

Interview with Crista Bank
Occupation: Fisheries Research Technician
Port Community: New Bedford
Interviewer: Julie Olson
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Working Waterfront Festival
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INDEX: (minutes:seconds)

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00:00 Introduction to Crista Bank's job description, history, time in Australia studying tropical coral ecology.

3:01 More on work in Australia; work in Florida Keys aboard sailing boats teaching; worked at New England Aquarium

5:59 Worked for computer company/ distant learning, sailed around the world; headed back to New Bedford, worked with kids on sailing vessel Ernestina; has a captains license.

9:02 Worked as a fisheries observer; was sea-going, never been sea sick before until observing; story about the gale and her sea sickness.

12:23 Learned that sometimes seasickness happens; likes field work element of observing; spoke with SMAST scientists on behalf of the fishermen and their questions; went back to FL observing on shark longline vessels.

15:24 Husband was Captain of Ernestina; she came back to New Bedford to do more observing; worked for SMAST on groundfish; wants to get Master's doing monkfish research.

18:05 Experience as woman in fishing industry; female observers are few but generally earn good reputation as hard workers; partly women work harder to prove themselves; only one woman professor at SMAST, but more women technicians; family issues; has a 15 month old and is pregnant currently.

22:14 One woman captain of scalloper; women on sailing vessels, but not so much on fishing vessels; comments from fishermen about why she is on a vessel and not at home with her children; fishermen gave her boss a hard time for letting her go on fishing/research trip; going to sea gives a unique perspective about fisheries issues.

26:12 Grew up with no connection to the ocean; scuba diving drew her to the ocean; interest expanded to fish; enjoys traditional family elements of New England fisheries.

28:22 Discussion of fishermen/ scientist antagonism; she see's validity in both arguments at times; things are becoming more cooperative; shark story.

30:57 Discussion of fishermen involvement in projects; scallop industry favors more than groundfish from cooperative projects; delay in seeing decisions made after research; often research shows stocks to be better off.

34:35 Goods relationship between fishing industry and SMAST; compensate vessels for research involvement; people should come away from the Festival knowing fishermen are hard working, especially scallopers, and want the resource saved as well.

38:34 Don't always believe the media; wonders about biases associated with working on boats as a scientist, trying to strike a balance of befriending and neutral scientist.

40:50 Sometimes feels biased on the side of fishermen.

43:06 Discussion about whether in certain situations she would be more like an advocate; her position doesn't allow her to make sweeping decisions; management should act timely to results from research; tough to change management.

46:26 Reference to cod tagging meeting and difficulty implementing a change in stock boundaries; finish up interview; not very excited to pursue Masters after extended period away from school.

48:00 End of interview

Major Themes

- Education interviewee – Bachelors, work experience in Australia, on sail boats
- Gender – female
- Home address – New Bedford
- Location of interview – New Bedford
- Crew – has good working relations with many boats
- Ecosystem, state of – cooperative research improving our knowledge of it
- Education history – Australia, Florida, UMass Dartmouth
- Fictive Kin – close with fishermen
- Fisheries – experienced many types
- Husband – sail boat captain
- Job satisfaction – choice to work in field, on boats even as new mother
- Management impacts – harder on groundfishermen lately; scallopers benefiting more
- Marriage
- Organizations – cooperative research projects, SMAST
- Perceptions of fishermen – hard working; bad media portrayal of fish consumption
- Raising children – at sea while child is little for a couple weeks
- Role of women
- Traditions and Celebrations – enjoys traditional aspect of New England fisheries

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Interview

00:00 JO: For the record, you can say what your name is.

CB: My name is Crista Bank and I am a fisheries research technician for the School for Marine Science and Technology here in New Bedford, which is part of UMass Dartmouth. I've been there for a couple years and I primarily work in the groundfish labs, so I work on some of the different research projects involving cod, yellowtail, all different types of groundfish, The other big part of SMAST is scallops, but I don't do the scallops.

JO: Maybe a little bit about your history so we can put this into context. Are you from New Bedford originally?

CB: I am not from New Bedford. I grew up in Lexington, a little north of Boston. I went to school for marine biology, so I graduated from UMass Dartmouth in 1994. And then I left New England for while because I wanted to do marine biology, I wanted to study coral reef ecosystems, so I ended up in Australia taking a tropical marine ecology course, visiting different research stations along the Barrier Reef. The whole point was to add different things to my resume and to then decide what I wanted to go back to graduate school for. Again, I thought I was going to stay with tropical fish or corals.

JO: Clearly you didn't (laughs).

CB: Clearly yes, I didn't (laughs). I mean there is still time, but. So yeah so I ended up in Australia traveling around after the class was over. I traveled around on my own and then from the connections that I made in the class, I was trying to see if I could stay and be a research assistant and nothing was firmed up by the end of the class. So I traveled around on my own so came back to Townsville which is where James Cook University is, which is pretty well known in the marine biology fields and I had talked to a few people that said it's better to be here then you can meet people.... So I ended up working with a guy that was working towards his PhD and was doing damselfish research which is a small, diverse type of reef fish, beautiful colors... and he needed a dive assistant, and I said, hey, I can do that!

3:01 He didn't pay me but I got free room and board and your backpacking around anyway. And they flew me to Lizard Island which is on the outer reef which is a place that is not easy to get to. So I got to hang out there for a month. And then I even extended my stay there and helped another researcher out for awhile. So it was a pretty cool experience. And then I actually came back and worked in the FL Keys teaching marine biology at Newfound Harbor Marine Institute down in the Keys, so again I just had my Bachelors degree trying to beef up my resume to get different experiences, where they taught you how to drive boats. So you got a 30 hour captains license training but you still didn't get a real license but it was something the organization worked out with the local authorities that let us drive boats. So I bombed around on a 20foot catamaran with 12-15 students and a chaperone and snorkeled around the reefs, shark biology, different stuff like that. Great place to work, you didn't get paid much but you were taught a lot cause the people weren't familiar with local species and fauna, you know they taught you, so you kind of went through a training period before you actually taught the kids. You did life-guarding, rescue stuff, all types of stuff before they let you go alone. It was a lot of fun, you worked

with great people but you got paid \$50 a week. And then once you went through a whole season of that, the training and then the teaching, then you could get hired back as an instructor, so it went from \$50/week to \$45/day. And so that was huge improvement. But again, so I still stayed in the Marine Biology field. I did that for awhile, then left, oh and then during the summers, just to come back to Boston, I would teach at the New England Aquarium, they had a marine science program. Kind of still stayed in the field with my Bachelors degree, still was learning though the different places I was working. Ended up in CA, similar place as the Keys, teaching Marine Biology, lot of hands-on experiential education work there. And still never really quite wanted to go back to school, you're having a great time, you're driving boats, you're still learning as your teaching, you're in different environments, now instead of coral reefs it was kelp forests and seals and sea lions, so I wasn't really making me want to go back to school. So I continued doing that, I ended up being hired as the marine biologist for a distance learning project. So basically a computer company wanted to sell their software to teacher, so they hired a few of us to go sail on a traditional square-rigger, a traditional sailing ship for 6 months.

5:59 It was around the world voyage, although I got on in the Seychelles in the Indian Ocean and sailed to Africa, around the Cape of Good Hope and across the Atlantic. Ended up in Canada. And again, this was the computer company wanted to sell their software, so we were taking digital photos, writing lesson plans, and writing about our experiences living on board a ship, all in their format, their calendar format. Also when we were in port, working with local environmental organizations, and I had a lot of flexibility to seek out organizations I was interested in so I go to tag great whites off the coast of Africa, I got to go sailing in a Microlite aircraft looking for basking sharks, cause I would say hey, I'm doing this educational website, it's free, do you want to be highlighted on it, so we'd link their website. Of course I wouldn't be, that's what the computer people back in NY were doing, I was just giving them the info for them to package and make it look nice. Again, didn't get paid much you got like \$1,000/month but they also paid for my birth on the ship which was a sail training ship which basically means there are professional crew, about 18 on that trip and then there were paying crew, amateur crew that were being trained by the professional crew and how to learn sail handling, sailing skills, celestial navigation, everything you learn about being out on the ocean. So that was a great experience, I thought that was great. That then got me more interested in sailing and being crew members on vessels which is getting me back to New Bedford, because after I got back from this long trip, I ended up finding out about the *Ernestina* here in New Bedford, which is a sail training ship, does education programs. They did marine biology stuff. Actually I had taken my aquarium students out with them a summer before I went sailing on the *Picton Castle*, which was the square rigger I was doing the other project with. That's how I ended up in New Bedford. And again here, I have my Bachelors in Marine Biology degree, now it's been 8 years I've been out of school. I have my 100 ton captains license and my sea time, crossing the Atlantic, and working *Ernestina*. So I ended up in New Bedford in 2000. At that time Ernestina was well supported by the state so we had funding. We sailed everyday from April through October, doing education programs everywhere from young day, kids just come on board for a dockside visit to week long trips to Philadelphia with college students, up to Nova Scotia with the Girl Scouts. We did a 10-day trip with the Tennessee Boy Scouts of America from here. They came onboard here and... this was during Tall Ships 2000 so we were all over the place.

They ended up coming to Philly with us.

9:02 So that's how I ended up in New Bedford. Now I still have my Marine Biology degree, now I'm getting sailing experience, but I felt like I was moving away from science and I was getting too much into education, which is great, but if you still have a scientific interest, I was afraid I would lose the opportunity to still go back to real science. I didn't want to get real rooted just into education. Now by this time, when I left UMass Dartmouth they were talking about this lab here in New Bedford, but I didn't think I wanted to stay in New England anyway so I didn't pay much attention. But when I'm back in New Bedford in 2000, the lab here had been built and fisheries science had grown a lot. And so *Ernestina* is docked here at State Pier, so you see the commercial boats going in and out, you hear all the newspapers, the fishermen are upset with management, you can't believe the government; you can't believe... you have to see for yourself what's going on. It's hard to choose sides. I wanted to see for myself what was going on and I knew there was a fisheries observer program that was based in NB; I actually wanted to work on the scallop boats mostly, so I started off observing just on scallopers out of NB. So I left working on *Ernestina* and applied to this. The observer program sometimes gets students right out of college with very little... work experience or boat experience and I had tons of on-the water time. I had never been sea sick...

JO: You could have Captain-ed the boat at some time!

CB: At that time I hadn't quite gotten the license and I was still working towards it, I hadn't taken the test yet.... So I started working as an observer and of course I just said I never get sea sick, so the first scallop trip or 2, never brought any medicine with me, I mean, come on I've had a lot of sea time, I don't get sea sick. One scallop trip out of here on the *Celtic*, I left mid-November, he said we're going to leave in a gale but it should diminish but we should be fine. Well we left in the gale and ... I figure if you love roller coaster rides then sea sickness isn't a big deal, you kind of like when your stomach is in different places as your stomach going up and down. So we're going out there, I'm fine. The next morning I wake up and say wow, I'm not really feeling great, and I got sea sick. I sick, throwing up, the whole works, and I was surprised because I'd never been seasick before. But it was just as I'd imagined it, it was like having a really bad hang-over and you never knew when it was going to end, but actually, after a day of being sick, I ended up being fine. So it was one day, and then the crew were making fun of me, "so how are you feeling, are you sick", as I was heaving over the side, I noticed I did not have chili the night before and there was some other remnants of puke on the side that was not mine, so I was not the only one seasick. Of course I was the only one who was made fun of for it.

12:23 JO: Well, you were the observer.

CB: Exactly, and the only female on board as well, so yes, that ended up being about a 2 week trip and the weather ended up getting worse on the way back in and I was fine. So now I know, sometimes on different... and I've worked on a lot of different fishing boats enough to know that certain boats, sometimes the way they move, will make you not feel... and a lot of it.. if you're dehydrated, tired, that can affect it to. So I always take something with me, don't usually have to use it but... so I feel like people... "I never get seasick".. well then you haven't been to sea enough. Because sometimes it can happen.

JO: I made that mistake once too.

CB: I heard someone say that to me before once, well then you haven't been to sea

enough and I was like, I'm going to start saying that because I think that's right. When you haven't been in enough situations on different types of boats that maybe you can get sick on. So that's how I ended up back in NB, and then the observer program has some great things to it, but you're just collecting the data, so you never get to deal with the experimental design of the project, you don't get to deal with even analyzing the data after, you're just out there collecting. Which is actually what I like to do I like to do the field work, that's part of the reason I didn't go back to school right away, I like working on different peoples projects, learning about what they're doing but not having to crunch the numbers and not having to apply for grants for money to keep paying for my research. I figured I wanted to do something else. And then a job opened up at SMAST and I had even as an observer had gone in to talk to them because the fishermen would ask me, I get these tags I don't know what the heck these are for, because they tag the scallops. So I went in 2002-2003, went in to talk to Kevin Stokesbury who does that project and ... out of nowhere I said hey I'm an observer, I want to learn more about what you guys are doing so I can tell the fishermen. He spent like an hour with me, going over stuff, and giving me some info to give back to the fishermen, so this was, again, before I decided I did want to pursue a degree. So I had some connection with them from before so I could pass the info on to the fishermen about stuff. And I did observing for awhile I ended up going to FL to do some observing for the shark longline. I also, again, trying to think of what type of research project I would want to do, sharks, etc. so I went to work for the University of FL for their observer program and that was actually a little better because you worked for the University. So I worked right with the graduate students that I'm out there collecting their reproductive tracts and vertebrate samples and I'm bringing it back to them. So you have a little more connection with actually what's happening with all the stuff you're bringing back.

15:24 So I did that for while but ended up coming back to NB because my now husband... we worked on *Ernestina* together, now was one of the captains of *Ernestina*, he was still working with *Ernestina*, so I came back up here. And I decided I didn't really want to stay in FL, I loved the Keys but mainland FL is a different ball game. And still there wasn't anything for sure, I knew I wanted to stay and study, so to kind of... so I came back up here. I knew there were opportunities, I knew Division of Marine Fisheries was up here, and I really.. being in NB you do get kind of into what's going on in the fishing community, especially again since we work right next to... you're down on the State Pier all the time, so you kind of... so I decided to come back up here, and I did some more observing for a little bit and applied to work at SMAST and ended up working with the groundfish again, doing the tagging stuff. So again, I took the job and I still, with the thought that I want to do my Master's now, I've been out of school for 13 years and I'm like alright, maybe now I should try to get a better degree. And I'm still not quite sure what I want to do my research on, except I do think I want to do it with monkfish, which isn't studied as much as cod. I like doing the tagging projects we work on now, right now is cod and yellowtail. But so little has been done with monkfish. And I worked on some of the gillnetters out of here through the observer program, I knew a lot of the monkfish gillnetters. For either fishing with them, or... I ended up being a coordinator for the observer program so I actually set up trips for other people and I did some trainings so I got to know a lot of the fishermen even though some of their boats I hadn't fished on but.. so I knew a lot of them from the docks. So now working at SMAST, recently

a proposal came up, a request for proposals to do research on monkfish. So I put together a proposal to do some tagging with monkfish. It's cooperative with the fishermen so I already knew some guys that would be great to work with that had some good size boats. You always take into account, do some research on a boat this big. Because some gillnetters are tiny and So I talked with a bunch of the fishermen and I have 5 that want to help out with the project right now. I'm hoping to get some from the north. But yeah, so that's where I am right now. Is that long winded?

JO: Very thorough! (laughs)

CB: Is that it for questions; I don't have any more to say! (laughs)

18:05 JO: We're on track here. You know one of the themes of the Festival is women in the industry and in science, and there are a fair number of women scientists, but not many in the industry. I'm just wondering since you sort of move towards both, what your experiences have been.

CB: It's interesting. On the docks and on the fishing boats, women are still not completely accepted. In some respects they are, until they see you out working,... like I've been on boats before, or I've even talked to a captain that says they never let a woman on my boat except to clean it, until I was forced to take an observer. A female observer and he said she worked harder than some of my crew. He completely changed his perspective. So as much as a lot of the guys complain about the observer program, guys that I was setting trips up said they would rather have a girl, because they work harder.

JO: Do you think women feel they have to?

CB: That's part of it, part of it I think is the women feel they have to prove themselves. So you might work harder and yeah. I think that is a good part of it. And then of course you have some guys that say they don't want a woman on the boat because their wife will get upset. And I still hear that. Sometimes even now, I mean, again, through the observer program, women have been on boats and the guys have gotten used to it and just dealt with it. I've been on tons of boats with no head facilities, no toilet, but everybody's very respectful. And again, as soon as they see that you're working and you're not a slacker, you get respect. But you do have to go out and prove that, but so does anybody. For you to be a crew on a boat, you have to go out and work and prove you can work. But yeah, I think it is true for a woman, you definitely feel like you have to prove it as well.

JO: I suppose anyone that's not from a fishing family might feel they have to prove it or do you think it's different for women.

CB: From my perspective, but part of it is my regular work ethic, you want to do a good job no matter what. That would be an interesting question overall, but I do think women feel like they do have to prove more. Even in academia, as well, like right now, we don't have any women professors at SMAST, in SMAST. Just now they hired Cindy... I can never pronounce her last name... she's in the Estuarine and Oceans Dept. So SMAST is broken up into 2, Fisheries Oceanography and Estuarine and Ocean Sciences. She just got hired as the first woman professor in SMAST and she's in the Estuarine and Ocean Science Dept. There's other women biology professors at UMASS. So most of our faculty are all men. But now, at my level, the technician and the graduate students, it's either even or sometimes more women. So definitely the trend is changing and I think there will be more of an even PhD level professor level coming in. But it's still, even in science you still see, in the upper level there are not as many women. And then of course

you come to the whole family issue, because that... I have 15month old daughter and now I'm pregnant again. But this, I actually thought of it, but if this research proposal gets accepted that I put in for, I have to start fishing in May, well my baby is due in March. Doesn't give me much time to hang out. My maternity leave is a bit longer. Any job that you have field work in, where hours and random times, you have to try and balance that. But I guess I never really thoroughly answered your question about being on the boats, having the women on the boats. Do you want me to go back to that?

22:14 JO: If you have something to say, sure. Because you were an observer for a couple of years?... were you ever on a where there were women on the crew?

CB: I have not been. I did, when I was doing the coordinating and setting up trips, I had met Ava, who is a captain of a scalloper, and I was like, wow, that's so great. But also working on the sail training ships, like *Ernestina*, we had women captain, women mates, On the *Picton Castle* the second mate was a woman. And there are other women crew. In the sail training world there are more women with bigger licenses and roles. But in the fishing world, no. I know I worked on one scalloper once and they were teaching me how to cut, and they were like, hey, you could go work out of Provincetown, there are some women that work on day boats out of there. And they laughs and said yeah, we're gone too long. And I was asked once, why aren't you at home having a family, why are you out here doing this with us for 2 weeks. I think in the fishing world, it still isn't quite as accepted... actually, I recently did a trip. So now after my daughter was born, I'm kind of jumping around a little bit.... We have a group of draggers that work out of NB, this is with SMAST, its cooperative research, it's called the study fleet program, so we have draggers that go out, and collect almost the same information observers do but the fishermen do it themselves. They record for us weighs of kept and discards, we give them a digital scale. They take lengths of fish for us, same thing observers do, same type of length board and they record all this data for us. And I did a trip, my daughter was almost 5 months old. And of course the guys knew me, they saw me pregnant, we were doing some of the training, they knew I had a family. And they didn't give me a hard time on the boat. But they gave my boss Dave Martins a hard time, "why did you let her go to sea, she's got a bay at home?" So there is still little stigma to a woman at sea, a mother at sea. Which I was surprised about because it wasn't said directly to me, it was said to Dave and my other boss, Steve. How come you let her go, she's got to be home, she's got a baby. You just shouldn't be at sea. We were gone for 9-days. It was a little tough on me, you're gone from your little one. My husband is great, he stayed with her for the 2 weeks, he got some help here and there. There was a little bit of, you shouldn't be out here, type of idea. But for the most part, you learn a lot from working with the fishermen. And as much as some things are tough being an observer, it definitely gives you a whole different perspective that people in management don't really have right now. Guys complain to me all the time, about having to take observers all the time, and the management doesn't know what they are doing. I said, one of the good things is there are so many observers out there that are interested in fisheries science and management, you're going to start getting people making management decisions that have been on a boat. And know the reality of what it's like to fish. And know what some of the management limitations can do to a small day boat that's trying to fish here... they are like blhhh, still not a good enough reason for them to take somebody. But I definitely value that experience just because you know what it's like and what really happens on the

boat. And now it's helped me to put this proposal and I have a bunch of guys right away that say they will help out with the project. That's been pretty beneficial.

26:12 JO: So you didn't grow up with fishing as part of your family.

CB: No, my mom can't even swim. No, my father is from Illinois on a farm. I had no connection to the ocean.

JO: So what drew you to the field?

CB: Wanting to scuba dive and I always thought fish were cool, they are just pretty neat. I did decide in Australia, corals were neat, but they sit there. Fish, on the other hand, move and change color, and sometimes change sex. They are crazy, they do all these different things. And as much as sometimes I do miss the warm water, water you can see through, there is something neat about working up here with the traditional fishing family. Some of these guys that I would talk with during the observer program, since I was setting up trips with them, you spend a lot of time talking with them. Some of them, "my cousin is on this boat, my uncle is on that boat, oh, don't do on his boat, he's nuts!" It's in their family, in their history. I don't have any of that with me. But you give it respect, because its peoples lives and generations of their livelihoods. It's pretty neat to see that type of tradition in New England. It's the small boats that get hurt the worst with all these management issues. And those are the guys that are just trying to keep it going. You hope that whatever does happen that they can still keep those small day boats and those smaller fleets fishing, because it's tough. The big guys can take it sometimes, even the big boat, the owner, those are the ones that get hurt. And they are very adaptable, the fishermen, once one regulation comes up they'll do something else to try and keep fishing.

28:22 JO: A lot of people talk about the antagonism between fishermen and fisheries scientists. Fishermen think scientists are all wrong and they have their own way of doing things. How would you characterize that?

CB: In a way, sometimes the fishermen make valid points, "why are we fishing here" or "we have to do this experiment here when the fish are over there", and I have the same questions when I was doing the shark, working with commercial guys going shark fishing in Florida. We're hauling up tons of huge sharks, hammerheads, bull sharks, good size, tons of them. You set your line up and you get them, they're there. Then I did a research cruise with NOAA in the same area and caught nothing. That's what I'm learning now, I don't have an answer for that. I know some of the NMFS surveys are done with stratified random sampling, and some of the stuff I'm just learning. When the fishermen have some of those questions for me, I don't really have a good answer for them, I don't know why they do it that way, but there is a reason and methodology behind it. Here I am on a commercial boat and get tons of sharks, and you guys are doing like 1.5hrs soak time, where on commercial boats it was over 8 hrs, ... so I'm still going to go back to that personally, I'm going to find out more about the shark survey and why they set it up that way, because there was such a difference. And I'm working on a research boat where no one else had been on a commercial shark boat when I was on this NOAA research boat. I tried to ask the head scientist why they do it this way and he kind of explained it to me but it wasn't making sense to me. So the fishermen do have valid questions, and there is usually a really good reason why some of the projects are set up that way. But the NMFS surveys were not set up to work cooperatively with fishermen, they are starting to now they are actually doing some more projects that are, monkfish survey, that they do with

the *Mary K*, they are incorporating more of the fishermen's expertise and knowledge into the project.

30:57 Although I still... the design of the experiment I don't... for the NMFS ones I don't know how much they use the fishermen's ideas. For some of our projects, they are involved in the beginning stages. Cooperative project we did with the fishermen and DMF and radars, they helped design a net, trawl net, the fishermen got to pick some of the sites, but still we were confined to go in closed areas. So they helped to pick where we were doing some of the tows. It is becoming more inclusive and using their experience and ... so I think they can understand better why it is set up that way. Like "why can't we go into the closed area", I say "well we have to get an Experimental Fishing Permit for that which takes about 2 years and we're using Grant money which has to be finished within this year." So there is always, ... there's usually good reasons behind why they are not doing it differently. But in order to keep... prove to the fishermen that it's worth it they need to see some positive results from it. So that's one reason why the scallop industry, the research that SMAST did with that, helped open up some closed areas for them, so they, right away saw some positive results of some science. Now the groundfishermen haven't been quite so lucky lately, there hasn't been any, they are still learning about some species and at this point management has to be conservative because they don't know a lot about some population status'. So I hope that sometime soon there is something good that comes out of science that can directly affect the groundfishermen. But right now it looks... there are still population studies going on, some of the tagging has opened eyes into the movement between stock areas of some of the fish. But it's still great information and still making management better, but it isn't such a quick, not dramatic, not really quick. Some of the stuff will take another year before it gets into the next stock assessment. So even though there are some great new info that may tweak what they think the population size is, it's not going to be such a big affect. Everything that scientists are learning now, relating to fisheries management, is helpful. And a lot of times it does look better than what had previously been estimated. Like just recently with the monkfish, they had a stock assessment workshop where based on the NMFS surveys they thought the population was overfished, but then with the new cooperative survey info and some other data that they added into the population status, it's actually better than what they had predicted. Because they used more information, there were more studies that had been done. So, again, it's not huge benefit right away, some of the guys might get some days back, but that's still not even sure. You kind of want results now, not in a year, not in 2 years, because they don't know if they'll be around then if they can't fish. They only have 12 days this year to fish, for monkfish.

34:35 JO: How is it working at UMass, there is a good relationship with the fishing community, does that really affect how you can do your job?

CB: Yeah. It definitely helps. Again, for all the projects, we compensate them in some way, we usually pay them a certain amount a day to use their boat, so that helps. Some people say they are in it for the money, but no, you need to have some type of compensation. We don't have a research boat, we use them, the amount of money it takes to upkeep a research boat... the least we can do is pay them to take us out for a day or to collect data for us for a day. So it's really nice to have this working relationship with them and I must admit it was really nice when people said "you still working for the government" and I said "no, I work for the University now, we do cooperative research

and we actually compensate you, so if I ask to come out on your boat, we'll pay you in some way." For me, it was great to be able to say that.

JO: Do they treat you differently now that you work for UMass?

CB: I can't wait to run into one guy, I can't wait to tell him. A little bit. Not too much. I think they know SMAST, the reputation, because of the one scallop project, it's a pretty good reputation. Some people ask if we need their boat, help out with any projects, "I'm a lobsterman, I don't work the lobster research, but Brett does and I can get you his number". So that's kind of nice. Even when I was still working for the observers, when I was applying here, I knew some of the people that worked at SMAST, so I could get some... I would tell the fishermen about SMAST... "they do cooperative research stuff." I gave some fishermen's names to SMAST before I even worked for them. That they have this kind of boat, would be willing to help out with this project. It is nice.

JO: You know the industry so well and I was thinking so many of the people coming to the festival, certainly some of the people, may not be that aware of the fishing industry and what the people are like. Is there something that you think they ought to come away with knowing, if you were organizing...?

CB: Know that they are the hardest workers I've ever seen in my life. They work so hard. Especially the scallop guys, I've seen boats... they all work hard, but scallopers work,... you're cutting around the clock. Draggers you get a little bit of time in between tows, it's still hard work... who is going to hear this.... And gillnetters, you get some time in between. But scallopers go around the clock. I mean they take a break obviously for food, but there is always something to do on a scalloper. So sometimes for me, I like being on a scalloper, you have no down time. If you were done filling out all the paperwork, filling out all your species stuff, you cut scallops or do something. You don't have any down time... you could if you wanted to but.... On draggers, "oh, you have another 2 hours until the end of this tow".... But I think I would want people to take away that they are hard workers. They want to see the resource saved as much as the scientists, as much as any one else, as much as Oceana and Conservation Law Foundation. As with anything, there are 2 or 3 different ways to get to the end result. So not everyone agrees on the best way to do that. No one really knows to be honest with you. But they are hard workers, they are good guys, eat fish.

38:34 JO: I think there is plenty of that out there!

CB: Yeah, exactly. And be careful of what they say in the media because it scares people away. Even with the red tide stuff, people weren't eating scallops, and it has nothing to do with it. And same thing, mercury levels, some people stay away from fish, it's not as bad as the media can make it seem sometimes. Especially for the amount of fish we eat. But anyway... I guess respecting that they are hard workers and talk to them before you judge, should be with anything but not always.

JO: I have another question for you. I have my oral history questions and they're all for different... the questions for fishermen, for lumpers, for processors, but nothing for fisheries scientists. So I've been winging it. Are there questions I should have asked or that people ought to know about scientists.

CB: You asked about working on the boat. I guess wonder, no one is really asking, but I wonder sometimes, because I do work with the fishermen, do you get your own bias.

JO: Ok, I'll ask that question for you now.

CB: Do you get bias. Sometimes I feel the managers can be biased. So I guess the

biggest, or some of the scientists have to be aware of bias. Especially when you are trying to work with the fishermen but stay scientific, you want to keep them working, you want to keep their livelihood going...

JO: Can you be neutral if you're friends with them.

CB: Right. But then you still want to see the stocks recover, you want to find this balance, and you still want to have a pretty sound project, you know, scientifically. I'm not really sure how to answer my own question or what the question was, but...

JO: I guess that's the tension you have to try and negotiate.

40:50 CB: You're trying to balance this line between... because sometimes I feel I am a little biased towards the fishermen because I work with them. I feel like if these managers make decisions and they've never been on a boat, how... but they are just thinking of saving the stocks. So that is something I think about a lot because you are trying to walk this line. I don't know what the question would be, but do you feel like you're biased, either one way or the other. I have a good friend that works for Oceana and so he has asked me some questions and I automatically get defensive "you don't even know, you haven't been on these boats. You want to shut down the scallop fishery for some turtles, there are ways around it, maybe shut down areas in the more southern portions where they are catching them in the summer. So I get this little bias to protect the fishing industry, so you can't have that cloud your science stuff. Which I don't think it does, it's more like in the social situations or when you read stuff in the paper, it's more in those situations. Because you never know really what you're going to find from some of your research projects, so I don't think it can be biased that way, in terms of your experiment.

JO: As an anthropologist, there is a whole debate about whether anthropologists should be advocates as well because you talk to people, you hear what they say and how could you not advocate. But then are you not being biased if you do that. It seems to me that SMAST is trying to make that balance because they do a lot of advocacy work as well. Would you put yourself out there and be an advocate if you thought it was the right thing to do?

43:06 CB: An advocate in support of the fishing industry?

JO: Right. If your project lead you to certain results.

CB: Yeah, absolutely. I think I would be.

JO: And if results were not what you wanted them to be, then how do you think you would manage that? It's very abstract, but...

CB: Yeah, I'm trying to think of a situation, like there were a lot less monkfish, and the result would be their days would be cut or they couldn't fish anymore... yeah, you'd hope that wouldn't be the case! I think the reason why there is such strict rules is because there is so much uncertainty in population structure, so I kind of have the perceived notion that the more science you're going to get is going to be positive for the fishing community, because you'll have better ideas of the population size instead of being conservative, being like "well, we're not sure, this is what we think, so we have to keep it low." But if it came up the other way, and yeah, the stocks were down, I don't think I would have a problem with those results, other than you'd hope that management could do something that didn't completely let these guys... put them out of business for good.

JO: Right, look for the alternatives.

CB: But even if it's positive or negative, I don't particularly at this level have any control over that. Neither does my boss, he helps with the stock reports, but that's still another

step, the management decisions. There is still another whole level that even if you have the best science... But what was kind of interesting, is since things have been done the same way for so long, people don't like change. In terms when it comes to changing the stock boundaries, because there is a lot of back work that has to be done and that to me is disturbing from a scientific point. If the science shows you there should be a change, stock areas, or whatever, then the work needs to be done to change that. Hire more people, do something. If the science shows you that then it needs to be done and you feel there is a bit of resistance so it has to be rock solid and even if it is rock solid it would be tough to change, so that's a little discouraging. Because here's all the science saying here is what it seems to be, but again... it's tough. Even if a lot of the science points in that direction if there's any uncertainty it can be disproved or not taken into account with enough momentum to change something. So that's an issue.

46:26 JO: So that's what you're up against.

CB: Yeah, 'cause I went to a meeting and it had to do with tagging. There's a huge cod tagging program all over the Northeast, so the question was that there is so much movement between these two populations, should the boundary change? It was like, yeah there probably should be, but is it worth changing that for what we think because tagging is still, the beginning and the end. And still some scientists don't believe it, well who reported, what if they didn't report it right, how do you know the fish really went that far, even... so yeah. I don't know if I really answered that well.

JO: Well, it was a vague question.

CB: And that's... sometimes the science can be vague!

JO: Indeed!

CB: So, are there any other question?

JO: I don't think so, unless there is something else you want to say.

CB: Not in particular. It's a neat opportunity to work with the fishermen and with the scientists. I still can't say after all these years of being out of school that I'm really syked to go after my masters. And I definitely don't think I'll go after my PhD. It's definitely neat and pretty interesting information.

JO: And this is a great place for it.

48:00 End of interview