Interviewee Name: Marina Cucuzza

Project/Collection Title: Voices of the Maine Fishermen's Forum 2018

Interviewer(s) Name(s) and affiliations: Matt Frassica (The Briney Podcast) and Corina Gribble (College of the Atlantic intern)

Interview Location: Maine Fishermen's Forum, Rockland, Maine

Date of Interview: March 3, 2018

Interview Description: Marina Cucuzza Boston, MA Marine Researcher Interviewed by Matt Frassica with Corina Gribble

Marina Cucuzza, a marine researcher from Boston, MA, is currently working on her thesis which assesses the capacity for sustainability in coastal communities. She discusses buzz words such as resilience and sustainability which she finds important to define and what she has come across in her projects so far. She talks about her experiences working on a whale watch, living in Canada, and working intensely with people as well as how her experiences have driven her interest in science and given her an understanding of how multifaceted situations can be.

Collection Description:

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Transcription by: Ela Keegan, College of the Atlantic intern

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MF: Matt Frassica (Interviewer) MC: Marina Cucuzza (interviewee) CG: Corina Gribble (intern)

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MF: Alright and um can we start by, can you just tell me your name and how to spell it?

MC: Okay, my name is Marina Cucuzza and that is M-A-R-I-N-A C-U-C-U-Z-Z-A.

MF: Alright, and where are you from?

MC: I'm originally from Boston, Massachusetts um but I moved up to Bar Harbor, Maine to um start my undergraduate degree at College of the Atlantic and after that I moved to Orono to do my graduate degree at the university of Maine.

MF: And what do you study?

MC: Right now I am enrolled in a dual masters degree program which is um a three year program and it's two masters, one in marine biology and one in marine policy and I am part time based at the Darling Marine Center.

MF: What's the Darling Marine Center?

MC: It's the university of Maine's marine lab um which is on the Damariscotta river and it's a remote campus where we do a lot of our fieldwork and um have access to the water because Orono is not coastal obviously, so it's really nice to have a lab to be on the ocean and work with um industry there as well.

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MF: and what in particular do you study?

MC: So my thesis is focusing focused on assessing the capacity for sustainability in coastal fishing communities. Um so, I'm in this collaborative project which is part of a NOAA Saltonstall Kennedy Grant. And that grant is really focused on improving economic conditions for Maine's coastal fishing communities um and we're calling this project the Maine Coastal Community Resilience project and it's a partnership between the university of Maine, Maine Centre for Coastal Fisheries, um and the Department of Marine Resources from the State of Maine. and the goal of this project is really to take a sort of wide lens and understand what um, what is resilience and how are Maine's coastal fishing communities prepared to deal with changes um like climate change and socio-economic change and so it's sort of um, it's in the very early stages right now, and we have some pilot communities

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MC: um in the midcoast area, but the goal is to sort of do some really deep work in those communities and then scale it up to the whole coast of Maine. Um and my primary advisor is Heather Lesley and she's the director of the Maine Centre and she's done a lot of this work in Mexico. So her work there is focused on fishing communities, small scale fishing communities in Maine and so we're trying to take the frameworks and the approach that she used there and bring it to Maine um and a lot of that has been going to a lot of community meetings and trying to understand people's perceptions of change and getting access to a lot of confidential data through the state and trying to like and summarize that and give it back to the community and it's really a community rooted project and um so that's been really interesting for me to sort of, I'm used to doing the science part, but now taking the science and bringing it to the communities and having that sort of feedback loop has been really fascinating.

MF: Um is resilience a particular concern in Maine because uhh you know so much of the fisheries is based on one resource?

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MC: Yeah Right, so resilience science is like this sort of buzz word, but like what does resilience mean? and that's a big question that I'm interested in and you know the ideas that resilience can doesn't necessarily mean a good thing, you can be in a bad resilience state. But the whole idea of resilience is that you can maintain that state in the face of change. And obviously we want good resilience, but there is a lot of qualities that would lead to resilient communities and not so resilient communities. So some of the things we are looking at is okay does the resilient fishing community it's diversified right that's important to resilience - there is access to different resources, there is access to the water, there is you know fishermen can switch licenses and have different you know opportunities during different parts of the year if there is something like a you know a die out or a disease that comes through they are diversified. That's a big key. They have access to education and things like that. So what are the factors that contribute to resilience and do we have those?

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MC: and a big part of that is creating this framework and then once we have that framework, doing this comparative analysis. And then the biggest and most important piece to me is once we have all this data is actually giving it to the communities and giving it to the state and saying like "what do we do with this?" So clearly we are not resilient in these particular places in these ways, so how do we make policy to improve that? How do we work with communities to contribute to that? Um one of the communities I'm mostly working with is Georgetown, Maine which is a small community in the mid coast and they are really interested in aquaculture as a key tool for resilience. And a lot of the people there are engaging in aquaculture for the first time, they are clammers or they're commercial fishermen and they're using this as sort of a tool for livelihood diversification um which has been really interesting so we're sort of learning all this together and it's been pretty cool.

MF: What kind of aquaculture are they doing?

MC: Right now it's just um oyster aquaculture but they are looking to go into quahog as well .

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Um It's pretty early in the stages and this is community-based aquaculture so they are doing this effort together. Um and they can apply for grants and things like that, there are a lot of benefits to doing it in a group instead of like sort of doing it on your own, um so it's been a really interesting experience for sure and yeah everyone's really excited about it. And um this is like our first sort of test community for this project, but I think we're going to look into Boothbay in Stonington as the next um communities that we are focusing on.

MF: So when it's community-based, what does that mean, does that mean that it's like not one person who owns the permit?

MC: The lease. Yeah so it's like owned through the community and then people have certain sections that they fish in. Umm umm excuse me. So that's sort of the community approach idea. Um they are doing a lot of collaborative learning and um things like that which can help them better prepare for this instead of just doing this, you know, it's kind of a lot of paperwork and things like that. It's a little bit intimidating especially for someone who's not experienced in it coming in so this sort alleviates some of that concern or confusion and just gives like a better resource to do it and it also provides a lot of like personal stewardship and ownership. Like it's in your backyard and you're working with your neighbors and think it creates a whole other level of um care for this resource and it's, I think it's only in the first year of the project but it's been really cool to watch them be excited about the oysters growing and like trying to figure out where the best spots to put the oysters are and seeing them you know, go through that process it's been really interesting for me.

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MF: Yeah so that's that's um when you say you're talking about expanding the project - your part is is studying what the fishermen are doing or not necessarily helping them set up that aquaculture.

MC: No, my project is more um yeah it's more from like a larger perspective like what are communities doing. How are communities responding? You know we talk about sustainability, it's another one of these big buzz words, well what does that mean, what does that look like?

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MC: What are concerns that fishermen have? And it's cool going through the Georgetown community because they are in the process of redoing their comprehensive plan. So this is a plan that you now Maine's towns are required to have and the whole idea is you make this plan and you plan for your future. Um and one of the projects I'm working on is like part of this grant - part of my thesis is um

what were comprehensive plans like intended to do and what are they doing now? Um because part of them is supposed to be inventory, you know how many houses are there? What are the conditions of the houses? And there's this section of that that's marine resources, inventorying marine resources. But it's interesting to think about that in a sustainability framework and a resilience framework. Are we just listing what we have or are we thinking about how is climate change gonna impact, this what is sea level rise going to do to these oceanfront resources? What is ocean acidification going to do to the clams that you are so dependent on? And are we thinking about those things? So these are all the sort of things that happen in my brain that I'm sort of working on. But the comprehensive plan process is an interesting one to think about that I'm, I collected twenty plans from coastal communities in Maine and I'm doing an assessment now of them under a resilience framework to see: are we planning for resilience or are we not? and um this should be a part of our planning process if we're planning for the future, these are things that you know maybe we want to be concerned about so.

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MF: Yeah, What concerns you? What do you worry about happening in the future?

MC: That's a really interesting question. I think that my biggest concern is just the single dependence on lobster and um warming temperature and lobsters migrating and shell disease being a part of that. There are so many compounding factors that I think there's a lot of uncertainty and I think that there's not a lot of planning in response to that it's sort of like: well things are good so we're happy with that, but you know what happens when they're not good and are we prepared for that?

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So sort of this compounded like single dependency and then, you know my advisor Josh Stoll has done a lot of research on the license portfolios of these fishers and he has some really amazing papers about this work and a lot of his work has sort of focused on how Maine's commercial licensing has really splintered off to these really tiny licenses and you can only get one or two licenses, you know people aren't diversified in what they actually hold for a license, it's getting harder to get these licenses. So even if you recognize that diversity is important, can you actually access these licenses? Are people able to do this? Or do they have to completely leave marine you know fishing and do something else? Um and I've talked to a lot of younger fishers and they tell me like "Oh it's really hard to get in too." So what does that mean? So this, there's a lot of issues, but I think the biggest one is the sort of single dependence and lack of planning.

MF: And what kind of feedback are you hearing from the community members when they tell you what they're concerned about? Does it overlap with what you're worried about or are there differences?

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MC: Oh yeah. Absolutely I think each community is different for sure that's um you know some of the issues in George Town the biggest one is access you know do they have access to the waterfront and

what does that look like? That's a big concern right now for that particular community and I think it'll be interesting to see how those issues change from time to time and place to place, um but yeah I think I've learned so much more from the community than I have from reading papers about what resilience means. So it's really important to me to do this collaborative type of research and it's one thing to say like oh here's like this framework for indicators of resilience and you can add up all these things and say here's your number, but like okay what does a ten mean and how is that impacting someone who, whose family depends on them to be outside fishing. So I'm just really trying to be mindful of that and making sure that the science that I do is applied and means something to people. It's one thing to just do the research but to actually have it um you know be significant to policy and change is important.

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MF: Yeah um can you tell me more about what's happening with access in Georgetown? What are um some of the barriers to access?

MC: I think the biggest one um is just there's not that many places they can launch their boats and things like that. There's some that are privately owned and there's confusion about ownership and things like that so again like single dependency on this one place to launch your boat. What is that going to look like for the future? There's not a lot of parking in the area and a lot of like Maine communities I feel like are faced with this question of like "what does our future look like?" Like they're promoting tourism but is there actually infrastructure to support the tourism that you're promoting so yeah you want people to come and visit the parks and visit the ocean but are there places they can park safely? Is there actually like infrastructure to support this tourism? Do you want to be a town that's touristy? What does that look like? Where are people going to eat when they come and things like that? So yes there's this really interesting like juxtaposition about like wanting tourists to come but like not actually having the infrastructure to support them so I think that's a question that they are wrestling with too right now and the comprehensive planning process are really interesting way to analyze these questions because they are planning for the future and they're putting this into a text that is, you know, what they say they want the future of the town to be, so, I think it's really interesting to to a really interesting window to analyze these types of questions.

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MF: What do you like about working in communities like Georgetown? What do you think is valuable about them?

MC: Oh man, that's, there's so many things. Um for me it's, you know I didn't grow up in a fishing community, I'm not like personally, like I didn't grow in this type of area but I've like very much like fallen in love with like coastal Maine and I think these coastal communities are like the heart of Maine, I think. Probably biased because I work there but they, the people who work on the water have so much to offer and they know so much and they have so much local knowledge that I think the science has a hard time like catching up with and they are the ones on the ground so they see things before we do.

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Umm so building connections with them, trying to understand what their concerns are, that's the whole reason for me why I do science is to inform the people who, to help you know, address these challenges like climate change and things like that and um yeah. So I think it's really important to be connected to the coastal communities and hear what their concerns are and um what their fears are and also we have connections at the university so I can do this mapping for them, I can get this data. I can you know things that they might not be able to do, like when I walked into the first meeting they had a bunch of maps like rolled up in the corner and that was their mapping and I was like "okay we can do something about this." So being able to provide data that's useful and um I think that's really helpful for them and they are really excited to partner with the university for sure.

MF: At the same time as you're you're valuing their knowledge and um building on their sort of know how, have you encountered any resistance coming from the university into these places that, you know traditionally the industry has seen scientists as more like interlopers interfering in some way?

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MC: I think that it's all about the approach, I mean I know that exists but I feel very lucky that I haven't faced that. I'm an outsider for sure but I come to these meetings but I and it still has taken me a long time to like sort of build these connections but I think the way you come in is very different. Part of it helps because I'm a student and I just, my attitude has been I want to learn like you know please teach me not let me come in and give you my resources, but I think if you come in with an attitude and this is something I've heard from a lot of people who work in communities is you know, they're the experts, you're learning from them and then once you learn and you build that knowledge and those, that trust, because it is a lot about trust, then you can sort of say well you know I have these ideas, what do you think? Like I'm trying to insert my thesis into this community planning process but I didn't come in saying like "can I interview you guys?" It was you're already interviewing people for this planning process, can I add a few questions that you might also be interested in.

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So finding creative work arounds and like and then they're like oh these questions are really cool this will help us with our plan too and I'm like okay so we can work together on this um and a big part of that is the approach and you know the whole scientist know more things like hierarchy I don't believe in that and I feel like I'm trying to be very sensitive of that and luckily that approach has worked really well for me so I think that's what I'll continue to do.

MF: Sounds like it. Um what got you interested in this kind of work to begin with?

MC: That's a great question. So I did my undergrad at College of the Atlantic and COA's a really amazing school and I got my degree in human ecology which is the degree everyone gets there and I

was really focused on human connection to the ocean in a broad sense um anthropogenic impacts on the ocean. How are humans impacting the ocean? um and through COA I got a lot of opportunity to work with Allied Whale which is the marine mammal research group at the college.

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MC: So I was doing a lot of really interesting whale research and I spent a lot of time doing internships. That school's very interested in hands-on work so I was fortunate enough to get internships and spend a lot of time working umm outside of the school and I did an internship with The Bar Harbor Whale Watch Company, and I spent a lot of time on boats and um it's actually really funny my very first whale watch I saw an entangled humpback whale and it was my very first trip, I had never seen a whale before, I didn't know how to use the camera. They just kind of put on the boat and they were like "you know it's early in the season you won't see anything." And here I am this like seasick intern trying to tell people about this entangled whale and people are like crying and I'm like having this like gut reaction that I'm so angry about this situation. My first response was anger. I see this very distraught animal that has scars all over it and it you know it's breathing really rapidly and I know it's not okay and I'm trying to tell people like what are we going to do to help this and I'm on the phone with the entangle you know disentanglement group trying to get them to come.

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MC: and we were stuck there for like three hours just like waiting for them to come and it was really interesting to see people's reactions. Like some people were like super angry at the fishing community, some people were like "I'm you know I'm going to be a vegetarian after this, this is what happens", and other people were like "Can we go home now? Like we've been here". So that like really interested me in like peoples perceptions um but also my own understanding was like my first reaction was to be angry at the community, but then you know after taking some time away and like through my class work I really learned a lot about fishing communities and fishing in general and Maine and my attitude completely changed um you know this is a sol…, there's no creative, there's no one solution to this problem and it's a problem that is very multifaceted and complex um and so really working with cetaceans was my first window into these complex human problems and I realized what really fascinated me was not just the ecology of these animals and you know some of the hard science about this but also like people are so involved in this and we have, we can't just study the animals without considering the people.

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MC: So I spent some time in Alaska um doing classes there and I learned a lot about indigenous communities and how you know their whaling works and so all these experiences has sort of just driven my interest in science, but then I also did some internships that were very hard science and I was sitting at a computer all day and I was measuring the sediment with acoustics and I had this opportunity after I graduated I did some other internships, I worked at aquariums, I did outreach, I did animal rescue. So I was doing all these different things and I loved all of it and um I had to decide what I wanted to do for grad school and I had interviewed a few places and I was sort of given this

toss up between opportunities to do really hard science and opportunities to like come back to Maine and do applied science and for me it was like a no-brainer. After, Especially after visiting these schools I was like you know what I need to come back to Maine. Um so these questions of human impact on the ocean, these questions of how we are planning for the future.

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Um those are the questions that fascinate me. Conflict fascinates me um and I think having like a biology background really helps me think about these differently because yeah I guess my I'm more of like an analytical thinker and I'm trying to approach these really complex human problems and then you add policy to the mix and it's this whole other issue so yeah I'm fascinated with all of these things, but for me just doing like single science work that's very focused on you know just like getting this job done is not fulfilling and I need to. When I was doing that work I felt felt really unfulfilled so I wanted to to have work that was tied to people and tied to important issues. And now I'm taking all these policy classes and I'm really interested in policy so maybe I'll go work in DC after, I don't know.

MF: Can you compare and contrast the what you saw in the communities in Alaska versus Maine. Not necessarily like their fishing practices necessarily but like the the community itself.

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MC: Yeah that's a really good question and I don't know if I've fully processed those differences yet myself, but Alaska is just a weird place. It's totally different. It's like a frontier attitude very much so, like people are very, I don't know, it's like really rough and um the tourism there is really weird too like you it's very like some places are very touristy and it's like picturesque Alaska and here's this moose. Take a picture of this moose and touch this glacier and then you turn the corner and there's like poverty and drug problems and alcohol problems and they paint this very different picture and living there for four months I got to see that and I feel like a lot of people just come through the main street and they don't see that piece of the issue, but I'm really interested in like indigenous communities and um how um they're treated and there's a lot of interesting stuff happening with the oil companies there and they get these like checks to basically say like "Oh yeah like, you can use my backyard and drill" and the oil companies will pay you off and all of that stuff that happens there and um so I feel like people don't understand they don't see that when they come and they're just being tourists for a day and I don't know.

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MC: That's probably not a good answer to your question but it's just very different. It's very rough and rugged and Maine is like that too but I feel like it's different um, you're still a lot closer to like cities and things like that. Like a lot of people are like in the middle of nowhere, they depend on national resources on a whole totally different level it's like completely different but yeah it I haven't really thought too much about that but.

MF: Yeah I mean it's interesting that when you talk about like poverty issues, they are those certainly

happen in, like those problems exist in Maine too but maybe, maybe the difference, maybe the like maybe it's not so stark between the touristy bits and the

MC: Yeah

MF: and the really struggling bits in Maine.

MC: Yeah that's a really good point. I think that's absolutely true

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MC: and maybe because Alaska is like way up there we can try and turn a blind eye to that on some levels and yeah I don't know if that's, people are here especially coastal communities in Maine, like people flock here in the summer so there's, we're in the public eye in a little bit of a different way. I feel like any report on lobster that comes out it's like in the press and it gets blown up and people are really concerned and I don't know if that same type of concern. And Alaska is even more dependent on their fisheries and I think they're number one and we're like number two in terms of landings, but it gets shipped out you know it's not as locally consumed I think so it's different. It's just different in a lot of ways, but there's a lot of similarities too. There's a huge dependence on natural resources, people are very tied to the land there so um yeah there's I think there's a lot of similarities as well.

MF: Yeah um can you, are there any um stories you can think of that you can tell of the times that you've been um collecting information in these communities or or or getting feedback um in Georgetown or elsewhere. Um Yeah tell me a story from your travels.

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MC: Sure um I guess the one that sticks out of my mind right away is, happened last month and I was asked to come and present the data that I have been collecting so you know I'm used to an academic setting and so I have a PowerPoint ready and I'm like I have my like Mac and I show up to the community library. There's no projector, there's no like it's just like it was a complete example to me of like "Oh right" so um yeah it was just really, it was funny but it was also kind of horrible because I was like, "Oh I'm not prepared for this" like I didn't think about where am I going to project these slides and then once we found a projector we got it all hooked up and people didn't understand how to read my graphs. So there's other level and I thought that I was explaining it in a way that made sense because I was doing it from my perspective but you have to really explain like okay this is what this shows you, this axis means this and this means that. And they're like, we can spend as much time as you want on it and

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MC: It's not to say like I don't want that to sound like I'm dumbing it down because that's not what it is, but it shows you that you know the information I have is different from the information they have. And it was cool because I said "Okay here your landings dipped here", I don't know why that

happened this is what the data shows me, but then they can say "Oh well we had a really weird you know, thing happen" or "We had a shell disease" or "We had you know a bloom of some sort, we couldn't harvest then so that's why our dip there's that dip there". So it just shows you that the data and the science like show you two different things and you really have to be communicating and building those relationships and it's not easy, it's, has to be an iterative process, it has to be, there has to be trust involved and a big part of that is connections like luckily my advisor Josh, he has his own shellfish farm down there, so he knows the community really well and he came in with me. Um. If I'd just came in as like an outsider from the university I feel like it would be a little bit different but I've been driving two hours down to Georgetown after my full day at school to go sit at these meetings and then come back at you know midnight, one in the morning, but you have to put in the effort like it doesn't happen overnight and I'm on emails with them, I'm over the phone.

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I just want to make sure that, you know, that that particular story it was just it was oh man like textbook what you're not supposed to do. Um. Show up and like expect things to be a certain way, but that was a really important learning process for me, um and I definitely have a better sense of what needs to happen next time. And I think that's important you know and same thing with them they say like "Can you map this thing?" and it's like "No" like they don't understand that's not how it works so I have to tell them like what I'm actually capable of doing for them. Um so it's definitely back and forth process that has to happen and it takes time and effort and hopefully we come out with the products that are meaningful and hopefully doing this really important deep work in one community will help us like figure out where to go in these next communities so.

MF: Yeah, um are there any other uh issues that concern you or that you see out there um that we haven't talked about?

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MC: Hmm let me think. I would just say yeah I think climate change is obviously really concerning but communicating climate change is another part too like we even like in my work like I talk about resilience and sustainability, but like what does that mean to people. Um so I think a huge problem is we understand the problems or what the problems are but like communicating them so everyone understands and gets on the same page that's the big thing that I see, bridging this gap between, like communities and the academic side, um and just like really respecting people's opinions and knowledge. There's different types of knowledge, everyone has different ways of knowing and local knowledge is you know just as important as scientific knowledge and that's, that's kind of my take home I guess I would say.

MF: That's great. Thank you very much.

MC: Thank you so much.

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