

As quickly as it started, the garbage patch voyage draws to a close. On Tuesday October 6th we arrived in Long Beach. Bill, Bonnie, Jeff and I stood on the bow as we neared the dock, and what sight greeted our eyes but hundreds of pieces of plastic? We watched plastic water bottles, a Capri Sun container, an empty bag of potato chips and a plastic shopping bag float beneath the ship.

Bill and Jeff stared out quietly at the trash and then agreed that trying to curb the amount of debris going out to the garbage patch seems near impossible if we can't even keep our own coastlines clean.

As we pulled up to the dock Marieta Francis, Jeanne Gallagher and Holly Gray of Algalita greeted us. As did Jeff Ernst's parents. We spent the morning cleaning off the ship and displaying all of the debris on long wooden tables on the dock. People were stunned by the sheer amount of garbage—the 100-pound tangle of net and rope was enough to surprise anyone.

Throughout the day I helped Moore make sushi from the fresh yellow fin tuna we'd caught a few days earlier. At 4pm we were ushered off the boat by Marieta so we could take photos and cut the cake.

The enormous welcome home cake was designed to look like the Pacific Ocean with the Algalita sailing across. "And this is the garbage patch!" Moore declared as he took a knife and drew an enormous circle in the middle of the ocean.

During the party I got to meet previous crewmembers aboard the Algalita and we shared stories about life at sea. As the party died down it was time to return to the "real world" and I've been here in Los Angeles since then.

So even as this journey draws to a close, there will be others and I've decided to use the blog to write about the next adventure. Stay tuned....

Post Script—

Bonnie asked me during our first day back what was most memorable about the trip. It took me awhile to think of an answer. Almost everyone else had an instant response.

But when I think about all the things we did out there—picking up debris, cutting open fish stomachs and catching Mahi Mahi—it has nothing to do with the garbage or the marine life.

At night, during my watches, I'd sit at the helm and look through the open hatch above my head at millions of stars. The sound of the waves against the ship and the sight of the sails above my head were incredible. There was a sense of peace I've never experienced before.

One night on the bow Moore said he wished more people would come out here. He talked about how beautiful it is and that people tend to “preserve what they love.” I couldn’t agree more.

Today around 5pm we docked at Catalina Island and we were all, needless to say, ecstatic! The site of dry land brought a smile to my face and after three days of cloudy weather we spent nearly the entire day on the bow in the sun.

After we anchored, we stepped on solid ground for the first time and I nearly fell over from “dock rock.” Apparently there’s a condition that causes you to feel like you’re swaying back and forth after being at sea for a while. Something to do with your inner ear, which controls your sense of equilibrium. All through dinner I had to make sure not to stand up too quickly, and I was told that standing in a small bathroom can be a particularly disorienting experience.

After stumbling onto the island, we grabbed dinner at The Lobster Trap and met two of Captain Moore’s fans! Two blonde girl scouts came up and asked if we wanted to buy Girl Scout nuts. Now first of all, have I been at sea for so long that Girl Scouts no longer sell cookies? In any case, Bill bought some nuts from one of the girls-six-year-old Faith, and she and her friend both asked for Moore’s autograph on a couple of napkins.

They were so excited to hear about the journey and thanked him repeatedly before leaving the restaurant with their parents. It’s amazing that he encounters fans nearly every where he goes.

We’re now back on the ship, Bonnie, Jeff and I holed up in the galley working on our blogs while sorting through photos.

Tonight we’ll sleep on the ship, which is docked outside Catalina and tomorrow we’ll head to Long Beach for the last hurrah. It’s been an unbelievable trip and something that Bonnie recently said struck me.

She said during one day of sampling, the sight of all that plastic make her feel sick to her stomach, like she was nauseous. “It was a sad awakening,” she said. She wanted one sample, just one to come back free of plastic, but that never happened. Each sample had more plastic than the last. The sight of all that plastic made her queasy and the tragedy of it all, she said, made her realize exactly what we’ve done to the ocean.

On Saturday, Captain Moore and Jeff cooked up a feast-a roasted chicken stuffed with garlic and onions, baked purple yams mixed with coconut butter, green beans and acorn squash with honey and butter.

It was cold and gray outside and we’ve all begun to get a bit restless. I used to get “exercise” by walking around the ship a few times, but the seas are so rough, it’s impossible to do without getting soaked.

So the dinner was a perfect end to a long week. After dinner Jeff whipped up a huge pot of Mexican hot chocolate and Moore pulled out his Bedside Book of Sea Stories. With Bill at the helm, Jeff, Bonnie and I gathered around the kitchen table where Moore leafed through the yellowing pages.

With all the lights off and only the sound of the waves crashing against the ship he told us the story of “Three Skeleton Key,” making sure to change voices with each new character. The story revealed the fate of three lighthouse guards after they’d been ambushed by a swarm of hungry rats. Luckily, (spoiler alert) the narrator survives the attack.

After Moore went to bed, Bill, Bonnie, Jeff and I stayed awake savoring our hot chocolate and enjoying the lingering effects of the story. And then, of course, Bonnie and I were back working on our respective blogs.

We only have one full day left on the ship and there’s so much left to do and write about. We’re expecting to dock at Catalina Island tomorrow afternoon before stretching our legs and maybe grabbing our first dinner back on dry land.

On Tuesday morning we’ll make the final trek back to Long Beach and have a welcome back party at Algalita’s headquarters on Tuesday afternoon. If you’re reading this and are in the L.A. area I hope we see you there.

For the past three days we’ve caught Mahi Mahi every morning. And we’ve been graced by the presence of several squid, which have jumped on board, that we’ve conveniently used as bait. It seems they jump on board to escape predators, though they don’t know their fate may be even worse when they hop on this boat.

I’ve never seen a squid up close-I figure battered and fried squid don’t count-but they’re pretty awesome looking. They’re sort of transparent and the ones we catch have purple flecks covering their bodies.

Once they’ve been sacrificed to the Mahi Mahi and the fish has been reeled in, Jeff and Moore take turns trying to coax Mahi toward death (this sounds much more pleasant than it actually is). Killing a Mahi Mahi, at least on this ship, usually means bludgeoning it with a baseball bat or driving a large knife into its head to cut a major artery. I’ve been told this is more humane than simply letting it suffocate. As a native Arizonian who grew up eating quail eggs and cactus, I know little when it comes to killing fish.

Due to the abundance of Mahi Mahi I’ve now eaten this fish more ways than ever imaginable-fried Mahi, raw Mahi, sautéed Mahi for fish tacos, boiled Mahi for Chinese food, fried Mahi wrapped in bacon and smothered with cheese. I feel like Bubba from Forest Gump who talks about “coconut shrimp, bbq shrimp, shrimp gumbo, fried shrimp...”

But as I type this, the smell of chocolate drifts through the air. It seems Jeff has decided to make hot chocolate while Bonnie and I work on our blogs and Bill sits at the helm. I can think of nothing better to take my mind of Mahi than melted chocolate on a cloudy day.

We've noticed an interesting phenomenon while on this trip, one Bonnie mentioned in a previous blog post (theplasticocean.blogspot.com). During Moore's 2007 voyage to the garbage patch, most of the buoys he pulled on board were covered with gooseneck barnacles. Huge clusters of them that made the buoys difficult to lift.

But during this trip the buoys seemed barren. Their sleek surface was coated with brownish gray algae, and only small barnacles, something Moore had never seen before.

Bonnie blogged about it and yet the very next day Bill yelled from the bow that he'd caught a buoy covered in barnacles. This, said Moore, is what he'd expected to see during this voyage, and yet, this buoy is the only one of it's kind. Since then we haven't seen any other buoys coated in barnacles.

It just adds to the mystery of the garbage patch-which organisms will thrive and which will perish? The answer certainly seems to be fluid.

It's a strange feeling knowing that this journey is drawing to a close. As we head toward Long Beach, we've all started thinking about what we'll do when we get back.

I'm looking forward to standing on solid ground and sleeping through a night without having my mattress fly across the ship. But I guess an adventure is an adventure and I'm trying to enjoy these laughable moments while they're still here.

In fact, Hannah H. from River Ridge High School in Florida asked what we missed most while at sea. Our answers definitely varied...

Bonnie said she misses her two kids Tricia, 26 and Franc, 24 who both live in North Carolina. Gwen misses her dogs and Jeff said he'd totally go for a cold beer and is looking forward to surfing in Ventura.

Bill has been at sea before so he's used to being away from home. He spent nearly six months in the Atlantic Ocean while completing oceanographic fieldwork for his PhD.

Moore said he's also accustomed to long stints from home but does miss his exotic organic garden. I would too if I had pineapple guava, passion fruit, avocados and fresh mulberries waiting at home for me!

I miss the smell of the desert and, ok, I do miss Twitter. It's not so much the Twitter binges, where I'll pass two hours online without blinking an eye, that I miss. It's the

sense of connection, knowing what's going on in the world and hearing people's ideas as they take shape and sharing journalism anecdotes with my fellow Stanfordites.

That's all about to change in a few days. Back to the Internet, florescent-lit supermarkets and crowded streets.

Now that I've been to the garbage patch, there are a few misconceptions I'd like to clear up. First, there aren't many large clumps of trash in the garbage patch except for amassed drift nets and occasional windrows.

Windrows occur when "a strong wind blowing across the sea surface ... causes streaks of ... surface debris that are seen trailing off in the direction the wind is blowing," according to "An Introduction to the World's Oceans."

From the ship, a windrow looks like a long streak of calm water. If there's trash in the water column, the windrow will be littered with debris. It's like one long polluted river amidst the ocean waves. The crew was always excited to see a windrow because it meant they could collect several fragments at once.

Second, the idea of a garbage patch, or any patch at all being separated from the rest of the ocean is a little misleading. The garbage patch was given that name to describe a heavy concentration of plastic pollution in the North Pacific Gyre. But the fact is we've found plastic throughout the journey.

In fact, some of the biggest pieces of plastic we've hauled on board came from outside the "garbage patch," things like buoys and drift nets. Moore keeps reiterating that the entire ocean contains plastic, and that designating a patch of garbage is a narrow way to look at the problem.

Oh, and what did he say about our generation? Oh right, that we're entering the Plastocene by covering the entire world with a thin coating of plastic. Now that's something to think about...

During the last two samples we've taken after dark, the net has come back full of strange purple creatures, hundreds of them that are the size of poppy seeds.

One sample was so full of these little critters that Gwen and Jeff had trouble unscrewing the end of the net from the manta trawl because it was clogged with the stuff. No one on board knows what these creatures are but we seem to have come across a midnight bloom of them.

For all of my Stanford friends who asked about conspiracy theories, these creatures could be the spawn of some alien life form, sent down to earth to multiply in the ocean before tackling world domination (end sarcasm here).

In reality we simply don't know what they are. But every single sample has come back with plastic fragments. And so, when the last manta trawl was completed today at 4am, it became apparent that there is still just as much plastic in the garbage patch as there was ten years ago.

Moore believes there's more plastic now than in '99 and after Gwen counts all of the plastic samples back in the lab, we'll know for sure. It's a sad state of affairs that we've seen just as much plastic as fish or plankton. I've definitely seen more plastic than fish on this trip, which in the middle of the ocean is tragic.

I've received a lot of questions about what the garbage patch actually looks like. Some people wonder whether you can walk on it or see it from space. Others wonder if you could turn it into a man-made island and auction it off, then use the money to raise awareness about plastic pollution. Project Kaisei, a non-profit based in San Francisco, has referred to the patch as the 8th continent. Here's what it's really like:

Q. Is it dense enough to constitute an island?

A. Nope, not even close. The majority of the debris is small plastic fragments the size of rice. When you stand on the bow of the ship you can't see these fragments because they're too small and are often below the surface. And with the reflection of the water and how fast the ship is moving it's difficult to see anything floating by unless it's at least the size of a pea.

Q. So you don't see any plastic from the ship?

A. No, we do see plastic, usually bigger objects like buoys, rope and water bottles that are easy to detect from far away. Jeff likes to sit on the main sail when it's down and scan the horizon for trash. On calm seas we can see white or orange buoys up to one mile away; they look like tiny specks bobbing up and down among the waves.

Q. So what exactly do you see out there?

A. The list is long. Common objects include water bottles, rope, fishing line, and pieces of plastic crates. We've also found a toothbrush, an umbrella handle, a tiny plastic tire (perhaps from a toy truck), a toilet seat, a glass vile, a plastic lid and part of a hag fish trap. We also saw a light bulb and a glass float, neither of which we were able to catch.

Q. What about partnering with Google Earth to get a photo of the garbage patch online?

A. Moore has mentioned this before and met with representatives from Google. It's a possibility but anything that went up on the site would be entirely conceptual/representational. Water in the ocean is like air in the atmosphere-it never stays in one place and these tiny fragments are constantly moving.

Q. Where does the trash come from?

A. Most of it comes from the Pacific Rim. Some of the buoys we found have Japanese writing on them and one even says made in Japan. One yellow crate has Korean writing and another buoy says made in China. The garbage is carried off the coast of Asia by the

Kuroshio Current, which flows east toward the United States. The Kuroshio Current is one of many currents that comprise the North Pacific Subtropical Gyre where the garbage patch is located. I should note that Americans contribute their fair share to the garbage patch; it isn't just filled with rubbish from Asia.

We've finally made it! After days of waiting to hit the convergence zone of the North Pacific Subtropical Gyre we've finally arrived. And how did the morning start? I woke up and saw an oversized light bulb floating by the bow. Unbelievable.

All the trash we've found has been truly amazing but somehow seemed "unofficial" since it was outside the realm of the garbage patch. Captain Moore, however, kept reminding me that the term "garbage patch" is almost irrelevant since he believes the entire world ocean is a toxic plastic soup.

Even so, we've been excited all day to see what the mantra trawls would bring in. We've found more fishing line and hundreds of pieces of plastic in each sample. Gwen spotted a glass fishing float off the stern this afternoon and Jeff hopped in the motorboat to chase it down; I tagged along to take photos.

But by the time we got out in the water it was nowhere to be found. When I looked back toward the ship it was a speck in the distance—we'd been motoring away from it for twenty minutes and the ship was headed in the opposite direction to keep the manta trawls going.

Jeff reminded me that if the motor broke we were in serious trouble—this as we headed back on choppy seas. The good news is, (and I use good in the most untraditional sense) I managed to find a floating buoy and a white plastic lid while I was out there.

Moore also wrangled in an enormous chunk of Styrofoam with a length of bamboo sticking through the middle. It was probably a homemade float attached to a drift net, which was used to catch fish. The underside was covered in algae and barnacles.

By the end of the day we'd done a few trawls and were ready to do a few more. In order to resample all the areas Moore examined in 1999 we'll have to keep a tight schedule. This means taking samples in the middle of the night and traveling quickly to get to each destination within the next three days. There are twelve spots Moore needs to sample and we've completed two.

Right now we're heading through strong trade winds and the ship is ferociously rocking back and forth. Every once in a while dishes start clanging and spice jars go flying off the shelf. But I can see the moon through the front window and hear the water splashing over the bow, and it's actually completely relaxing.

Just when you think it's going to be an average day, you catch a fish, swim through an ocean of trash and the engine stalls.

If that wasn't enough excitement for one day, Bonnie also found half a toilet seat, Jeff spotted another 55-gallon barrel with fish living inside and Moore, Jeff and I pulled an 80lb. tangle of rope on board.

It started before noon when I was at the helm, Moore suddenly shouted for the gaff so he could hook a Mahi Mahi he'd caught and bring it on board. It flailed around before Moore put it in a bucket, stabbed it in the head and waited for it to die. I have to say, the procedure was pretty gruesome and not having grown up fishing, I realize I don't quite have the stomach for it.

After the Mahi Mahi stopped breathing, Gwen quickly went to work cutting open the fish's stomach and found a small square piece of yellow plastic inside. It's about the size of a popcorn kernel.

And here's the most interesting part-we're having this fish for dinner. Now, obviously, I have mixed feelings about this. Algalita is taking a tissue sample from this fish to test for toxic chemicals and we're eating the rest of it.

Bill and Moore were quick to reassure me that this fish is no more toxic than other fish I'm likely to eat. Are farmed fish any better seeing as they're pumped full of antibiotics and kept in close quarters with hundreds of their brethren? Are other wild fish better even though they may also contain mercury or dioxins?

Moore said that all food on this planet is tainted in some capacity and Bill said there's no way to connect the plastic in the fish's stomach to the level of toxins in it's tissue. It's just not that simple.

I started to see their point. I don't know where a lot of my food comes from and have no way of knowing whether my food is tainted or chemically engineered or full of toxins. I do my research, try to make smart choices about what I buy and at the end of the day, I'm still looking for answers.

Feeling ambivalent, I ate the fish. It was a true "farm" to table experience-one of the first times I've been able to picture the animal, to see it's face, while I was eating it. The vision was a little jarring and I'm ashamed to say the Mahi was delicious. But it was.

Let's go back a few hours because a lot happened before that conflicted dinner. From the bow, Bonnie caught half a toilet seat in one of the mesh hand nets. As you can see from the photo she was overjoyed and has already wrapped it in a plastic bag to take home with her. Moore wants it too so they've jokingly agreed to ship it back and forth across the country from Long Beach to Wilmington.

Jeff, the master at spotting floating objects from his roost on the boom, saw a barrel and he, Bonnie, Moore and I put on our dive gear and dove in the water. The blue plastic barrel had two holes on either side and over 15 Hawaiian sergeant fish were swimming in and out. The entire barrel was covered with gray algae and gooseneck barnacles. Jeff and Moore covered the holes with a towel so the fish wouldn't escape, tied it up with a rope

and hauled it on board. Gwen individually wrapped each fish in tinfoil and will test the tissue for toxic chemicals back in the lab.

Only a few hours later, Jeff, Moore and I heaved an enormous tangle of rope on board after Jeff spotted it while sitting on deck. As soon as it was out of the water, tiny crabs poured out of the center-yellow, purple and gray ones the size of dimes and one as big as a tennis ball.

The rope was two inches around and Moore said he'd never seen rope that looked and felt so organic, one that created the illusion of a natural fiber like manila or sisal.

By the time all of this happened I had enough to blog about for three days! Of course that's when the engine stalled. The dashboard light went on and the oil pressure alarm went off. Moore guessed almost immediately that the motor had caught on a drift net or a ball of rope like the one we'd found today.

Jeff put on his wetsuit and grabbed a dive light since the sun had already set. He swam under the boat and found almost as much rope as we found today, wrapped around the propeller. Luckily he could easily unwrap it-the last time the crew had to remove net from the motor it took an hour, but Jeff managed to pry the rope off in ten minutes. He dried off and joined us inside eating the Mahi Mahi for dinner.

So that's it-our most action-packed day condensed into one post. A day that forced me to think about where my food comes from, why synthetic rope has replaced natural fibers post WWII and how a toilet seat ended up in the middle of the ocean.

It was 12am when I felt the ship lurch forward and then heard a loud bang and a ripping sound. I think the next words out of Jeff's mouth were a series of expletives. Luckily he was awake just as I was about to go off watch and knew instinctively that the sail had torn (we were sailing through gusts of up to 35 knots or over 40mph which put enough pressure on the Spinnaker to tear it).

Captain Moore popped his head out from his bunk, which is around the corner from the helm, and shouted, "what happened?" When I told him the sail had torn we both scrambled to find life preservers while Jeff sounded the alarm to wake up Bonnie, Bill and Gwen.

By the time I had on a life preserver Jeff was already on the bow wrestling with the Spinnaker trying to pull it down as it flapped violently in the wind. He yelled for help and I ran over and started pulling in the sail though it quickly pulled back and I flew up against the front railing.

Over the next ten minutes we fought to pull it down, each time trying to keep the Spinnaker from catching more wind and yanking us off the ship.

Eventually Bonnie came out and sat on the sails with me so they wouldn't blow away. Bill helped pull the last bit of the Spinnaker on board, which had ripped cleanly all the way down one edge and was dangling in the water.

After an hour it was all over. The Spinnaker is out of commission until Moore repairs it back in Long Beach and for now we're relegated to using the main sail and the genoa.

We all slowly wandered back to bed; I lay awake most of the night-hearing the sails flapping sent me into a panic every once in a while.

This morning when I woke up the windows were covered with rain and the sky was a cloudy gray. Moore said we have two more days of rain before we reach the garbage patch. We're all hyper-alert now, aware of how quickly the seas can change.

We've had a few culinary adventures in the last two weeks, one of them being the tomatoes we delicately wrapped in tinfoil. Remember that little gem of advice about sealing tomatoes to keep them fresh? It turns out that strategy does nothing toward their preservation.

In fact, opening up the balls of foil is like opening up a stink bomb; you never know how bad it's going to be until you peel back the wrapping and see a squishy tomato-like mess inside.

This was the beginning of the experiment, half of the tomatoes were wrapped in tinfoil and half of the tomatoes were left unwrapped. Let's just say the wrapped tomatoes didn't fare so well. Photo Lindsey Hoshaw

This was the beginning of the experiment, half of the tomatoes were wrapped in tinfoil and half of the tomatoes were left unwrapped. Let's just say the wrapped tomatoes didn't fare so well.

On the other hand, we've had some great meals, albeit unusual ones. We've consisted on a diet of banana bread, fried bananas, dried bananas, banana smoothies and banana pudding (among other things). And we managed to pull 20 mussels off a buoy we found floating by then boiled them for dinner. I have to say, spaghetti with a side of buoy-mussels is pretty delicious.

Dear Reader

In the name of transparency, I'm going to tell you why I have been a little miserly with my photos. Because the pictures I take may be published in The New York Times, I have agreed to save the "best" photos for them. Science Editor Laura Chang said as long as the photos I post on the blog are not the same ones I'll submit to the Times, we're ok. So, alas, some of the photos I'm most excited about won't appear online until October or November. I hope you can wait and I hope the photos I do post answer some of your questions about what it's like in the middle of the Pacific ocean.

All the best,
Lindsey

It looks like we have a large hairball sitting on our bow. It's what oceanographer Curtis Ebbesmeyer would refer to as a giant dust bunny, (really an enormous tangle of rope and fishing nets). Most of the material in this mass is abandoned fishing gear that has a way of finding other net and knitting together.

Some of the nets literally weigh a ton, and are impossible to retrieve unless you're on a commercial fishing boat with the right equipment. They also have organisms living on them; we found barnacles on the outside and crabs nestled inside.

And of course, as yesterday's pictures prove, fish follow the nets which they believe are reefs, i.e. suitable habitats to live on.

So here's a rundown of some of the material tangled in our "dust bunny":

* A hag fish trap

These traps are used in deep water to lure in fish through a plastic opening that gets smaller toward the inside of the trap. These jawless scavenging fish are usually lured in by some sort of bait. People, especially in Asia, eat hag fish or use their skins to make "leather" products.

* Rat lines

These yarn-like pieces provide abrasion resistance on ships-they act as a buffer preventing large ropes from rubbing against the ship's railings and fraying.

* Gillnets/drift nets

These fine monofilament nets are designed to catch many types of fish. They are clear, nearly invisible and are often left sitting across mangrove channels, or taken in and out according to the tide in coastal zones and left at the surface in the deep ocean.

*And an update on our progress toward the patch-Captain Moore says we're about 6 days away...

This may be one of the more amazing thing we see.

In the land of garbage, we hit a goldmine. Today, Jeff spotted a large tangle of drift nets off the port side of the ship. Even from 100 meters away we could tell it was enormous. I ran into the cabin and grabbed my underwater gear. Within five minutes I was in the water swimming over to a mass of drift nets and rope of every size and color. There were blue ropes and green ropes, orange ropes, purple ropes and black ropes.

Underneath it was a school of Hawaiian sergeant fish, a rainbow runner and two grey chubs, all circling the debris. None of the fish were scared of us and the grey chubs were fascinated by my camera.

They kept swimming up to the curvature of my fisheye lens and started biting the camera. They even chewed on my hair! I could distinctly see one of them swimming around with a long blonde hair caught in it's mouth.

After 45 minutes, Moore got in and grabbed the ropey mass by one end. He pulled it over to the boat and Bill and Jeff helped lower a line so they could haul the debris on board. Moore said the entire rope ball probably weighs 200lbs. After Jeff and Bill pulled it on board we all sort of stood back and stared. It hung from the back of the ship all day. At dusk Moore tied it on the bow and flattened it as much as possible in order to make a sort of "debris nest," where we'll place our future finds.

What a sight, and, as I've said before, we're still not at the garbage patch...

This morning we were up cleaning the cabin for the Billabong seaplane crew, which was to arrive today. And they did-for a moment.

But as the plane neared the water and touched down, it quickly bounced back up.

The rolling waves were too much and they couldn't land. They circled for about half an hour looking for the water to calm down and they scoped out an area that Moore said had plenty of debris to look at and then, they left.

So who were these mystery people? Rumors were floating that maybe the Honolulu mayor was on board or even Jack Johnson since he's friends with filmographer Mike Prickett who helped organize the trip. But we may never know.

Luckily, a lot happened the rest of the day. Jeff swam out and found a piece of a packing crate and Captain Moore found over twenty large pieces of garbage-a flower pot, part of a black trash bag, a water bottle, a buoy and some yellow rope (among other things).

We hauled all of it on board and brought in the other debris we'd tied to the back of the ship as a display for the Billabong crew. By 3pm (HST) we were sailing again, leaving the area we'd been hanging out in for the last three days. Now, it's on to the garbage patch.

We're preparing for visitors. And who, exactly, are these guests? Great question. We're not entirely sure. For the past four months Mike Prickett of Prickett Films has been planning a trip out to the garbage patch to meet up with Moore's ship the *Alguita* (which we're on). He wants to fly out on the Billabong seaplane; I'm told it's well known in the surfing community.

So the date has been set-for tomorrow. Prickett will fly out with a plane full of celebrities who are environmentally concerned and can bring attention to plastic pollution in the ocean. It's part of a plan to turn Prickett's visit into grist for a movie about plastic in the ocean. The script he's sent Captain Moore reads:

At a small airport in Hawaii a seaplane sits on the runway making final preparations for flight. Destined for a target offshore in the Pacific Ocean, is a group of planet caring souls, from athletes to artists, boarding and packing the aircraft. Individually they have all heard of this "Garbage Island" and have different levels of education on what exists out there. Each of them are anxious to witness firsthand what it is all about.

So we're expecting company and no one knows who will step off the plane tomorrow. Stay tuned...

Yesterday Captain Moore took out a motorboat to search for more plastic debris. His search yielded a caulking tube with a trigger fish living inside and a hairbrush surrounded by two Hawaiian sergeant fish. Both had algae and small barnacles growing on the outside.

Rick McCourt, of Pennsylvania, recently wrote a blog comment asking whether the fish we're seeing around all the debris are reef fish, meaning they usually live near coral reefs. And Gwen, the director of lab research for Algalita, says yes. The floating plastic looks like a reef to the fish and they follow it, sometimes for miles away from their natural habitats. It's a fascinating phenomenon, and one that, according to the Algalita crew, hasn't been studied much.

So let's count, how many pieces of plastic has the crew collected since we've been out here? Over 20 large pieces of trash, with everything from an empty 55 gallon barrel to a caulking tube. And these are just the big things. The amount of small plastic fragments is countless.

Also, we haven't even reached the garbage patch. Captain Moore says we still have a week until we reach the patch! It's truly astounding.

It's been an action-packed morning. Last night Captain Moore tied up all of the debris he'd found to the front of the ship but this morning we woke up to rough seas and he spotted something floating off the back of the ship. Well, three floating somethings-broken bits from the yellow plastic crate we'd tied up.

With all of the wind, the crate smashed against the other tied up buoys and splintered apart. Moore, Jeff and I headed to the bow to check on the collection of debris. It was all still there, except for the crate.

Then something appeared to be wrong with the sea anchor. Moore could feel the boat drifting and the position of the buoy above the anchor had changed.

Jeff, Moore and I started reeling in the anchor and soon found that the rope had snapped apart. Luckily there was an extra rope we could use to pull the anchor in. After the anchor was on board, we tied on a new rope and threw it back in the water but it quickly got tangled up in the floating buoys.

Then Captain Moore and Jeff argued over how to free up the debris. Jeff ended up jumping in the water and untying everything by hand, after which he hopped into the motorboat which was loosely tied to the ship and bouncing around. Two hours and a lot of hard work later, we'd secured everything. It was only 12pm, who knows what awaits during the rest of the day...

Well, I've officially been at sea for a week now. So much has happened:

- * The crew has found plastic in every single sample of seawater they've taken
- * Jeff caught our first fish-a 27" Mahi Mahi
- * I've been able to take underwater photographs of a floating yellow crate from Korea and a 55 gallon plastic barrel
- * The crew has retrieved over ten different abandoned buoys of all shapes and sizes
- * I interviewed Moore about the trip and what he hopes will happen to the garbage patch in the future, (will include comments from the interview in future posts).
- * We lost a flow meter (the flow meter is attached to the manta trawl and measures how much water the manta samples)
- * Bonnie started fishing for plastic with a net from the bow. In ten minutes she found a handful of tiny plastic pieces.

We caught a barrel full of fish!

Jeff spotted a large plastic barrel floating off the port side of the boat. Initially the crew thought they'd just reel it in, but after seeing how big it is-the size of an oil drum-they decided Bonnie and I had better get in and take photos/video before they lugged it on board.

I've gotten used to jumping in with my clothes on, so I dove in, underwater camera in hand.

It was pretty incredible to see this barrel floating underwater, especially since one end was open. Inside were about nine fish and they stayed put as Captain Moore and Jeff tied a rope around the barrel and got Bill to heave it on board.

Captain Moore was pretty excited; the crew has never hauled a 55 gallon drum full of fish on board before. The outside of the barrel is covered in green algae and hundreds of barnacles.

Gwen took out five of the fish and put them in a smaller bucket without water before wrapping them in tinfoil, labeling them and sticking them in the freezer. Back at the Long Beach lab she'll see if they have any chemicals in their tissues.

Well, it's nearing the end of the day. I'm off to sit on the bow for a few minutes and watch the sunset, before getting back to work.

As I'm new to the world of long-term sailing, and I imagine many of you are, I decided to put together a frequently asked questions list. It's compiled from actual questions people asked me before I left and questions I had leading up to the trip (which I now have the answers to).

Do you get seasick?

Nope, and thankfully neither does any of the other crewmembers. We're the first group Captain Moore has taken out that hasn't gotten sick.

What do you eat?

Contrary to my prior beliefs, we're not eating beans and corn out of a can every night. The galley (kitchen) is well stocked with everyday spices, exotic fruit, fresh Mahi Mahi caught by Captain Moore and my favorite-farmed sea asparagus. A few of the meals we've had include tostadas and quesadillas, Thai eggplant with lettuce wraps, BLATs (A=avocado) and of course, fish tacos. We keep everything cool in a small fridge, a cooler and an oversized freezer.

What type of ship are you on?

A 50-foot aluminum catamaran. Moore's ship was designed by Australian ship maker Locke Crowther, and it's hull (the body) is completely unique.

How do you go to the bathroom?

We have a head (toilet) on board, and in the same "room" (more like a tiny box), there is also a sink and a shower head. The bathroom is just big enough to turn around in and couldn't fit more than two people. When you shower everything ends up getting wet, so you have to be creative about tying your towel and clothes to one of the handlebars near the roof. Also-during rough seas taking a shower becomes quite difficult. Standing up is hard enough and trying to undress, hold onto the railing and shampoo becomes an acrobatic feat!

How do you get fresh water?

There's a desalinator on board that works through reverse osmosis. Yeah, I kind of get it; luckily Bill Cooper is a chemist and explained the whole process. In any case, we have fresh water to drink and for our showers.

What's it like to live on a ship for three weeks?

Incredible. Growing up in the Arizona desert, I didn't have much water experience before I came on this trip. I think the best I'd ever done was a few sailing classes at a sleep away camp in Minnesota when I was a kid. But the views out here are absolutely incredible. I get to see the sunset every evening, dive with Mahi Mahi and watch the changing ocean colors—from bright cobalt blue on sunny days to light silver when it rains.

And I get to learn from the Captain and Jeff about what it means to be a good sailor. And of course, I'm learning all I could ever want to know first hand about the garbage patch. This truly is a reporter's dream: being able to meet and live with the person who discovered the garbage patch and then see it first hand.

Do you swim in the water/are there any sharks/have you seen any?

Yes; possibly; no.

A lot of people expressed concern about sharks but I really think this is fueled more by horror films and the Discovery Channel's Shark Week than by any real experience with deep water diving. During almost every dive we see absolutely nothing but clear blue water. And I mean nothing.

You may be wondering, "but then, where is all the trash?" Well, we haven't reached the garbage patch yet and most of the trash out here is tiny—the size of corn kernels, so we can't see much of it.

Hope this answers most questions!

Ahhh, the leisure of a Saturday morning, reading the paper while sipping a cup of coffee. Ok, I don't exactly drink coffee and the most recent newspaper we have is a September 5th edition of The Wall Street Journal, but still.

When I woke up this morning almost everyone had slept in and Bill and Bonnie were happily keeping watch at the helm. There were no shouts about plastic pollution or scrambling to grab camera and gear to take photos on the fly. Just a quiet morning putting up the sails and closing down the hatch as a rainstorm moved in.

It's amazing to see the spikes of rain hitting the waves and the drops rolling off the windows. There's something inherently soothing about being on a ship in the rain. There are so many nooks and crannies to nestle in and the bunks have just enough room where you can curl up with a book and read to the light of your headlamp.

This afternoon I'll type up my first draft of an article about the garbage patch and try to capture some audio for the upcoming slideshow. I have an enormous amount of notes and numerous background articles. What better day to pull it all together than our first "day off"?

me on top of the boat

Well, the floating piece of plastic I mentioned in my last post turned out to be a yellow crate with Korean writing on it. I heard Bill yelling about it just as I was sitting in the galley about to update the blog.

As soon as I heard, "we've found something," I ran onto the stern and realized it was time to gear up. I grabbed my camera, put it in the underwater housing and suited up with my snorkel, fins, weight belt and mask.

Bill hopped in with his video camera and I eased in with my camera and it's underwater housing.

It was so incredible to see the crate underwater. Millions of tiny barnacles were stuck on every inch and a school of tropical fish swam underneath.

There was a white fish with a thick black line across it's eye and a greenish yellow fish and another black fish with white polka-dots. Anywhere the crate went the fish followed-just like the rope we found yesterday.

Bill was fascinated by the fish and captured footage of the school swimming in and out of the crate, which hovered near the surface. I left myself sink down, took a few photos and then swam back up for air. After half an hour I was exhausted. Keeping myself from sinking had been more draining than I thought.

Moore and Jeff dove in after Bill and I got out and caught the fish that were in the crate before bringing them onboard.

Gwen dumped them into a bucket and then took them out one by one to measure them, seal them in tinfoil and pack them up for the lab. Once she's back in Long Beach she will cut them open to see if they've consumed any plastic particles.

It was an exciting day. We're hoping for another great day tomorrow as we idle in calm winds and still waters waiting to see more garbage.

I was awoken, again this morning, by the sound of Captain Moore shouting about a buoy he'd seen a few hundred miles in front of the ship. Bill was on watch, upbeat and alert, always excited to be on "plastic patrol" as he calls it-looking through the window at the helm searching for debris in the distance.

Moore snatched up the floating buoy in a large net and observed that bird feces on one side indicated it'd been used as a floating perch.

Half of it's white exterior was also covered in green algae and gooseneck barnacles. After snapping a few photos I put it on top of the other "loot," but the buoy collection is piling up quickly. In just two days Moore has found nine buoys.

And today the crew collected the first round of plastic bottles-three separate water bottles, some with algae and barnacles growing on them. One opaque plastic bottle has bite marks out of it and looks like it's been attacked by a group of hungry sharks. (This is highly unlikely but the jagged bite marks immediately conjure images of Jaws).

During the afternoon we took a quick swim. As we near our destination the ocean becomes calmer and calmer since the garbage patch is located in an area of low winds. The entire Pacific is starting to look like a giant piece of glass.

Bonnie and Bill tried out their underwater video camera and I practiced free diving with my camera and a weight belt. It takes at least 10 pounds to keep me from bobbing like an apple at the surface.

But our afternoon swim quickly ended when Bonnie started yelling and swam for the boat. Bill was right alongside her and, of course, with thought of sharks circling in my head I looked all around to see if I could spot anything. Nothing but deep blue water. I soon realized what she was startled by when I felt a sharp sting on my hand. I yelled too and swam for the boat. Apparently we'd all been stung by Portuguese man o' wars.

My welts soon disappeared but Bonnie had a thin line on her back and under her arm where the man o' war's tentacle had wrapped around her.

Yikes! Bill is shouting from the bow right now-apparently Jeff has seen more floating plastic. Got to run!

[These posts are coming in via email from Lindsey and being posted by the Spot.Us community which helped fund Lindsey's trip. We are in communication with Lindsey - comments and questions are welcome.]

I woke up to the sound of Captain Moore shouting from out on the stern. The first thing I did? Grabbed my camera.

He'd spotted a floating buoy off the starboard side of the boat-the first large piece of plastic pollution we've seen on the trip. It came closer as Gwen steered the ship and Moore scooped it up with a pool-like mesh skimmer.

It was covered with algae and small gooseneck barnacles. Some of them even opened up after they'd been on board for a few minutes. Their brownish-purple "tentacles" came out of small white shells.

We haven't even reached the garbage patch yet so Captain Moore was surprised we found anything this far south. Especially since in the next hour the crew spotted three more floating buoys.

One of them had Chinese writing on it, well, Chinese words spelled out in English. Captain Moore thinks this means it's from Taiwan-he suspects that Chinese fisherman wouldn't bother translating into English.

During the afternoon we hopped into the water; I dove in equipped with my underwater camera and I furiously began taking photos of a large rope that was floating by.

There were over fifty golden rudder fish swimming around the rope. Jeff tells me that the rope provides a habitat for the fish, it keeps them protected from the sun and other predators and the algae on the rope is their food. They did not want to let it go!

As Jeff dragged the rope toward the ship they furiously swam alongside it. They kept up the entire time until he hauled the rope up onto the boat. Not to worry though. Captain Moore has decided we'll "hang out" in the gyre for a while and put the rope back in the water to see what type of creatures it attracts. He's thinking more rudder fish, I'm hoping Mahi Mahi.

Lindsey's trip to the Great Pacific Garbage Patch made possible by community members at Spot.Us.

As soon as I woke up and stumbled into the galley (the kitchen) I saw Captain Moore out on the stern untangling the Mantra Trawl to take the first ocean samples.

The Mantra Trawl was built especially for Moore and looks exactly like a mantra ray-with aluminum rectangles for wings, a wide open aluminum cage for a mouth and a long cylinder of mesh dragging behind that looks like a tail. The mesh catches anything in its path and the 1/3mm mesh is small enough to catch plankton and tiny pieces of plastic.

Jeff lugged the manta into the water and slowly let out the two ropes that secured it to the stern. About an hour later, it was time to pull it in. He hauled the manta out onto the deck and Captain Moore unscrewed the end of the tail where all the debris gets caught.

Over a glass bowl he turned the mesh inside out and sprayed it down with a plastic bottled filled with seawater. The plankton and plastic dripped down into the bowl, which was soon filled with salps and tiny jellyfish and a few pieces of plastic.

The pieces were so tiny, if you weren't looking for them you'd miss them. They were smaller than grains of rice. The three pieces I immediately saw in the bowl were blue, green and white. Who knows how many more there were; Moore and his crew won't know until they process the samples in their lab.

The rest of the day we went for a swim and the water is so amazingly clear-you could see down for probably 100 feet. But there is nothing much to see. The plankton and plastic are so tiny right now, that all you see is clear cobalt blue water.

And this evening while having dinner on the bow as the sun set I realized why Moore felt so passionate about saving the ocean. The natural beauty is overwhelming. Under a deep blue-black night sky I could see hundreds of stars. I'm inside the ship now with the hatch open, slowly falling asleep to a luminescent night sky.

How do you stay awake from 10pm-2am during your first night watch? Coffee from the French press, 10,000 songs from iTunes and lots of conversation. Jeff and I stayed awake for the late shift last night to make sure the Alguita didn't hit any oncoming boats, that the wind hadn't changed directions and that the motors didn't malfunction.

We talked about everything imaginable-what it's like working for Captain Moore, how Jeff ended up on a ship in the middle of the Pacific Ocean and why he thinks cleaning up the garbage patch is impossible (more on this later).

The four hours passed slowly and I had a minor bout of anxiety when I looked down at my phone and saw the words "no service." No phone calls, no email, no Twitter for nearly a month. Though I will, because of behind the scenes assistance from Spot.Us, be able to blog.

While I was lamenting the virtual death of my cell phone Jeff tapped my shoulder and pointed through the front window to a masked booby that landed on the front of the ship's railing. He stayed there all night and into the morning catching a ride to calmer seas.

During this time we rounded Oahu from the west and traveled north past Kauai. The ship's computer showed us as a tiny chartreuse speck sailing through the Hawaiian Islands.

There was more action in the morning after our shift ended when Captain Moore showed me a flying fish that landed on board. He was blue-gray and his eyes were sunk in-they'd probably dried out before we found him.

While I was snapping photos of the flying fish I looked over at the dangling cluster of bananas on the stern, all 85 of them. We'd bought them green to last the entire trip but much to our dismay they've all ripened.

Bonnie has vowed to make banana bread during her 2am-6am shift with Gwen. I just don't have the heart to tell her that it only calls for two bananas.

Well, this is the last land-based post. We're scheduled to depart this afternoon and we have the trade winds on our side. We've been doing last minute preparations—going over the mechanics of the boat, doing laundry, securing down the gear and the produce strapped on the front of the boat.

We'll start our first night watches tonight—having two people stay awake in 4 hour shifts steering and watching for oncoming boats. Captain Moore assured us that last night was the last good night's sleep we'll have in a while.

And I want to thank everyone who has supported me as I head out to sea—from Twitter followers to Spot.us donors to environmental enthusiasts, the response to this project has been overwhelming. Know that I'm thinking of you all and will Twitter and blog as much as possible while at sea.

All the best,

Lindsey

This weekend I was nudged awake at 5:44am to make it out to the Kapi'olani Community College Farmer's Market over by Diamond Head. Captain Moore, Gwen, Bonnie and I smushed into the rental truck and drove to the east side of the island to make it there before 6:30am. We were on a mission—to buy several pounds of green produce—bananas, pineapples, avocados, tomatoes, mangoes, limes—that would ripen slowly over several weeks.

We scurried around to several vendors and paid for as much as we could before 7:30am when the market officially opened and we could go back to pick up our groceries. We purchased everything from the ordinary—bananas and tomatoes to the exotic—longans and breadfruit. My favorite finds were four small passion fruit and a fresh nutmeg that we bought from a citrus farmer.

By 9am we'd purchased enough food to completely fill the truck bed and by then the market was packed! People were everywhere smelling fresh papayas, sipping ginger basil coolers and standing in an endless line for pizza napoletana. We decided to try some and it was, by far, some of the best pizza I've ever had. Who knew pizza in Oahu could be so fantastic and who knows when I'll be digging into a slice of hot pesto-covered pizza again?

Yesterday marked our first voyage out to sea. Our goal: learn how to work the sails and how to rescue passengers who had fallen overboard (don't worry, no passengers were sacrificed for the drill). Captain Moore told us about the life vests we were to wear at night while keeping a watch and then showed us how to rescue someone using the three floatation rings on board. Thankfully, he said no one had ever gone overboard without someone being close by.

I quickly learned two things. One, hold on! The waves on our way back were so severe that pots and pans, dishes and spices jars in the galley (the kitchen) were banging about. And second, sailing makes you extremely sleepy. Throughout the day Bonnie, Bill, Gwen and I battled constant drowsiness—an effect of the sun and working outside all day?

By the time we got back to the dock last night, around 1am, we were all ready to crash. At least for a few hours—the next day it was time to head to the farmer’s market at 6am to load up on produce. The travails of this journey are on their way...

By mid-afternoon yesterday, I’d met the entire crew. Bill and Bonnie, a couple who split their time between North Carolina and California, flew in and we headed to NOAA to meet Carey Morishige who’s in charge of the debris recovery program. Afterward we returned to the ship, unpacked and then went out for dinner to celebrate our first night together. It’s a laid-back and amiable group, everyone willing to help out and make the journey run smoothly. So without further ado, here’s the crew!

This morning I met first mate Jeff Ernst and got a tour of the ship. As I walked up to the Alguita a string of plastic debris lay on the dock—mainly buoys and one old tire. On the bow sits a large tangle of fishing net and rope the crew caught during their first voyage out this summer. So this is it—home for the next three weeks!

After a bumpy ride, I made it safely into Hawaii on Monday morning. I’ve spent the last two days with Stanford graduate student and Waikiki Aquarium intern Micki Ream. While Micki is at work I’ve been busy making last minute preparations for the trip—checking my equipment, reading recent articles about SEAPLEX and Project Kaisei, responding to emails and kicking off the start of the blog.

And I’ve been talking to just about everybody about the trip. From my experience, about half the people I run into on the street seem to have no idea about the floating mass of plastic trash. The other half either vaguely know what I’m talking about or pretend to know and nod quietly as I explain the expanse of the oceanic “landfill”. One man I ran into in a coffee shop, Jerry Bush, a lithographer, suggested we get the Navy to clean it up, a woman I sat next to on the bus suggested we use the plastic pieces to soak up oil from oil spills since plastic in the ocean concentrates toxic chemicals anyway. It’s very gratifying to know that everyone has some opinion on the matter even if they’ve just learned about it.

In a few hours I’m meeting with Captain Moore, the first time since I interviewed him back in March for a mini-documentary about nurdles. It will be the first of four consecutive days learning to be a member of the crew—working the sails, mastering emergency rescues and scheduling my night watches to check for oncoming boats. I’ll have full internet access until September 7th when the 50-foot aluminum catamaran Alguita sets sail, and limited access from then on. Right now I’m working on my maritime vocabulary—if anyone knows the word for neophyte sailor let me know...