

Ocean Gazing: Episode 28
Adroitly adrift
Southern Maine Community College

<begin music>

Ari: I'm Ari Daniel Shapiro. And this is Ocean Gazing, the podcast where we dunk into the ocean and let the waves push us to and fro.

La Lomia: Well, I enjoy this kind of work. It's hands on and it's quiet, thoughtful work, and I enjoy that very much.

Ari: Kara La Lomia is part of a team at Southern Maine Community College that's designing, constructing and using drifters. These floating instruments track the currents, and are engaging everyone from students to lobstermen. So I made a trip to Portland, Maine a couple months ago to check it out. Stay tuned.

<fade up music to full>

Ari: Before leaving for Maine, I checked in with Jim Manning – an oceanographer at NOAA in Woods Hole, Massachusetts.

Manning: Each drifter has a story to it.

Ari: The story of the drifter project starts with Manning. He's the one who thought up the idea of partnering with a variety of community colleges to design and build drifters. Drifters that could be used by the colleges for their own research, and to facilitate the science of oceanographers elsewhere. Manning led me outside.

Manning: Oh, we're just going out to the storage barn here where I keep all my junk and assorted parts of drifters. <sound of keys jangling>

Ari: He shoved open the door to reveal a large warehouse filled with metal shelves piled up with all sorts of salt-encrusted equipment.

Manning: I should clean this out someday.

Ari: We walked down one of the aisles and dusted off some gear.

Manning: Let's see if we have any parts. These are some of the older units.
<rummaging sounds> Simple flotation with stainless hardware, fiberglass rods that hold the sails together. <more rummaging sounds>

Ari: There are a handful of different drifter models. The ones being built these days are made from PVC piping, cantaloupe-sized styrofoam floats, and flexible plastic

sheets or sails. The sails wrap around the PVC skeleton kinda like a hoopskirt and give the currents something to push against. The flotation is rigged to get the drifter to hang at a particular depth: at the surface, say, or 5 meters underwater.

<cross-fade warehouse ambient with outdoor SMCC ambi>

Ari: A few weeks later on a cold, bright morning in early December, I stood near the dock at Southern Maine Community College, or SMCC. A team was getting ready to take a boat out a short ways to drop a couple of drifters into the water. Brian Tarbox was part of that team. He's a faculty member at SMCC and a lobsterman. Tarbox unfurled a chart showing me where we were headed. <unfurling map>

Tarbox: So, here we are right here on the South Portland shore. What we're looking for is to get the drifters out past Cape Elizabeth. We start 'em off in Hussey Sound. Hussey Sound's got a pretty good current on the going tide. They'll have to run through the gauntlet of lobster gear.

Ari: How do you steer around that, do you just hope, kind of? <laughter>

Long: Yeah, that's pretty much it.

Ari: Drifters move passively with the currents. They can't be guided once they're set afloat. So the drifters might snag or get entangled on the lobster gear scattered all over the sound. But, providing the drifters steer clear of all that, they'll provide tracks of where the currents are flowing and where the water's moving. Each drifter's got a small GPS transmitter glued to it that relays its position via satellite for remote tracking. As I walked to the boat, Tom Long, the science lab manager at SMCC, fleshed out the importance of this program for the students.

Long: Students who've come onto the project are asked to help design and build these units that're gonna be used by researchers, not just by us. What the students get out of that from a practical point of view is how to think about design, how to put that design into action, into reality. And then there's just the physical skills of learning how to build things, you know, use a table saw, that kind of thing.

Ari: And are you nervous about anything, or is there anything to be concerned about today?

Long: Today? Nah, the only thing I'm nervous about today is the transmitters to be honest with you. They've been a little quirky for us lately. And so I'm going to be very anxious within the next hour to see that we're actually getting good fixes. That's what I'm nervous about. Other than that, have a good trip!

Ari: Thanks, Tom!

Long: I'll see you when you get back.

Ari: See you then.

Tarbox: Are we all set?

Ari: All set.

Tarbox: Great, Catherine, could you get that line? <fade up departure noises>

Ari: The outboard engine of our small boat kicked up the noise of our last sonic stumper. As we began motoring out towards Hussey Sound, Catherine Chipman, one of the students involved with the project, pointed out a couple of landmarks.

Chipman: That's Fort Gorges right over there. Think that's Peak's Island, I always mix them up.

Ari: So, can you tell me, you've been involved with helping to build some of the drifters as well?

Chipman: I did for a short period of time but then my school schedule didn't really allow me to work on them too much.

Ari: These days, Chipman's working on a research project using the data from some of the drifters that she used to build. The drifters we were deploying on this particular day were gonna be used by an SMCC professor to teach about local currents in his oceanography class. <changing boat gear>

Tarbox steered the boat to the deployment location. One of the drifters was to float at the surface and the other was to drift about 5 meters down.

La Lomia: We ready?

Tarbox: I guess so, yeah.

La Lomia: I think I'll put this in first. <splash>

Ari: The drifters were on their way pretty quickly and Kara La Lomia, who helped build them, looked delighted.

La Lomia: <laughter> That's trucking along pretty good, isn't it?

Ari: So what are you thinkin'? Does it look good?

La Lomia: It looks good, yes. It looks very good. And it's nice to be able to see the two side by side and compare, compare how they're floating for right now. We'll have to see what happens here.

Ari: We watched the drifters move off for a couple of minutes. Then Tarbox grabbed the steering console, pushed the throttle forward, and guided us expertly back to the dock. I turned back to La Lomia. So what's it like to kinda come out here and say good-bye to them? To kinda put them in the water, and set them free?

La Lomia: It's always very exciting, it's very exciting. I like to be part of coming out here to let them go. I've worked on them for so long, and it's just great to see them go out. <transition boat noise to returning to dock noises>

Ari: When we got back to the dock, a tall, trim, local lobsterman named Elliott Thomas was waiting for us. We went inside, and he explained what all this has to do with his line of work.

Thomas: There seems to be a trend over the last 10 years of getting fishermen involved in science.

Ari: Do the lobsterman pretty much know why these drifters are out there?

Thomas: Those who follow do know. I mean, the movement of the drifters can indicate movement of lobster larvae before they settle. So it's a good thing for people to know.

Ari: I was about ready to go, but before leaving campus, I dropped by Thomas Long's office to make sure the transmitters on those two drifters we'd deployed were working okay.

Long: As you can see, we've got two relatively new pings off of our drifters, which is a good thing.

Ari: So this must be kind of exci-, I mean this is exciting for me: we just went out on the boat to put these things in the water, and you're already getting data right here in your lab.

Long: Well, I get excited every time we do it. And it engages the students too.

Ari: Catherine Chipman, she agrees.

Chipman: It's like you learn one thing and then you keep wanting to know more about it 'cause there's really no end. It's like seeing something interesting and then being like, "Oh, I wonder what that's all about." And then actually getting to really try and figure it out, I think that's awesome.

Long: It's almost like having pets out there that you can watch, you know? People get very interested in it, in following it, in where they're going.

<fade up "Rock Lobster">

Ari: Onto the new sonic stumper.

<sonic stumper>

Ari: Send us your guess by visiting oceangazing.org. You'll find links to track all the drifters yourself, a couple of short movies of my time out on the water, and a clip from lobsterman Elliott Thomas talking about a rather unique lobster recipe he recently had.

Thomas: It was just out of this world. It sounds so strange, but the flavors complimented themselves.

Ari: Special thanks to Deidre Sullivan from the Marine Advanced Technology Education Center. Ocean Gazing is a product of COSEE and we're supported by the National Science Foundation.

<fade up sonic stumper to full and sustain until it ends>