

February 5, 2018, oc020518.mp3
Sea Foraging the Northern California Coast
Jennifer Stock, Kirk Lombard

Jennifer Stock: You're listening to Ocean Currents, a podcast brought to you by NOAA's Cordell Bank's National Marine Sanctuary. This show was originally broadcast on KWMR in Point Reyes station, California. Thanks for listening.

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Jennifer Stock: Welcome to another edition of Ocean Currents, I'm your host, Jennifer Stock. On this show, we talk with scientists, educators, fishermen, explorers, policy makers, ocean enthusiasts, authors and more, all uncovering and learning about the mysterious and vital part of our planet: the blue ocean. I bring this show to you monthly from NOAA's Cordell Bank national marine sanctuary, one of four national marine sanctuaries in California, all working to protect unique and biologically diverse ecosystems. Just off shore of the KWMR listening area on the west Marin coast are the Greater Farallones and Cordell bank national marine sanctuaries which together protect 4,581 square miles. These national marine sanctuaries are well situated in one of the most productive ocean ecosystems in the world, here in California. The oceanographic system that generates tons of nutrients for a diverse food web support highly migratory animals, but many local ones as well. Including ones that we can eat. Kirk and Camilla Lombard are a husband and wife team that started and run a community supported fisheries membership program in the San Francisco bay area. They lead educational coastal fishing and foraging walking tours and are salty sea shanty musicians. Kirk is the author of *The Sea Forager's Guide to the Northern California Coast*, which was published by Heydey books in 2016. In this guide, you can learn about a rich variety of sustenance for those willing to work for it, so I'm really thrilled to welcome Kirk Lombard to Ocean Currents today. Kirk, welcome to Ocean Currents, you're live on the air.

Kirk Lombard: Well, thank you for having me.

Jennifer Stock: So I understand you're busy at work and you've got some black cod laying around.

Kirk Lombard: Heh, yeah, I'm sitting on a forklift, I'm actually gonna move, but I just offloaded my buddy, he went out with his really bad flu, and caught me 700 pounds of black cod the other day, and now it's here at the warehouse that I use, and it's gonna get all filleted up tomorrow and sent out to all my cousins.

Jennifer Stock: Sounds good. Well we'll talk about the CSA a little bit later on. I wanna start just talking about the book. *The Sea Forager's Guide* is part natural history guide, fishing instruction, nutritional guide, stewardship advice, and salty lore, and to me is a culmination of a lot of experience and unique in-depth knowledge. What was your process for writing this book, and launching your CSA?

Kirk Lombard: Yeah, so my process for writing this book, that's interesting. Basically the process was working twelve hour days and then coming home and trying to stay awake in the garage while I typed out this ever expanding project that I thought would be a little shorter, but then it kinda grew and then it grew and I decided to do this whole... everything. Mollusks, and small fish and large fish, and just kind of a guide for people who want to go out and get their own stuff. Particularly fishing from shore, which is kind of my gig. I do these walking tours around San

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Francisco and some of the areas around san mateo county coast, and take people out and just kind of jam on fish. We just kind of geek out over fish and mollusks and some of the seaweeds and stuff, and it's fun. I have sort of a natural tendency to like performing, I come from a family of performers, Broadway performers, and I've always enjoyed having an audience and telling fish tales, so it kind of really fell into my lap. But the process of writing this was, how do I write something like this so it doesn't become dry and stuffy. Because if it was dry and stuffy I'd be falling asleep, I was so tired while I was writing most of it, I had to entertain myself, the way to entertain myself was to make it funny. So the feedback I'm that getting is that the book is very entertaining, so it makes me happy to hear.

Jennifer Stock: It's definitely very entertaining, it's been a part of our bedtime routine with my 7 year old son, who's quite obsessed with fishing, and you're definitely contributing to this obsession, so thank you for that. But what you're sharing here in this book is a lot of knowledge, and a lot of this is typically knowledge that's passed on human to human, it's not just something you read on the internet, or research in a paper. Tell me a little bit more about how did you learn all this stuff, there's maybe a hundred or so species you write about here. Tell us a little bit more about your background, of being a fisherperson and a sea forager.

Kirk Lombard: So, I've always been, I don't know. Since I was a little kid, I've just always been interested in wildlife. When I came to California, I had been an avid fisherman on the East coast, I came to California I don't know, maybe 25, 30 years ago, and I just fell in love with the coastal ecosystem here, and my grandfather had grown up in the Santa Cruz and Monterey Bay area, and used to reagle me with stories of salmon and lingcod and all this stuff, so it was kind of just this magical land to me as a little kid, and then I ended up living here, a little further north than my grandpa did, but, yeah, I just kind of got into the fishing culture here. And then that sort of landed me with a job working for the Pacific Coast Marine Fisheries Commision as a surveyor, which was kind of like feeding my addiction, you know? Because then it was like my day job was walking around San Francisco and beaches and piers and launch ramps all over the bay area, and checking everybody's fish which was kinda like, on my days off that's what I was going and doing, you know? And then all of the sudden I had this job where my job was to go around, find people, catalogue all the different species they were catching, have a conversation, and I was already so deeply immersed in all this that it was kind of difficult, or I should say, it was very easy to expand on my knowledge base, because I was already there, and all the sudden I was meeting all these people and getting a lot of stories.

Jennifer Stock: What is the Pacific State Marine Fisheries Commision, I don't hear about it very often, so what's the role of that in terms of fisheries, is it California, I guess it's interstates, between Washington Oregon?

Kirk Lombard: Six years ago that I worked for them, but I did work for them for at least six years, so. But to my knowledge theri main, well as far as what I was doing for them, it was gathering data. You can go, anyone can go, and check out their website, PSMFC, and you can read all about it better than I can tell you about it.

Jennifer Stock: That leads me to think about the observations that you were having with people that were catching stuff, and in one part of your book, in terms of talking about

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access, you talk about pier fishing, and that people don't need to have a permit to fish on public piers. Why is that? We have a process in California where everybody has a fishing license, but why do people that fish on piers not need a fishing license?

Kirk Lombard: Yeah, you know, that's a really good question. I'm not exactly sure why. I just know that that's the rule. It has something to do with the money that paid for the piers. Wildlife Conservation Board money I guess, was used. Now, don't quote me on this, a lot of these sort of finagaling of regulations and stuff I'm not so big on. Again, you don't need me to answer that question, it's just, anywhere in the state of California you can fish two rods on any public pier. The definition of a public pier is not necessarily what you might think. For instance, the ferry pier in San Francisco, would seem to be a public pier, but its not considered one, so if you're fishing on that pier you only get one rod and you have to have a license. If you're fishing on the south jetty of Half Moon Bay, that is considered a public jetty, so you can fish two rods, or two lines, and you don't need a license. A very good place to find information as to which man made structures are actually considered public is on Ken Jones' wonderful website, Pier Fishing in California, and anybody can go and get a whole list of all of the public piers in the state of California. It's really a great, I don't want to say program, but it's really a great thing, in California, that you have this opportunity to fish and you don't need to pay for it. You can just hang out on public piers. Unfortunately, a lot of the best fishing isn't on those piers. Still, I mean, nevertheless, it'll get you out, and it'll get you fishing if you're low on funds.

Jennifer Stock: So you're pretty clear about the importance of following the rules in this book, in terms of making sure you're following the catch limits and size limits, and taking care of the habitat, for species, for sustainability, to have along. What do you encounter when you're out in the field, and you see people that clearly aren't? What are ways that you approach people that you know are not abiding by best practices for fish and mollusks?

Kirk Lombard: Well, I yell at them a lot. I yell at them, give them the stink eye, take photographs. You know, there's also just the fact that even sometimes following the regulations isn't really quite enough. I'm thinking about this past herring season, I'm saying past, it's still on, but I think it's dwindling down right now, but I saw there's no actual sport limit on herring, and I think there should be. I don't think it should be as small as they're talking about making it. Because if you weigh it against the commercial fisheries, for God's sakes, it's a pittance, even with the sort of abuses of herring that are happening right now. In any case, they should put some kind of limit on it, because we can't just have people backing up pickup trucks to the San Francisco shoreline and just filling the backs of the trucks, and driving off with six garbage cans full of herring. It just boggles the mind. And I get it, at a certain level, you can make the case that at least those people are most probably eating-- some people are rolling their eyes as I say this, because a lot of that is probably getting sold on the black market-- but, I think, for the most part, people are eating it, which is awesome. Most of our herring gets shipped off to Japan, or at least the roe does, and aren't really consumed locally, or at least a very small fraction of the catch is. In any case, yes, so in the case of herring, there were a couple of times this year where I just, I had to go over and say something. I'm fishing next to this couple of guys, and I mean really, is 2,000 pounds really what you need to catch as a sport fisherman?

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And you're doing that, because yeah, okay, there's no restriction, there's no ceiling on how many you can catch, legally you're ok, but what about ethically?

Jennifer Stock: So what do you think they're doing with 2,000 pounds, you mentioned black market, what is that about?

Kirk Lombard: You know I don't want to speculate too much on that, but you know, think about it. I mean unless that person's family is huge, or they're, you know, giving them out in the neighborhood and becoming the most popular person in the neighborhood or something, I guess. But it seems that, you know, it would seem that when you see that over and over and over again, yeah, well I would think that some of that's getting sold. Wouldn't you think that? Maybe I'm wrong, it could be. I don't have phone numbers, I haven't followed through on it. It seems a logical conclusion, and it could be wrong, I'm open to it being wrong. I think a lot of it is eaten, and, like I said, there's something to be said for that because our herring fishery is by and large is not consumed locally, it's all shipped off to Japan, and not all but most of it. That's my take on it. But in any case, I just don't like to see, there's just something wrong with one guy standing over the net and taking 11 hundred pounds of fish. Now I took a lot of herring this year, I pickle them and I give jars of pickled herring to my friends, we must have, god, we must have done 50 jars of them. I think probably my whole catch for the season was 200 pounds. That's a lot, you know?

Jennifer Stock: Is that the best way to prepare herring, I haven't heard of other ways to eat herring.

Kirk Lombard: One of the ways that's really cool is to do them on a stick and throw them on a grill. There's a restaurant that does this really well called Fish Restaurant in Sausalito, a Marin County restaurant, and they do some amazing things with their herring. You know the hard thing about herring is that they've got a lot of scales, and, you know, they're small. They're not tiny small, they're not as small as say, like a night smelt or anchovies, but it requires a lot of work. So you get a 38 pounds bucket full of herring, 38 pounds is about what a bucket weighs, a 5 gallon bucket, and you think, this is great, I'm going to fillet all these fish and scale all these, and then eight hours later you're still doing it. This is, I think, sort of might be part of the problem with them, but you know, I mean, restaurants should be able to handle that. It's nice to see that there are some places that are really getting into the local herring. Most of those people pickle it. I'm, as I said, into the pickled herring, and the grilled herring, and then taking the fillets you can pretty much do anything you want with those fillets. You can bread them and pop them in the skillet, that's you know, that's nice. Our herring, by the way, are much less fatty than the herring you associate with things like kippers, right? I think when kippers are caught, they're not caught while they're spawning. Our fish are caught while they're spawning, they're living off their fat reserves, they're not really feeding while they're in the bay, and they tend to be leaner. So when, you know, people are probably thinking, so why don't they smoke it? You can smoke it, but we've found you have to kind of add some fat content to get it to approximate their Atlantic cousin in smoked deliciousness. So, those are my thoughts.

Jennifer Stock: Well I look forward to trying some fresh herring sometime. So you have some black cod on hand. I'm thinking about, we've had some pretty calm weather lately, which I understand are good conditions for fishing for back cod. Can you

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talk a little bit about the process of how black cod is caught? I understand it's one of our more sustainable rockfish species?

Kirk Lombard:

It's not a rockfish, it's in its own family, I think it's closer to a sculpin fish than a rockfish, and it's not a cod. The other market name for a black cod is sablefish. So again, it's not a rockfish. It is associated, sometimes, with a rockfish because part of the bycatch especially in a long line fishery, can be various types of deep water rockfish. I want to make it clear, I'm not a black cod fisherman, it's way off shore, way past my field of expertise, but I've dealt with enough black cod fisherman, and I have enough of them as buddies that I can tell you a little bit about it. They have to go out today, on fishing vessels to Sadie K at Half Moon Bay, he's a guy that does a lot of dock sales, so if folks are in Half Moon Bay area and they want to buy fish, they should go and buy off Jake. He's there on the weekend, he sells his crab, he sells his black cod, I'm just giving a pitch for him. It's been a hard year for everybody. But Jake goes out, the funny thing about Jake is, you know, he and I were colleagues working for the Pacific States Marine Fisheries Commission, now I run a seafood company and I do coastal walking tours, and Jake's a black cod, crabber, salmon fisherman, so it's a little bit ironic. But, in any case, yes, so, Jake told me it took him a little over six hours to get out to the black cod grounds from Half Moon Bay, his trip was supposed to be three days. He uses pots. There's two ways, typically, in our area, the two most sustainable methods for black cod would be the bottom long line and the trap fishery. So, Jake just fishes at open access, so I think he's allowed 13 hundred pounds per trip, something along that. I won't say exactly what it is, because I don't know. But he went out, and he was gonna do a three day trip and he got a really bad case of the flu out there, and he was alone, he didn't have deckhand, he was going by himself, to try to, I guess handle money. And so his trip was only one day, and he did pretty good, and he caught enough fish to take care of me and all my customers. But yeah, so I mean, it's a lot of work, doing black cod, and it's not without its dangers. You've got those pots, and the pots are all, well, not all, but they're daisy chained to each other, and anytime you have that kind of weight and you're pulling it up off the ocean there's the possibility of injuries and all kinds of things, especially if you're going all the way out there, right? So it's not easy, you know, if it was easy everybody would be doing it.

Jenifer Stock:

Totally. Hey for folks tuning-- I just want to take a quick pause here and reintroduce you. For folks tuning in, this is Ocean Currents and I'm talking to Kirk Lombard, who's taking a break from processing fish and taking fish in to distribute through his CSA, and we're talking about his book *The Sea Forager's Guide to the Northern California Coast*, and I want to talk about the monkeyfaced eel. What's the monkeyfaced eel all about? You have quite a fondness for them, and I understand you had a record at one point, catching the largest one, and as someone who explores the intertidal zone frequently, I usually see these little ones, so these big ones that you write about are perplexing to me. How do you get them, and what do you do with them?

Kirk Lombard:

Yeah, you know, I leave them alone now, because I've killed so many of them over the years, I've, you know, I've got some payback coming to me. So, I kind of leave eels alone. Occasionally I can get them and put them in my CSA box as a store item people can buy. But, so far as the monkeyface eel, it's not really an eel, it's a prickleback, which is an eel-like creature. It subsists mostly on algae, on marine algae, the various species of seaweed. When you clean this animal,

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or fillet it, you will always find in its stomach, that its guts are just loaded with seaweed, and you never find anything else. I've never, in all these years of catching monkeyfaced eels and cutting them open, I always, whenever I catch my own fish I always check out what they've been eating. This is especially exciting when you catch a cabazon, by the way. Cabazon has come incredible abilities to eat things like gumboot chitons and abalones, I've found abalones, whole abalones in the stomachs of cabazons. I don't know how they do it, but I don't think it's legal, they're not measuring them, and they don't have an abalone gauge. In any case, you know what, it's very interesting, once I found in the stomach of a cabazon, the whole stomach of this cabazon was loaded with siphons of horseneck clams.

Jennifer Stock: How did they get those? They're just so, you know, those horseneck clams are deep in mud, what are...?

Kirk Lombard: Yeah, that's what I don't understand. I don't understand. I caught this cabezon, you know, where you always catch cabezon on the rocks, and there it was, you know, and I cut it open. There's nothing else that a horseneck clam siphon could really be. I, you know, they're very distinctive, they have like a skin on them and a very distinctive head, like a, sorry, a siphon, like the tip of the siphon, I don't know what that would be, anatomically. Anyway, yes, the whole stomach of this cabezon was loaded with those. And I, maybe he made a foray into a muddy bay, I don't know. Very strange. In any case, monkeyfaced eels always have seaweed in their stomachs. This is part of the reason, I think, when you cut them open they're just wretchedly, the smell of the gut of a monkeyfaced eel is really something to behold, or not. Maybe, if you're squeamish, it's not what you want to smell. And some people feel that the scent of the gut really permeates the meat. I've had some people just recoil from monkeyfaced eels, and then I've had people that are just like, this is the greatest thing ever. I'm somewhere between the two.

Jennifer Stock: I suppose you have to fillet it pretty quickly then?

Kirk Lombard: I think it's more about just making sure you don't pop the guts-

Jennifer Stocks: -in a closed space?

Kirk Lombard: Yeah, well, right, yeah. Do them outside. They're, you know, it's a bizarre animal. Because, it's just also very difficult to dispatch, you know. Because you want to be reasonably kind to the creature that you're eating for dinner, you don't want it to suffer unnecessarily. The problem with that is that monkeyfaced eels just, I mean they're like the freaking--I'm trying to think of a boxer-- they're like the Jake LaMotta of fishes, right? Because they can just take it. It's like, I mean, you can hit them on the head. When I first started doing this, and I was selling them six years ago, I brought a bunch into a restaurant, and I had broken their necks and gutted them. Okay? You gotta figure, that's pretty much a dead animal, and I, you know, and then I put them in a tray, and the chef was coming over, and then all of a sudden we heard these screams from the kitchen staff, and we ran back there, and lo and behold, the eels, with their guts gone and their necks broken, were crawling all over the sink and several of them had spilled out onto the floor and were flopping around. It's just a strange, I don't know, it's just a strange creature. It's just, I've found that creatures that live in the intertidal zone,

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that being the zone between high tide and low tide, creatures that live in there are very resilient and very tough. Because first they have the waves crashing down on them, then they've got a lot of other creatures that they have to compete with, and then they've got low oxygen, so there's going to be times in a monkeyfaced eel's life when it is stuck under a rock with two inches of water and has to wait for the whole tidal cycle to turn around, and it has to be able to survive, so it's hard to kill them. That's a diatribe, I just gave you a diatribe, oh my God.

Jennifer Stock: Now I'm going to be dreaming about eels, that sounds more like a nightmare. Hey, we're coming up on a half an hour here, we need to take a quick, short station break. If you wouldn't mind just holding on the line, and we'll come back in a little bit, and I want to hear about your abalone diving experience at Tomales point.

Kirk Lombard: Oh yeah, okay.

Jennifer Stock: It's pretty fun to read about that. So we'll be right back. Folks tuning in, this is Ocean Currents, here on KWMR and we've been talking with Kirk Lombard, the author of *The Sea Forager's Guide to the Northern California Coast*.

(pause)

Jennifer Stock: It's all about food out here in West Marin, and we're talking about harvesting your own food on the California Coast with Kirk Lombard, and Kirk?

Kirk Lombard: Yes?

Jennifer Stock: I'd love for you to share a little bit about some of the dangers, You know, fishing foraging, doesn't seem to be the type of habit that one does lightly, and there are extremes that a fisherperson will put themselves into to get that target species. How do you describe the decision making one goes through when you might be putting yourself into a challenging or potentially even life threatening situation?

Kirk Lombard: I would describe it as "don't."

Jennifer Stock: Yeah, but they still do it.

Kirk Lombard: Yeah. You know, I mean sometimes you just forget, you know, you get so into something that you just take a chance you shouldn't have taken. I don't know if that was my takeaway from the abalone thing. My takeaway from the abalone thing was that, I was describing sort of my first abalone dive experience, and I almost drowned, and then came very close to, I think, having a negative encounter with the big alpha predator in our region, I got into the boat and as I was pulling my flippers off a gigantic great white went directly under our little boat. There were a lot of details in that story, signs that I was seeing, like all the sudden all the sea lions exiting the water, and that's a bad feeling when you're like 60 yards away from the boat, and you have to cross a deep channel to get back to where it is, and there's nothing, really nothing, I could do, just try to get back to the boat, and then I got back to the boat and I was like, man, this is feeling really weird, I feel really weird, I feel like that was really dangerous, and then I looked down into the water and there it was. So, you know, there's that. But I think other things were more dangerous, even, like, things you wouldn't

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think. So, it's very important, if you're gonna go out and do night fishing on the beaches, which is something that I do a lot, that you're careful. The risk of throwing nets. You know, I mean, you know, I had a story in the book about-- I'm sure your listenership being where you guys are based, I'm sure there are people who have gone out and fished for surf smelt, and thrown the net on them, and I've had this experience where I throw the net and the net lands on a seal. It's just never happy, when that happens you know. It's not that the seal get injured, but I mean the seal basically just takes off and basically drags you to your death. And then you know, the net comes through, these are small nets I'm talking about folks, you know, like a six foot net, it's not a gill net, it doesn't hurt the seal. It startles the seal, and it kills you. So I, you know, I made a joke in the story I told about how I was writing this from the other side, you know. I described how like I should never have survived that. You know, I should say, that we ran into a lot of sea lions, big bull sea lions, this year, while fishing for herring. And what was interesting is that I have developed a technique, and man, it's so profound. May I share it with you?

Jennifer Stock: Sure.

Kirk Lombard: So, you know, as with surf smelt and various other small fish, the main way, if you want to actually go out as, like, a citizen fisherman and you want to go out and get you fishing license and go catch some these smaller fish, you have to learn how to throw a casting net, right? And that's how you catch herring, and that's how, you know you can fill up a bucket with one throw, if you do well, and then you should go home. Or, you know, do one more, for your entire year, and then go home. And don't fill up the back of a pick up truck, as I was saying earlier. Anyway, this year, at the height of the herring spawn, I had located a nice school, and I got on them, but the whole place was completely choked with sea lions. And I showed up and there were, like, ten fishermen there, but no one was daring to throw their net in the water. Because what the sea lions do, because they're smart animals, is that when the herring fishermen throw the net, the sea lions wait until it's full, and as the guy's pulling the net in, they swim over, and one of them grabs onto the net, and pulls it, and then the fishermen pulls against the sea lion, and the net rips in half, and all the dazed herring swim out, and the other sea lions following behind him, they all gorge themselves. And this technique was working marvelously for the sea lions, and then I had this idea. So I took my little net, the one I wouldn't really worry about if they tore it to shreds, and I threw my net in, and the bull sea lion came over, and the other guys followed, and he grabbed onto my net, and I just, let it go loose. I did not resist. And, oh, you should've seen how angry it made this sea lion, because what he wanted me to do was resist, because if I resist then he pulls against it, and then the thing rips, and then he gets all of my fish. So, I just, I let it go limp. And, you know, I held onto the rope, and everybody gathered around, and they could see him, and he came up and he barked at me, and he went back down and he grabbed the net and he shook it, and then he went back up and he barked at me again, and then the other ones started barking at me, and I just let it sit there, you know, like five minutes until they swam away about 30 feet away, and then I yanked it, I pulled it up as fast as I could and all my herring were in it, and there were no holes. So, there's my story about what you do. The difference is that when you're in the surf throwing a net and it lands on a seal, or a sea lion, you can't let it go loose. It's been extended, and you're going with it. So, anyway, those are my thoughts.

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Jennifer Stock: Got it, yeah. So you do write about quite a few species that are not well known and we don't see them in markets, and you talk about a lot of smelt and a lot of perch. What's attractive about these species that are rather small, and quite a bit of labor to get. Are they because they're lower on the food chain, in terms of what they eat? Or is it the fun of the catch?

Kirk Lombard: Well, I wouldn't group them all together. Because, for instance, I really enjoy sort of sport fishing for perch, as just a catch and release thing. I love catching perch and looking at them and showing them to my little kids, my little boy, and then throwing them back. Although, lately, I've been experimenting with surf perch ceviche, and I'm really liking it. But on the whole I'm not really, you know, aggressively pursuing perch because I like to eat them that much. I find the meat really mushy, some people will scream, but that's just my take on perch. You can make a great ceviche out of it though, the meat does well under lime juice, I'll just put it that way. But the other ones, things like night smelt, herring, day smelt--or also known as surf smelt, which, the numbers have been really low lately, in California, the last few years--sardines, anchovies, and mackerel, when they show up here, those things I'm very passionate about pursuing, I love all of those fish. And it's just a taste thing, I just love the way each one of those species taste. Night smelt, man, god, you just batter those puppies and throw them in a skillet and they're just awesome, eat them whole, you know? In fact just dip them in any sauce you made and eat the whole thing whole. And surf smelt, I like those even better, so, I'm rather passionate about my smelts, by the way.

Jennifer Stock: Yeah, I got that.

Kirk Lombard: In any case, as far as like, if you're looking for anything beyond just that, as a reasons to pursue these things, you might want to consider that smaller schooling fishes tend to live shorter lives and feed lower on the food chain, so they do not bioaccumulate the types of toxins one associates with larger, longer lived species. Their populations, now this is, I think, true for everything except, perhaps, surf smelt, but their populations tend to recover even after, like, industrial scale fishing, so if you're looking just to make some decisions, you know, based on sustainability, you might want to consider, you know, eating anchovies every now and then, don't change your whole diet, but every now and then, throw some anchovies in, don't always feed on the top-of-the-food-chain predator. Does that make sense?

Jennifer Stock: Yeah. Is this also something that you've worked into your CSA to educate consumers about, in terms of varying the types of fish that they might want to consider eating?

Kirk Lombard: Yeah, I do. The way that it's working out best, in that, is that people can add them onto their order. You, know, it's a tough sell for people to--people think that they want small fish, and then it turns out that there's a lot of work involved in small fish, and so, you know, I'll do, I remember last year, I'll do 600 pounds of herring and I send them out to everybody, and, well, some people are really enthused, and some people, even the ones that were warned that that's what they were getting they were like, "Ah, what am I supposed to do?" So a lot of what we do is educating people, and we've been largely successful with that. If someone wants to sign up for my CSA, we do a CSA that's basically like a, like a farm box, you know, something you get from a farmer, I just source, I try to source most of my stuff directly from a boat. If I can't, I have some suppliers that

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I really trust that I can get stuff from. Primarily TwoXSea, which is where my, where the warehouse space that I rent is, on Pier 45 in San Francisco, I rent that space. In any case, yes, I'm giving you a long answer. If somebody wants small fish, they can get it from me.

Jennifer Stock: We have time for just about one more question, and I just wanted to ask, since you have spent so much time on the water, at the water's edge, and interacting with all these different species, what have you seen in terms of changes in the last few years? We've had some warming waters from a couple different varieties, of El Niño, or the mysterious blob. I'm just curious what you've seen in terms of changes in the ecosystem and the species variety that might be changing as a result of the warming water, and it might be dynamic, it might be short term, it could be long term. What are you seeing?

Kirk Lombard: You know, it's strange, you know, I've found that there are always anomalous fish, and I don't know if we can really say, from what I've seen along the coast, you know, there's more going on that I've read about than what I've actually seen. Like I've read a lot about what's going on for the kelp beds in Mendocino, and points north, but I haven't actually seen that here so much, but maybe that's because I don't spend as much time out where the bull kelp is, or down on the bottom in those areas. I think the person to ask about this would be a sea urchin diver. But, in any case, you know, we see when the water is warm, we see weird things that you don't associate with this area. So, a couple years ago we had a lot of bonita up here, which is a fish that I associate with points further south. If you were to at what a bonita's actual range is, it would include this area, so it's not so anomalous. You know, there was like a, this past year there was a sighting of a type of seagull, called a Ross's gull, that's rare. That's bizarre. That's a weird one. Or the Red-Footed Booby that was in Half Moon Bay this year that all the birders went crazy over. I think those are way more anomalous sightings than really anything I've seen. I've noticed, one thing that's really troubled me, is the disappearance of our beautiful *Hypomesus pretiosus*, the surf smelt I talked about, which is pretty much, I think I can go out on a limb and saying that's my favorite local fish. And they're just, you know, I haven't seen one in three to four years.

Jennifer Stock: What do you attribute that to? Is it the conditions, the water conditions, or...?

Kirk Lombard: Again, you know, it's a funny thing, I tried to not opine on this too much, because especially with small fish, there's a natural fluctuation in their population. I talked to, you know there's a tendency to say, "oh, it's global warming it's the end of the world," and shut down the fishing and everything else. I don't know if that's true. I know that looking at the commercial catch records for surf smelt, going back, I don't know, going back 20 years, last year was the lowest ever. But is that because the market dried up and the guys are deciding not to go catch them? Is that because maybe some of those old smelt fisherman who have the permits to go fish on Gold Bluffs, maybe a couple of those guys died. I don't know, what is the reason that that fish suddenly disappears from the market? Why is it that I can't find them anywhere? I talked to some old timers down in my area, and they tell me about whole decades going by where they didn't see any surf smelt. I'm new on the scene, you know, I mean I started fishing for these fish maybe fifteen years ago, and when I started there were a few, and then all of the sudden there was this huge boom, and it was like every year everybody was like, "wow they're everywhere, ah this is great, yeah we got them." Well, maybe that's

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just not the way they operate, maybe they go in 20 year cycles. Like, you know, when the sardines crashed, I wrote about this in the first chapter of the book, but when the sardines crashed, back in the day, the popular wisdom told us that they were fished to the brink of extinction. Well, they definitely caught too many, there's no doubt, you can't have 2 billion pounds a year being caught in one area. However, scale deposits from the ocean floor have proved, conclusively, and this is not me as a fishmonger speaking, this is me citing scientific works by marine biologists, by checking out core samples from the ocean sediments, they are able to get an approximation of sardine abundance on the Pacific coast going back as long as they've been here on the California coast. And what they learned is that sardine populations go through intense periods of abundance and decline. Did it help that they were catching two billion pounds a year, or whatever it was, I don't know the actual number? No, it probably didn't but would sardines have declined in 1945 anyway? Yeah, they probably would have. This is why I'm always sort of loathe to pronounce the verdict on it. There's so many things at play it's hard to say. I'm concerned about warming oceans, I have a feeling that surf smelt need cold, clean, crisp, perfect water, we all know that they do, but I don't know, is this something that happens every 20 years, every hundred years, every thousand years? I'm not sure.

Jennifer Stocks: Thank you. It puts in perspective that we're here for just a small period of time on the planet, and the ocean's so big, and so dynamic, and so much more going on there than we could possibly know, and it is kind of interesting to look at, well this is a moment in time, this is what I'm observing, hard to pontificate, so thanks for that. Kirk, I really enjoyed hearing your perspective on foraging and I really enjoyed reading your book, and I hope that others will consider picking this up, because it's quite fun to read, and I'm definitely reading it through a new lense as a parent of a son that's super interested in this, and I've never been a fisherwoman myself, and I'm really excited about trying some of these things, and thank you so much for putting this compendium book together, very educational and helpful.

Kirk Lombard: Thank you.

Jennifer Stock: Any last thoughts you want to share before we say goodbye to you for the afternoon?

Kirk Lombard: No, just really thank you for having me on, being generous with your time and thank you for the opportunity.

Jennifer Stock: You're welcome. Thanks again Kirk.

Kirk Lombard: Okay.

Jennifer Stock: We've been talking with Kirk Lombard, the author of *The Sea Forager's Guide to the Northern California Coast* and you can learn more about Kirk, his book, the CSA membership that him and his wife offer and the educational tours that they do at seaforager.com, that's seaforager.com. I highly recommend it. Super fun read and as Kirk mentioned, he has a bit of entertaining blood in his family and he's a man of all trades, of art and words and fishing, too. So, pretty exciting. We are close to the end of the show here and I just want to end with our Positively Ocean episode that is produced by Liz Fox and quite off the topic of the shore and harvesting but somewhat related, and looking offshore and some of the folks

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that are helping to help some of those larger mammals that are getting caught in some nets and gear offshore. So we will listen to Positively Ocean before we say goodbye from Ocean Currents.

(Pause)

Liz Fox: Hi, this is Positively Ocean, where we celebrate the ocean and look at what's working well. I'm Liz Fox. While the continental United States tries to keep warm through this frigid winter, it's whale birthing season in Hawaii. An estimated ten thousand humpback whales have returned to the warm waters at the Hawaiian Islands Humpback Whale National Marine Sanctuary to give birth and make more babies. That means that whale watch boats are busy, but so are rescuers like Ed Lyman. He's the whale entanglement response coordinator at the sanctuary. Whales can get caught in equipment that improves our lives like moorings, fishing nets, and communications and research instruments. Entangled whales can drag ropes, cables, metal cages, that can weigh hundreds of pounds, and that makes feeding and breathing in their annual migration of up to six thousand miles nearly impossible. Researchers and rescuers like Lyman study how whales get stuck, what they tow, and how to safely remove the dangling and dragging debris. Lyman is working with extra precaution this year after one of his colleagues and whale rescue pioneer Joe Howlett died in July. Howlett had successfully disentangled a right whale in the Bay of Fundy when the giant animal made a sudden and unexpected flip. As a result, NOAA temporarily suspended all whale rescues until officials reviewed their safety guidelines for this dangerous work. Although Howlett lived and worked half a world away, globally the whale entanglement responders make up a tight community that meets yearly to discuss what they've learned about whale entanglements and how to improve their responses and safety. Lyman says the keys to successful disentanglement are a wide network of educated hands maintaining a safe distance and also using tools that keep the rescuers and animals safe. When boaters report an entangled whale, Lyman instructs them to track the whale from a safe distance while his land-based team drives to the harbour, loads the boats, and buzzes across the channel. Here's what Lyman said when I spoke to him at his office overlooking the sanctuary last spring.

Ed Lyman: So we need standby support from that community. And the whale watch vessels now, the captains, they totally organize themselves in that monitoring a whale, you know, standing by so we don't lose it, and that always brings a smile to my face, when you've got a community working with you so well like that.

Liz Fox: Like historic whaling crews on the hunt, Lyman and his team use a large boat to get to the whale's general area then launch a small, swift boat to get closer. They hook a bright orange polypropylene ball to the trailing debris, rather than harpooning the whale with floating kegs. Then, just like in *Moby Dick*, the team hangs onto the ball with the line and lets the whale take their skiff for a Nantucket sleigh ride.

Ed Lyman: And we're doing it for a reason, it's all about assessment. So when we're towing behind the whale we can feel its strength. If the lines are drifting, that's good news. And that changes our technique.

Liz Fox: The tools Lyman uses are designed with human and whale safety in mind. Lyman unfurls a rolled-up set of knives to reveal a modern collection of blades and

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grapples that won't harm the whale and will quickly sever the tie between whale and boat if needed. And even well-planned disentanglements can change at sea. Last April, Lyman's team struggled to free the season's last of three entangled humpbacks, a calf that dragged what appeared to be a typical poly blend braided line.

Ed Lyman: Well we got the cutting grapple on and fifteen minutes later, nothings happening. And we look down, and the grapple's all fowled.

Liz Fox: That's when they pulled up the line. It was extraordinarily heavy and they realized it was actually a five eighths inch coaxial communications cable.

Ed Lyman: We needed a pair of bolt cutters, a large pair of bolt cutters.

Liz Fox: After two days of pursuing and tiring out the whale, the team cut the cable in two spots. Some of the material remained in the calf's mouth, and that's the best Lyman's team could do.

Ed Lyman: And that's what we have to do. I mean, you have to look at the long run here.

Liz Fox: And while the public has a vital role in spotting distressed whales, Lyman stresses that a call to NOAA's whale entanglement hotline can save whales' lives and humans' lives. Here in California, the whale hotline is 1866-767-6114. And that's an example of folks doing right by the ocean. Until next time, I'll be searching for all things Positively Ocean. For Ocean Currents radio and KWMMR, this is Liz Fox reporting from Kihei, Hawaii.

(pause)

Jennifer Stock: Thank you, Liz Fox, for that Positively Ocean episode about humpback whales. And thanks also to Kirk Lombard for calling in earlier. The sea forager, seaforager.com. Check him out for local CSA for seafood as well as his fantastic book, *The Sea Forager's Guide to the Northern California Coast*. Ocean Currents has a new time, I'm still reminding myself of this, the first Monday of every month from eleven to twelve, and you can always hear past episodes through our podcast available on cordellbank.noaa.gov. Also in iTunes, and I love hearing from listeners. If you have topics, ideas, questions, comments, please email me at cordellbank@noaa.gov. Thanks for listening, enjoy the bay, ocean, or whatever body of water you can get into safely. This has been Ocean Currents here on Community Radio for West Marin.

(pause)

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