

# Cape Cod River Herring Warden Oral History Project

## TRANSCRIPT

**Series:** Cape Cod River Herring Warden Oral History Project

**Interviewees:** Mr. Doug Kalweit, Supervisor, Town of Barnstable Natural Resources Department

**Interviewer:** Abigail Franklin Archer, Marine Resource Specialist, Barnstable County Cape Cod Cooperative Extension Marine Program

**Date:** March 31, 2014

**Interview Length:** 42:15 minutes

**Location & Setting:** Mr. Kalweit's office in the Town of Barnstable Natural Resources building, 1189 Phinneys Ln, Centerville, MA

**Doug:** I wasn't in charge when I started.

**Abigail:** When did you start working for the Town of Barnstable?

**Doug:** February 1972.

**Abigail:** Wow, you remember the month, that's pretty good.

**Doug:** Yes, no cause it's come up. If you're gonna retire you have to know when.

**Abigail:** Right, right.

**Doug:** So that's a while ago.

**Abigail:** So you first started working for Barnstable in 1972. So did you work on river herring then?

**Doug:** Yes

**Abigail:** You did. So what were your duties? Your river herring duties?

**Doug:** We'd just maintain the run, make sure there wasn't any obstructions. In this town we have one part of the herring run in Marstons Mills is 1000 feet and we have to keep it free of debris and we have to repair it. Because it rotted from time to time, so we just kind of kept it up so the herring could pass.

**Abigail:** So did you guys do all that work? Or did you have volunteers that helped?

**Doug:** Just us. It was just a normal routine, that's what we did during the day. If need be we repaired it and cleaned it.

**Abigail:** Yup

**Doug:** This town's got a lot of, a few herring runs and has probably, four herring runs. And back then they were all very, very active. So much more than now. It's just, this is like a token of what it used to be.

**Abigail:** So was there harvest at all four of them?

**Doug:** Yeah. No, no. Well in Barnstable people used to go way back then, people didn't care, people cut through their properties they took whatever. But there's only one in Barnstable, one take site.

**Abigail:** One public take site?

**Doug:** Public access, yeah that's (Route) 149 and 28. And that used to be all with people there all the time. The days you can go, the days you couldn't go. One of the main differences too besides the amount of the herring is become nowadays more of a, lot more of a bait fish than it used to be. Nobody really used them for bait, unless they were at the canal in Bourne fishing, and there's a herring run right there and they'd put one on. Nobody ever got herring for bait. Now it's just a huge, huge commodity for bait.

**Abigail:** So when people were harvesting them then were they eating them?

**Doug:** Oh yes. Some people used to eat, they used to mostly try to just take the females to get the roe. They'd just check 'em and put the males back. But that was frowned upon after a while. Some people used to get them they used to smoke them, they used to do different things. Some people just got them to put them under their tomato plants.

**Abigail:** So just to use as fertilizer, straight up?

**Doug:** Yeah, they did. Didn't have anything to do with them. But we used to go down there when we were kids and get the herring, and we'd sell the roe to people in the neighborhood over there. You know, we were young.

**Abigail:** So that was in Marstons Mills, you grew up there?

**Doug:** Yes, correct. But a lot more herring then, tons.

**Abigail:** So did you have a stand? With roe? A lemonade stand by the herring run?

**Doug:** No no no, a lemonade stand, no no no. This was a lot of people who really like, used to fry it up.

**Abigail:** Yeah, yeah

**Doug:** And it was good.

**Abigail:** I've never had it. Someday when herring harvest is allowed again I'd like to try it.

**Doug:** It is good.

**Abigail:** So did you just like have a basket and go door to door?

**Doug:** Oh no, you knew people ahead of time that wanted it. They would ask you, "Can you get me some?"

**Abigail:** Yeah. So did a lot of kids do that or were you guys just unique and enterprising?

**Doug:** No, just a few. It was just sort of a...you wanted to be Bill Gates. Yeah, but we just knew everybody. Pretty much everybody did want that. They'd give you a buck and a half or something for a soda. They didn't give you much. It was cool. We had a purpose to be there.

**Abigail:** And so how long did you do that for when you were a kid?

**Doug:** Oh I don't know. Three or four years probably, off and on, you know. If somebody asked, "Can you get me some roe" we'd do that. Other than that, nah. No, I didn't advertise in the Globe.

**Abigail:** Yeah right. But like was it usually kids of a certain age, and then once you passed that...

**Doug:** You get by, passed that.

**Abigail:** And then you're just too old for it.

**Doug:** Yeah, yeah. Pretty young. I forget the time, but it was good.

**Abigail:** So was there any commercial harvest? When you were working for the town, did the town auction off the rights to the fishery?

**Doug:** Mmm mm <negative>

**Abigail:** So it was just public.

**Doug:** Well the town back in, from the state, as you know they gave, DMF, if so voted at a town meeting back in 1934 you could have local control of that, shellfish and herring runs, which we do have. The town did vote that at a town meeting 1934.

**Abigail:** And so public could, so there were regulations about when the public could...

**Doug:** They were a lot more lax then then nowadays. We used to have back then, you could buy a herring permit for a dollar and a half. But in this town if you had a shellfish permit, recreational or non-recreational, you could get herring along with it on that permit. And in probably 10-12 years we sold like say 2 herring permits.

**Abigail:** During what years?

**Doug:** Oh this is in the 70s. But the last year before it closed down we sold 200 and something. As I said before, mostly for the bait activity.

**Abigail:** So do you think, were people just using the bait on their own or do you think they were selling it?

**Doug:** Both. Yeah. A lot of people came down to get them they'd have an aerator in their truck. And they'd bring it to someplace, their own or a neighbor that had a dock and they'd put it in a cart or a cage in there they'd put the herring in there. Then they'd take 'em or sell 'em as they, you know... I'm sure a lot of this stuff was done, you know, at 11:45 at night or something. And we used to have a lot of problems with that too. People used to block off the river system and just catch the herring. We caught some people doing that in Prince Cove. They'd come up to the river and block it and get some herring. Because we knew many herring didn't show up from time to time so we'd check the whole river system to make sure that wasn't happening. And we'd check it to the last maybe 3 or 4 years prior to it closing. Because we didn't see hardly any herring. So we'd check it to see if somebody was blocking it and it wasn't blocked. So there was a drastic decline in the amount of herring. Really.

**Abigail:** So around what year did you notice that, the drastic decline?

**Doug:** Probably in the '90s, you know. It's amazing. I know how it used to be. It was unbelievable. You couldn't... We constantly thought it was blocked or somebody was messing with it. That's how drastic it was, as far as... But it wasn't overnight type of thing but I mean just in a few years it just went steadily downhill. Last year and the year before we had a decent run, but nothing like it used to be 40 years ago.

**Abigail:** So have you noticed any changes in like the size of the herring?

**Doug:** Yeah, the size is definitely getting smaller. The overall size, yes.

**Abigail:** Both males and females?

**Doug:** Yes, they were bigger before.

**Abigail:** That's interesting, I've heard that from a bunch of people.

**Doug:** Oh yeah but it's true. Yeah. The reasoning for it? I don't know. It's very noticeable. They were a lot bigger. I don't know how much.

**Abigail:** But something you could notice.

**Doug:** Oh yeah, definitely notice it. Yes. Have you ever heard why?

**Abigail:** No, no.

**Doug:** No, 'cause I have no idea. Most people we have now don't notice that.

**Abigail:** Right, cause they just haven't seen...

**Doug:** They haven't experienced the larger sized.

**Abigail:** Shifting baseline.

**Doug:** This is true.

**Abigail:** So, do you know who managed river herring before you came onboard?

**Doug:** Ranta, Tysa Ranta.

**Abigail:** And did he leave you any records you could go by? Any training?

**Doug:** He was very meticulous about records, but I don't have any of them. He had a little red book, everyday he'd write in there. He'd write everything in these books, but I've never seen them. He was very good at documenting everything he did, but I've never seen them, no.

**Abigail:** So who would patrol, were there people who would patrol the harvest and make sure people were only taking as many as they were supposed to?

**Doug:** It was lax then, I don't think we actually had a limit. You could take what you wanted basically. Nobody really... We took 'em and we enforced...The biggest thing for us as far as enforcement was to see if it was the right days and right hours. That was more...we never worried about who took how many. That was not the issue back then. But nowadays it's totally changed. You can take so many a day, a week rather.

**Abigail:** Yeah, leading up to the moratorium. I know some of the other towns did this. And some of the other towns they would actually harvest them for you.

**Doug:** As you know the Tribe members can come down and take what they want.

**Abigail:** And do they have any limits?

**Doug:** No. And the state has told us that we just leave them alone. We just observe and document. That's what we do. They show you their card. They can. And they don't have to be from the Cape, they can be from Idaho.

**Abigail:** Really?

**Doug:** Yeah. If they have a card, a Native American card, I don't bother them no matter where they're from.

**Doug:** Yeah. It's good. It's changed a lot though, really has.

**Abigail:** So of the four runs that are in Barnstable, do any of them now, take... which ones takes the most time, do you think? Do you spend more time on one then another?

**Doug:** Marstons Mills. Santuit and Martsons Mills because they're both pretty long. Santuit one we share with Mashpee. And, Marstons Mills, it's about two and a half miles from the pond to its saltwater exit. And ah, it's invasive. It's amazing how thick it can get over the summer. We visit it twice a year. Of course in the winter you have a lot of trees that fall down across it. Some right in the herring run. It's amazing the size of these trees coming in. And people throw leaves in and junk from their yard.

**Abigail:** Oh man..

**Doug:** Just over the bank. They try to say it just flows down. It doesn't all flow down, it catches and it gets all plugged up.

**Abigail:** So do you have a regular schedule every year that you guys use to clean out the runs or is it just kind of as needed?

**Doug:** No we try to get it before you know, if it's not too, too cold. This winter wasn't too bad in the beginning. We sent a lot of people in there and they still haven't finished it. They've been at it two or three months. But along with the other duties they get involved with, they don't have the time to commit. In Marstons Mills I know we had some volunteers. Marstons Mills, the Village, is really a great place for volunteers. They care about this whole river system with herring and things. They even have a River Day once a year, they celebrate the river. They have hotdogs and games for the kids and stuff like that. It's a cool thing.

**Abigail:** Yeah I tabled once at it.

**Doug:** Did ya?

**Abigail:** They didn't have it last year, right?

**Doug:** No I don't think so. Yeah the Marstons Mills is by far because of the nature of the curve and it's so long, and some of the ones if you keep up with it a little bit, you know, couple times a year, that's what we're doing now. Every year a couple times we walk the whole system and clean it out. Most of the times, two people do it. And sometimes you get volunteers from the shellfish program and stuff, they help if they need help. It's good. If you keep -stay with it, it's not a big huge deal. But it takes time.

**Abigail:** So the four runs are Marstons Mills, Santuit Pond, the Wequaquet Lake run and then...

**Doug:** West Barnstable

**Abigail:** West Barnstable, the Mill Pond run.

**Doug:** Mill Pond, yeah. And Lake Elizabeth, up across from Craigville where Southwinds Cottages are. That has been a run for years since I've been here. But it's never been very active. You see a few fish once in a while. Because the Centerville River, when you go up there, usually they go up in to Wequaquet.

**Abigail:** Into the main one

**Doug:** And a few sort of stray off to Lake Elizabeth, or on that side, but not very many.

**Abigail:** I talked to one of the Board members, the Lake Elizabeth whatever their neighborhood association is, and they were saying that they thought that during years of low water, like drought years, that more herring came to Lake Elizabeth as opposed to the main.

**Doug:** In years of low water that place is dry. They'd have to learn to walk to get up to Lake Elizabeth.

**Abigail:** <laugh>

**Doug:** No seriously. That very seldom has water plus the Southwind Cottages are rental properties along there for maybe, two, three hundred yards and they throw everything in there. Washing machines, microwaves, diapers, and everything in there. We have to clean it out.

**Abigail:** When there actually was a fishery, when people could take them, was there someone from the town just like standing there and checking permits? So that was part of your duties? Or someone else's?

**Doug:** Someone else's. Well, we did so many, we did Sandy Neck, hunting, and fishing, and lobsters and (*shellfishing*) stuff. We usually hired a couple people seasonal that would sit there on the open days, especially the weekend, just to monitor what was going on. And that was their duties of the day. They took their own cars sat down at the run and talked to the people, whatever they wanted, just made sure people abided by the regulations. But we did it once in a while, but not as much as they did. That was their job. And we were doing so many other things, in that time of year especially.

**Abigail:** So during the season that was a job?

**Doug:** Absolutely. That was a job.

**Abigail:** So how many people would the town hire?

**Doug:** Just a couple. Like I said they were seasonal staff. That was their positions. It was sometimes hard to find people to work all day on a Sunday sit in your car by the herring run but they wanted to do it sometimes. But we had Sandy Neck at the time also, the early Spring out there is really busy because they've been cooped up all winter and they got to get out on the beach and do their thing, and there was all kinds of little parties and senior skip days... We didn't have the time to address the herring. We're the primary people who kept the runs clean so the herring can go up in the ponds. As far as enforcement, yeah we would do it at different times in the evening and stuff. But the primary people who checked and kept them in line was seasonal staff we hired.

**Abigail:** And does the Town still hire seasonal staff?

**Doug:** <shook head no>

**Abigail:** So when did the Town stop doing that?

**Doug:** (19)80s. Cause we have, ah... Again, part of that whole equation is that the herring had declined so much.

**Abigail:** That's what I was curious about. Abundant herring, did those provide some jobs for people?

**Doug:** Yeah, right. The herring run at 149 in Marstons Mills, Route 149 and 28 a lot of times there'd be a lot of little kids there, 5 years old, got their little K mart net and they're taking one little fish from here up into the pond. They can't do that, it's against regulations. We hated to tell the person that your son or daughter can't do this. I mean, why not? I didn't like to do that, tell that little 3 year old can't play with this little fish and put it in the pond. Nothing happened to it but you can't obstruct those. And of course some people complained about this little kid doing it. So since we oversee that we had to...

**Abigail:** ...had to respond.

**Doug:** Mm hm.

**Abigail:** So what do you think about the moratorium? Do you think it was a good idea?

**Doug:** Good thing. Sure it is. Do they know the reasoning why the decline?

**Abigail:** They don't. There's all sorts of theories, I mean they're addressing the um, starting to address the uh, the offshore harvest.

**Doug:** That's what I think is a huge part of it, the offshore fishery. It's not 'cause we took so many here. It was so heavily regulated just before the moratorium. I mean, we paid attention. We had non-criminal citations and all that stuff. But I don't know why it steadily...<sound



effect> The last couple years, two, three years we've seen an increase in the overall, not harvest, but the overall amount.

**Abigail:** Yeah the numbers

**Doug:** Yeah. So evidently something's working. I think if they address more of the offshore, I think that might have a lot to do with it.

**Abigail:** Yeah, more attention is being put on that now.

**Doug:** Because there's a lot of trawlers, whatever they do out there, they've improved the gear so much they almost can vacuum the bottom. They can just, you know, so I mean, a lot of the scientific things that they've ah, the gear or the techniques have improved so much it doesn't leave much margin - room for error. That's my guess. I don't know, but what do I know. I don't know for sure now. But the state doesn't, you don't think they actually know?

**Abigail:** No, I mean, some people think that commercial harvest is a factor, but not the only thing. Something is happening to the adults out at sea 'cause we're not seeing as many older...so based on the sampling they're doing we're not seeing as many older fish.

**Doug:** So the size point, is that maturity?

**Abigail:** Yeah, I don't know. But I know they used to see more 4,5,6 year olds...

**Doug:** Yes, OK.

**Abigail:** And now it's just mostly 4 and 5 year old. Up in Maine they'd sometimes see 8 year olds. But those, the older larger fish are not as present in the population as they used to be.

**Doug:** Oh definitely

**Abigail:** And they know that from sampling.

**Doug:** Cause you'd notice if you found a smaller one. "That's a small one" None of them were like that

**Abigail:** I don't know what they have in Maine. But in Massachusetts the oldest data set we have is 1980s and it's from the Monument River in Bourne. So it doesn't go back that far. But even since then they can document the change. So for Barnstable there's a herring count program at Marstons Mills, Santuit Pond.

**Doug:** Yes

**Abigail:** Is there one for the Wequaquet?

**Doug:** No, Amy's been actively looking, to talking to people.

**Abigail:** Cool

**Doug:** We're going to have one for Wequaquet 'cause she got permission from some land owner in that system. She went to Con Com and got the right to make a path to the water so they can count.

**Abigail:** Nice

**Doug:** So that's our plan to do that this year. I think we'll have a training session like they always do. Because if you want to have a management plan put together you have to know the numbers for x amount of years.

**Abigail:** Right

**Doug:** But whether I agree with that, all those numbers and all that manner of plan. I mean, the only place we have you can take them, and people who gonna illegally take 'em are going to take them anyway whether there's a moratorium or not. They don't care about that. But the place at 149 and 28 we monitor very heavily. We could put a camera there to monitor even further. So if no one's going to abuse it because we're right on top of it. Like I said if they are going to abuse it they won't be there number one, and whether or not there's a moratorium it don't matter. They take what they want. But I think it's a good idea overall.

**Abigail:** So what kind of information do you think you'd want, just for the town's herring, in order to open up the fishery again? If you were given the power solely, it's up to you whether to open or not. If you were herring czar, what information would you want to determine that?

**Doug:** Just the quantity of the herring and the condition of the run. In our town we keep the condition very good. The staff here is really super, they just do it. Just the numbers pretty much. We have regulations in place. We have enough enforcement and video surveillance things. We could monitor very well. Just the numbers. I'd like to see the size come up a little bit. I don't know how that could happen. Taking younger and younger fish I just don't know why the... Last couple years the numbers have been decent though, especially in Marstons Mills. And we're trying to get some of the other ponds restarted again also that have gone by the wayside over the years.

**Abigail:** I wonder if, cause DMF, they do the biological sampling at a bunch of rivers in the state, and they haven't had one on the Cape. Well they've had Monument River in Bourne.

**Doug:** Yes, right.

**Abigail:** So they were gonna, I think they're going to do Herring River in Harwich now. But I wonder if they'd let, you know, authorize towns to do the biological sampling. So that you could start to look at that, you know, the size range, age range...

**Doug:** Most of the things the state does, that regulates, they only accept their own lab, their own testing.

**Abigail:** Yeah

**Doug:** But we certainly could be, I think a big help. Most other towns is that they have, if they can test... So you give the state indicators, and then if you got an indicator that says they should get involved, then they do it. Why not?

**Abigail:** Yeah. Cause you'd have to get authorization I guess to officially harvest, take some.

**Doug:** Yeah, but that could be done.

**Abigail:** That could be done.

**Doug:** We all have the same goal, we want to improve the fishery. We're not going to go out and not do... You set up a protocol of what you want done. That's exactly what we do. And like I said, we could be the indicator people. If they think what we're doing is enough, what warrants their attention, they come down and they take over and do it and see what's going on. I think it could be a big help to the state as far as...

**Abigail:** I think it would too.

**Doug:** They only have as many staff as we do. Most towns.

**Abigail:** Hm, interesting. So what do you think, what aspect of river herring management takes up most of your time now?

**Doug:** Just the clearing, keeping it clear.

**Abigail:** Yeah

**Doug:** And we're still having DMF, they're coming and testing and getting an environmental impact statement for Mill Pond and Lake Elizabeth there, in the canoes and boats and they're testing various aspects of it to rejuvenate those runs.

**Abigail:** That's the habitat assessment that Brad is doing?

**Doug:** Mm hm. Correct. That's ongoing now. And we just have the herring count and we monitor and keep it clean. That's about it though.

**Abigail:** Are there any current controversies over management of any of the runs?

**Doug:** No. Just Wequaquet is always a water height thing. There's 400-500 people who live around Wequaquet Lake and some are in high areas and some are in low areas and there's two factions if they want the water high for their beach or their dock. The other people where

they live in the low part of the lake they no, no they don't want that. So we have, off-setting things they complain about, the water height, all the time, it's constant. What I try to tell them is that we have, our only charge is to get the herring up and out both ways to spawn and to go back out to the ocean. It's not our charge to worry about their dock or beach how much water they have for their boat. That's not our job. But they talk to the town leaders and sort of got them to agree that we should manipulate these boards to make their summer better, however they want high or low water. But the County did a 3-year study on this issue, because it's been an issue forever, and they did a 3- year study and put wells in to check and see about this whole equation about the boards, other springs and road run off. And the boards, they proved that the boards that we have, manipulate for the herring passage has little or no long term effect anything to do with the water level, the lake level. But most of the people choose not to refer to that because it doesn't fit their agenda. Simple. I mean they never... they wanna, you know...

**Abigail:** So it's groundwater that's actually affecting the water, not necessarily the boards.

**Doug:** Yes. No the boards don't do anything. Little or no. But they don't refer to that because it doesn't...

**Abigail:** It doesn't fit with their story.

**Doug:** No. It's an issue. We have meetings with them and meetings with the town manager and things about those issues. But there's two separate factions there. You do the best you can, you can never please everybody.

**Abigail:** Yeah. That run further down, was that hand dug?

**Doug:** Yes

**Abigail:** Do you know when it was established?

**Doug:** No

**Abigail:** Man I walked down there with Martin (*Barnstable Natural Resources Department*) and Brad Chase (*Massachusetts Division of Marine Fisheries*), last Fall.

**Doug:** South of Pine St?

**Abigail:** Yeah, oh my goodness, the wall, those banks are so high. I cannot believe the amount of work that went into that.

**Doug:** Oh I know. What was that, 3 mile high fish company or something that did that.

**Abigail:** Really?

**Doug:** Yeah. Way back, way before my time.

**Abigail:** That was a tremendous amount of effort.

**Doug:** Oh yeah, I agree.

**Abigail:** So let's see, maybe you just answered that. What do you think is the most challenging thing about river herring management?

**Doug:** Challenging? Well right now with the moratorium not a whole bunch. Except, you know every year we just keep it clean and brush it, which is a chore in itself. 'Cause if it ever does open, I mean the more you let it go it's a horror show. So you have to keep up with it even though the moratorium is there. And they find different things. Trees during storms in the winter they just fall into the run.

**Abigail:** So before the moratorium, was maintenance still the most challenging thing?

**Doug:** Yes, and monitoring what they were taking. 'Cause people had, as I said the bait fishery is became, become so important. I'm sure there's a monetary gain for various people and how they, what they do with them. I'm not sure exactly what they do. But I'm sure, it's gotta be. Because there's so many people that, like I said for 10-12 years we had one, we sold two herring permits, now we've got 200 something. It was a buck and a half and then it went to fifteen dollars I think, and they just, still... Some people had herring permits, or the ability to do that in 3 or 4, 5 towns, you know, where the herring are. So you know they're not just kinda planting them under the tomato plants.

**Abigail:** Right, that there was some kind of commercial enterprise.

**Doug:** There has to be some commercial enterprise there, yes.

**Abigail:** So do you have any favorite memories of doing river herring things?

*<Doug made a face and shook his head no>*

**Abigail:** No? <laugh>

**Doug:** No?

**Abigail:** It's just part of the duties?

**Doug:** It's just part of the job, yeah. Like anything else. I mean, you get used to it. It's sort of routine, you just do it. There wasn't a problem, it was just something you did.

**Abigail:** What's the weirdest thing you ever found in the river?

**Doug:** <sigh> Good question. Good question. Nothing like a body or anything.

**Abigail:** Thank goodness.

**Doug:** Thank goodness. Oh I don't know, just all kinds of, like I said before behind Lake Elizabeth you get microwave, diapers, TVs, all that type of stuff. Which is not uncommon because a lot of the herring runs go through neighborhoods between developments and stuff. Especially in Centerville there's a 40-50 foot bank down there. So it's out of sight, out of mind, gone.

**Abigail:** Out of sight out of mind.

**Doug:** There'd be leaves, sticks, kids broken plastic toys, nets, whatever. Get it off the property. You didn't have to go to the dump and spend 5 bucks, you just throw it over the bank, the water hopefully takes it out but it doesn't do that so then we have to take it out. We had Southwind Cottages, Conservation fined people for, 'cause we found out who it was, who was doing some of this throwing stuff into the river system, the herring run. They fined them for doing that.

**Abigail:** Good.

**Doug:** Yeah. It was sort of a token fine, but at least it was something.

**Abigail:** At least something. Is there a town committee that's involved with river herring management at all?

**Doug:** No just us. Some towns I know have a herring warden. It's just been part of our duties for eons. I don't think we've ever had an appointed herring warden. But myself as shellfish constable it's sort of assumed. I don't have an official herring hat or anything.

**Abigail:** That would be fun.

**Doug:** Yeah, have a herring hat.

**Abigail:** Oo maybe we could do that for River Herring Network. Not in an official capacity.

**Doug:** But I know like on River Day we have different classes we take down, we explain the herring runs, how the herring come up and spawn and do that whole thing. We do that on occasion, just cause people, different teachers have little things they want to show the children. We do that from time to time.

**Abigail:** So outreach is part of your duties too?

**Doug:** Oh yeah, yeah. It's all connected. 'Cause you need to show the young people what they have around them. Some find it very interesting. Some might in 5 years, who knows. But at least they were aware of what's around them.

**Abigail:** Are there any other things you want to talk about river herring?

**Doug:** No...they have scales. I think it's an important for the whole ecosystem.

**Abigail:** You know the scales would be, I think that would be the challenge if the towns did do their own biological sampling.

**Doug:** I 100% agree.

**Abigail:** Cause I think partly what they're doing trying to do is consolidate, who looks at the scales, because everybody's eyes are a little bit different, so they're trying to get just a few people actually looking at them.

**Doug:** *(I cannot hear this comment well enough to transcribe it)*

**Abigail:** But if the towns collect them and then send them to DMF lab, if they have the time and staff.

**Doug:** No, I mean. You're right. There's so many little things. As much help, I mean I'm sure they do need help. But if they can outreach to us. I mean just, "What would you like us to do to help you?" I think data collection and whatever they're doing. If we could be some small help to them that's fine. You don't need everybody, a whole bunch, just one person here and there just to kind of help out.

**Abigail:** I know they've been so understaffed for a while.

**Doug:** Oh I know. Are they getting back up to staff you think?

**Abigail:** They hired two new people, well newish, I guess they've been there for 2 years now. Mike Bednarski is focusing on the south (*Massachusetts*).

**Doug:** OK

**Abigail:** And Ben Gahagan is on the north shore. So for a while it was just Brad.

**Doug:** Yes I know.

**Abigail:** And then Ed Clarke who's the fishway crew. But now it's just Ed. Ed used to have a couple people working with him and now it's just him.

**Doug:** They had probably 3 or 4 carpenters all the time.

**Abigail:** Right at one point in time they had the fishway crew.

**Doug:** One now?

**Abigail:** One.

**Doug:** Does a great job.

**Abigail:** He's awesome.

**Doug:** Awesome is right.

**Abigail:** The skills he has, the way he knows how to move water, and build things and fabricate things. We're so lucky to have him.

**Doug:** In West Barnstable, I mean, he came down and took measurements and he built this big thing, heavy, took 6 or 7 of us to carry it.

**Abigail:** That was the Mill Pond?

**Doug:** Yeah, we had to get help from the railroad they had a little truck that goes on the tracks, and we brought it on that down the tracks. And then we brought it down the path around some trees, it took 4 or 5 of us to carry the thing. But it fit just like a glove. Unbelievable.

**Abigail:** Yeah he's good. He just built an eel ramp for the Audubon Sanctuary in Wellfleet. That's going to go in for the first time this year.

**Doug:** The guy he's great. You know? We brought him all the lumber he needed. Just went down and took measurements. It's amazing. He did a great job. He's by himself now?

**Abigail:** He's by himself now.

**Doug:** Is he still in East Sandwich there by the hatchery?

**Abigail:** Yeah.

**Doug:** But who knows. One thing about the herring and the management plan you need. They want a management plan. But I just, I personally would like some guidelines, or a boiler plate, just part of it. I just don't, no idea what they want, what they're looking for.

**Abigail:** And I think that is the direction. So Wareham requested for the fishery to be opened and then the Nemasket River in Middleboro.

**Doug:** But what were the? How? Just say you want it opened? What's the criteria?

**Abigail:** Nemasket, my understanding is Nemasket they um.... Yeah right now there are no official criteria. ASMFC says you have to show that it's sustainable. But they don't officially say, you know, define sustainable.

**Doug:** Do we have any guidelines to go? Are there certain things?



**Abigail:** There will be soon is my understanding but they are not there now. Theoretically DMF is going to do some kind of workshop at some point in time.

**Doug:** Have to have certain criteria to do a certain....

**Abigail:** But it's going to be, absolutely, collecting data on numbers. So either having volunteer... I don't know, but this is my educated guess, that it's either a volunteer count or an electronic counter or a video counter. So we just installed, I helped install a um video counter at Herring River in Harwich.

**Doug:** Those things are fairly expensive?

**Abigail:** Yeah DMF provided all the materials and everything. And then I think eventually the town may need to support it?

**Doug:** OK Yeah.

**Abigail:** DMF gave them that one. So, yeah...But some kind of method of counting the herring so you can see from year to year is the run decreasing, increasing?

**Doug:** 10 minutes every hour or something.

**Abigail:** Or the volunteer count. Yeah some kind of established counting method, protocol.

**Doug:** Two or three of the runs we have we got this white board, and we painted it white so they can see the herring crossing it.

**Abigail:** Mm hmm I think that data is going to be really valuable. Nemasket had that data so they had a sense if the run is increasing or decreasing. Wareham doesn't necessarily have that information.

**Doug:** You need, somebody was saying that you need it for 10 years, the information?

**Abigail:** Yeah, I don't know.

**Doug:** You can have information for 10 years but if it doesn't meet a certain criteria, then you still can't open it.

**Abigail:** Right, I think that's the idea is you-

**Doug:** What is the criteria?

**Abigail:** There's percentiles. Maine has filed a sustainable management plan. The Carolina's I think did.

**Doug:** OK

**Abigail:** They established a threshold. One I think it was straight up numbers and the other one was a percentile based on a running average. So something-

**Doug:** Most of the rivers are different as far as the –

**Abigail:** Right

**Doug:** Some will never reach the numbers that they-

**Abigail:** Right yeah. That's why good to have as much historic data as you can, or at least recent numbers. And then base it on the average.

**Doug:** But when they first came out with this, is that so you can't open unless you have this, so you look and automatically at that instant 10 years you can't open until then.

**Abigail:** Yeah, which is why I think it's great that people are starting some counting programs.

**Doug:** Do they have the same leverage on these ocean trawlers and things?

**Abigail:** Right that's the question.

**Doug:** Why punish the little, you know, not punish...

**Doug:** Because they can

**Abigail:** Because they can! It's easier to manage on land. I think there is more attention and I'm really curious to see how it's gone this year.

**Doug:** Me too

**Abigail:** So they've had the, the fishing boats are actually voluntarily being part of this program. It's run through SMAST, the School of Marine and Science Technology.

**Doug:** Most of the boats?

**Abigail:** Yup. And then they're working with Division of Marine Fisheries too. It's like a real time monitoring system. So if one boat catches a whole bunch of herring then they can call it in. They put a grid system over the whole area so they can say, "OK I'm in grid 1A and I got this many river herring".

**Doug:** Oh OK, yeah.

**Abigail:** And then all the other boats can hear that information. Because the idea is they don't want to catch river herring either, cause they know it's gonna lead to more regulations, so they can voluntarily back off. So there's been funding for that for 3 years.

**Doug:** How popular are the river herring for those boats?

**Abigail:** I think it's just, my understanding is that it's just bycatch. They don't want them, necessarily.

**Doug:** Oh, okay.

**Abigail:** They're going after the Atlantic Herring. They know there's a lot of attention on it. They don't necessarily want to catch them. But previously the monitors out there, the observers, you know it's hard to distinguish river herring from Atlantic herring when you're out there.

**Doug:** I think so.

**Abigail:** And there's tons and tons and tons of them coming in. So now that DMF has been doing dockside sampling. So as they come in they go through a certain number, and that's a really huge effort. There's staff and a lot of time going into that. So they're collecting that data. And theoretically the mid water trawlers are somewhat self-policing with some input from DMF.

**Doug:** It's on the basic honor system, right?

**Abigail:** Right now it is yeah.

**Doug:** Can they take river herring?

**Abigail:** Right. They are allowed to take a certain percentage of the overall catch.

**Doug:** As bycatch?

**Abigail:** As bycatch.

**Doug:** You cannot effectively, go after those.

**Abigail:** Right. They cannot. They are not allowed to specifically target them. It's only as bycatch.

**Doug:** Are the other herring larger so they can

**Abigail:** It's hard to tell.

**Doug:** I know

**Abigail:** They look different a little bit but you really have to be trained to see those differences.

**Doug:** And you're in this whole...

**Abigail:** Yeah, they're being vacuumed up off of the net.

**Doug:** Like I said, the technology is so good now a days.

**Abigail:** I think we're headed in the right direction. And actually, yeah that's a good point. I need to go back and write up a little summary about what's happening on the ocean right now. What are the regulations and what's the progress.

**Doug:** Amy might because she goes to the meetings.

**Abigail:** Oh goodness, I forget his name right now. Anyway, the student who has been working on this project, he came and presented the past couple years on the progress of the program.

**Doug:** OK

**Abigail:** But the funding was sort of up in the air, and so it's not really sure if they're going to be able to continue it. So that's the next question. So I think way more attention is being paid to it now than it has been.

**Doug:** Oh for sure.

**Abigail:** But I think, definitely it's good to keep people talking about it and keep attention on it so it doesn't fall by the wayside.

**Doug:** I can just relate from years ago how many herring there were. And it's just a little drop in the bucket. Now it's just kind of a little token of what it used to be. I don't know how you're gonna do it. They're trying to get stats on how many herring are coming up. But what about the other end?

**Abigail:** For the, right, so I guess John Sheppard, Division of Marine Fisheries is talking about that. He has a JAI – Juvenile Abundance Index. I guess it's just really difficult, and they haven't come up with a method that's statistically valid and easy to do.

**Doug:** OK

**Abigail:** But yeah, I think that's something else that's really needed too.

**Doug:** The numbers, what creates the numbers? How do you improve that aspect of the whole equation?

**Abigail:** I think that's what Brad was doing with the habitat assessments.

**Doug:** Right

**Abigail:** To make sure, ok, can a pond actually support that.

**Doug:** Right

**Abigail:** My sense is, I don't think that's our problem.

**Doug:** I don't either

**Abigail:** There was a PhD student who was doing work on the water chemistry in the ponds. I don't know if she actually finished her work. I should try and track that down. I don't think that's the problem.

**Doug:** I don't either.

**Abigail:** I can't believe water quality has changed that much in the ponds

**Doug:** Nobody's ever alluded to that fact. I mean, the ocean and the salt water yeah.

**Abigail:** But yeah. It's a big mystery

**Doug:** Oh it is. It is. The catches...but what causes me to have less herring? It can't be all...it's a combination of many things I'm sure. But what they are, I have no idea.

**Abigail:** One more exciting thing that actually, that I'm hoping to get someone to talk at the river herring network meeting. The genetic work, they're actually figuring out how to, relate, they can look at the genetics of the herring and look at different stocks. And they've actually figured out that there's a Northern Gulf of Maine Stock. So that the Maine fish are actually

**Doug:** They're there.

**Abigail:** They are really, really separate.

**Doug:** Are they missing scales and teeth?

<laughter>

**Abigail:** But now they can figure out once they do the bycatch, the herring trawlers are out there and then they do the dockside sampling.

**Doug:** There's that much of a difference, huh?

**Abigail:** They can take

**Doug:** Wow

**Abigail:** They're getting to the point where they can then take then genetic materials, scales, whatever, samples.

**Doug:** Yes

**Abigail:** And then figure out, OK did they just catch a Maine herring? Did they catch a middle New England Herring? Did they catch a Southern Atlantic herring? Where are those bycatch coming from?

**Doug:** Right

**Abigail:** So then that might help us figure out part of the puzzle.

**Doug:** That's good

**Abigail:** So I'm hoping to get - there's two people that are working on that right now.

**Doug:** There's a lot of unknowns right now.

**Abigail:** There's so many unknowns!

**Doug:** The decline in the herring fishery

**Abigail:** Yeah

**Doug:** I don't know. I wonder if it could be...cause I know for bait, those river herring are a really popular commodity. So I don't know if there's any boats that would key on them? Or, no? Probably not.

**Abigail:** I don't know.

**Doug:** They make money. That's not what they're going for.

**Abigail:** Cause they're making money on other stuff.

**Doug:** The thing is, they make so much money, and their techniques are so good. And then when they take all the fish they complain cause there's regulation they can't take the fish. But they took 'em all in the beginning to make the regulations happen. Hello!

**Abigail:** Alright, I'll let you get back to work. Thank you.

**Doug:** You're welcome.

**Abigail:** Thank you for doing this again.

**Doug:** That's right.