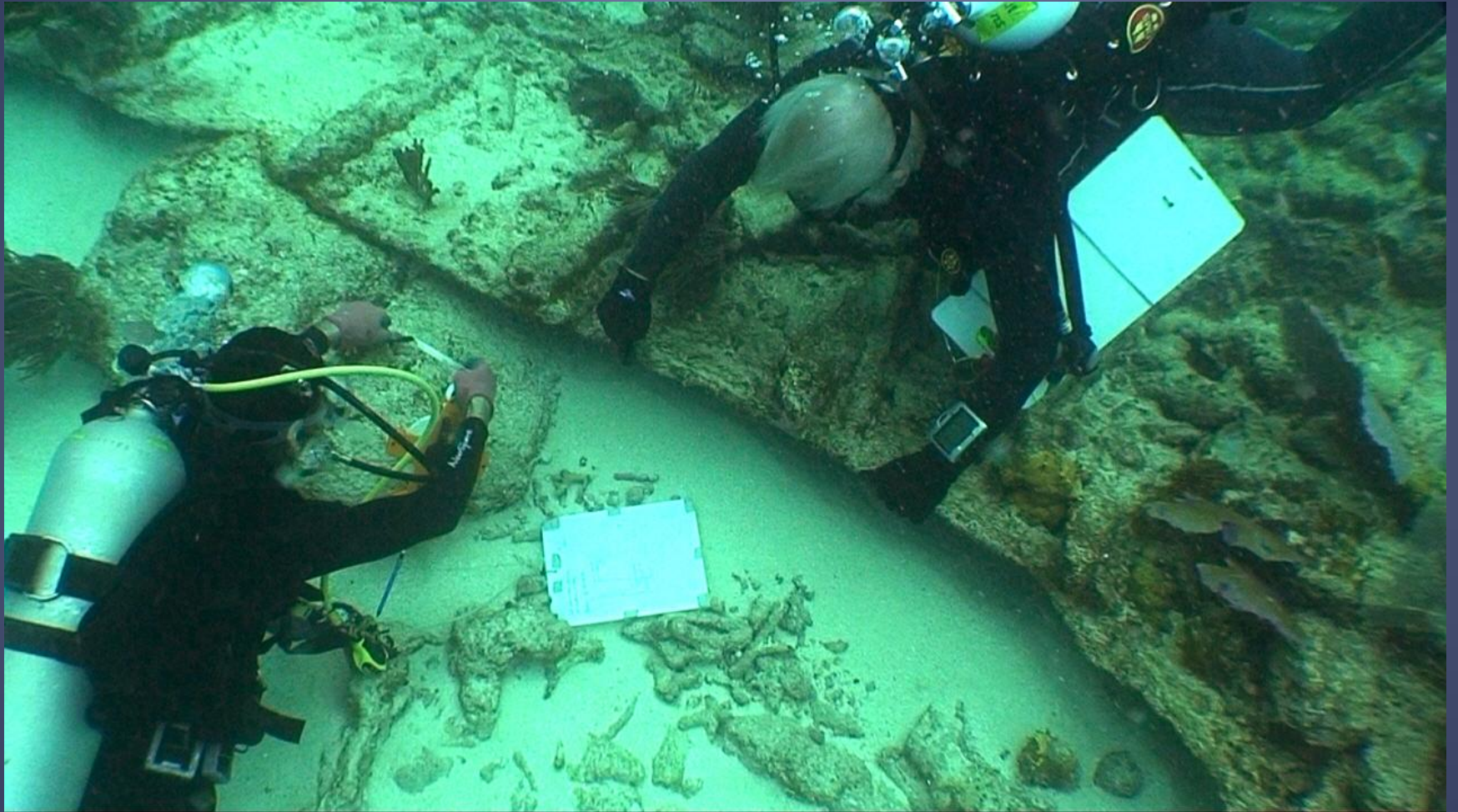
Meanwhile, we began recording data.



More data.



Trilateration mapping – the second diver is at the baseline, off-camera to the left.



Divers took detailed measurements of some of the larger features.

EVERYBODY'S MAGAZINE

FEBRUARY, 1908.



Over the Florida Keys by Rail

By RALPH D. PAINE

Author of "The Dying Shipper," "The Greater America," etc.

EDITOR'S NOTE.—Key West, the point of the tail of the American Continent, is attached to the Florida mainland by loose vertebrae called "keys," separated from one another by miles of water. Across these, south from Miami, a railroad is being built. It is the greatest engineering feat of the day. Thirteen miles of the Atlantic, and nineteen more of submerged ramp have already been bridged; and when this veritable railway in the sea is complete, it will mean a forty-eight hour schedule from New York into Havana.

A SPECK of reef set far out in a tropical sea, much nearer to the coast of Cuba than to any part of its own country, Key West has long been the most remote and inaccessible city claimed by an American State. In days gone by its spongers, wreckers, and Spanish-speaking cigar-makers no more dreamed of being linked with the mainland by rail than do the people of Honolulu. Until ten years ago their nearest home port was Tampa, 250 miles up the Gulf of Mexico. Then the Flagler railroad, which had been

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advancing down the strip of wilderness along the Atlantic seaboard, brought Key West within reach of Miami, 157 miles away by steamer, which skirted the far-flung cays of the Florida keys.

This chain of islets swings off from Everglades of the mainland to stretch down into the Atlantic and the Gulf as far as Key West. Worthless, chaotic fragments of coral reef, limestone, and mangrove swamp, most of them are submerged by high tides and have been aptly called the sweep-

Synopsis of Tests of Various Mortars, made for U.S. Government

No. of Test	Breaking Strength - 7 Days, 100 lbs. per sq. ft. under			Breaking Strength - 28 days, 100 lbs. per sq. ft. under			Remarks
	Average	Max	Min	Average	Max	Min	
1	138.5	168	120	190.5	248	112	Finest calcareous sand, Atlas Cement, 1 lb.
2	150	267	151	225	272	199	Coarse calcareous sand, Atlas Cement, 1 lb.
3	183	224	137	223.5	446	177	Coarse calc. sand, Atlas Cement, 1 lb.
4	171	282	152	235.6	283	209	Coarse calc. sand, Atlas Cement, 1 lb.
5	156	200	130	263	316	146	Coarse calc. sand, Atlas Cement, 1 lb.
6	271	317	249	348	378	292	Coarse calc. sand, Atlas Cement, 1 lb.
7	233	276	187	348	446	242	Coarse calc. sand, Atlas Cement, 1 lb.
8	298	322	246	354	406	372	Coarse calc. sand, Atlas Cement, 1 lb.
9	330.7	439	208	511	576	418	Coarse calc. sand, Atlas Cement, 1 lb.

American Society Brackets broken on Riehle testing machine. Proportions of materials by volume.
Proportions of water voids in coral sand (by weight) = 30%.
Tests made by Frank Brown, Civil Eng.

NEWS FROM THE EXTENSION.

Oct. 13th 1909
Key West Citizen
Eleven Lost on Tug Sybil and One Dead at Marathon.

The following statement was given out by Engineer Ernest Cotton this morning:

The loss of life is limited to eleven. The loss of life is limited to eleven. The loss of life is limited to eleven.

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TWO TUGS SINK AT BAHIA HONDA

Oct. 14th 1909
All on Board the Sybil Go Down
With Tug-Crew of the Sadie Escaped.
Timevision
TWELVE LIVES IN ALL LOST.

Steamer Antilles Aground, But In Safe Position—All on Board Safe and Well.

Miami, Oct. 13.—News reached here late this afternoon of the sinking of the tugs Sybil and Sadie at Bahia Honda during Monday's hurricane, and the loss of the eleven members of the crew of the Sybil, including Capt. Parker. The crew of the Sadie escaped.

This news was brought here by the relief expedition sent by the Metropolis, the local afternoon newspaper.

The loss of life on the tug Sybil includes, besides Capt. Parker, Engineer Fox, Pilot Whitmore, Engineer Peterson and seven deck hands.

The following statement was given out today by Engineer Ernest Cotton of the Florida East Coast railway:

The loss of life on the Florida East Coast extension is limited to the crew of the tug Sybil and Timekeeper Brown at Marathon, a total of twelve persons. The floating equipment of the road and uncompleted work were badly damaged. There was, however, no damage to the concrete work at any point. All of our camps were more or less wrecked, but the larger forces of workmen are being

Tequesta:

Building The Overseas Railway To Key West*

By CARLTON J. CORLISS

In my boyhood I was an avid reader of adventure stories, and one of the first impressions I gained of that far-flung chain of tropical islands which extends in crescent formation from Biscayne Bay to Dry Tortugas was from a lurid and exciting tale of pirates, buccaneers and smugglers who haunted that region and carried on their nefarious operations in the surrounding seas, the Bahamas and the West Indies.

The Florida Keys are indeed rich in romantic interest. Along these palm-fringed shores sailed the picturesque caravels of Spanish explorers and adventurers—Narvaez, De Vaca and De Soto—and the galleons which bore Cortez, Coronado, Iberville and Bienville on their history-making voyages of discovery, conquest and colonization.

During the Spanish occupation and on through Florida's territorial period, the numerous sheltered bays and inlets which dot this "Coast of nature" were familiar hiding places and rendezvous for "Brethren of the " whose very names sent chills up and down the spines of honest men.

Historians searching for truth find it difficult sometimes to determine legend and what is history, what is fact and what is fiction. But of this there is no doubt—from the earliest days of American occupation orida an important center of activity in the Key country was the ancient Hueso ("Isle of Bones"), or Thompson's Island, known today as Key

Key West dates its growth as an organized community from the 1820's, for a period of more than fifty years—until 1890—it was the most lous city in Florida.

alk before the Historical Association of Southern Florida, Miami, April 7, 1953.

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In the end we were only able to get in one day of diving. Conditions were too rough to go out a second day. So we much of spent the day working on archival material.



The CRD boat captain...



...and mate.



No sunset picture to end the project...it was too overcast for that. We did have a good meal to finish things off, though.



Here are the organizations involved in the project again this season:



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



NOAA / Florida Keys National Marine Sanctuary



Conch Republic Divers



Photos by Jim Smailes and Dennis Knepper.
Underwater photos captured from video taken by Will Blodgett.