

Scallop Advisory Council Meeting January 22, 2015 in Ellsworth

DMR staff: Trisha Cheney, Pat Keliher, Kevin Kelly, Joseph Wodjenski, Jeff Turcotte, Brent Chasse and Troy Down.

SAC members: Paul Cox, James Wotton, Tad Miller, Alex Todd, Andy Mays, Erin Owen, Jimmy Ackley, Justin Boyce and Ray Swenton.

SAC members not present: Rick Wahle, George Freeman and Dana Temple.

Public: Mike Murphy Sr., James West, Bill Anderson, Togue Brawn, Carla Guenther, Travis Fogg, Alfred Haycock, Russell Leach, Dana Black, Rocky Alley, Ben Crocker Jr., Owen Moody, Junior Kelly, John Mitchell, Leonard Durkee, Chris Beal, Walter Kumeiga, Luke Horner, David Horner, David Leach, Genevieve McDonald, Dennis Sargent, Aaron Kilpatrick, Stephen Rappaport, Patrick Thomas and Maurice Alley.

Meeting commenced at 6:10pm.

Last meeting minutes approval: passed unanimously.

P. Keliher: I would like to recognize that a member of the fleet, Bruce Porter, passed earlier this week. Bruce was a great guy and helped the Department tremendously with our survey efforts. I would like us to have a moment of silence for him.

DMR UPDATES

2014-15 SEASON SUMMARY

T. Cheney: I would like to start out by saying that you to all those fishermen who help to provide us with reports during the season. This information is vital to help us accurately piece together the status of the fishery in certain areas during the season. Combined with our survey data and in-season data collection, it is very helpful, particularly in areas where we do not have good coverage, especially in Zone 1 where it really is the only data I have other than Marine Patrol observation. Thank you for all your help, we really appreciate it as it helps us to better manage the fishery.

At this time we are on harvest day 30 in Zone 1 & 3 and day 18 in Zone 3 (Cobscook) and overall, the catches have been very good. Only a few years ago, we would see CPUE drop off significantly only a few weeks into the fishery, with Cobscook harvests starting at getting the limit around 9am the first day to noon by the end of the first week. The last day there folks were still getting this limit within a 1-2 hours and guys outside in Zone 1 & 2 still able to get their limit. However, we are starting to see things slow down a bit, and have has some violations for small scallops and closed area fishing, as well as folks searching more and boats spreading out, sometimes taking all day to limit out, which is indicative of the "gravy" being gone. In Zone 1, while some folks are still able to maintain their limit, I have not heard great things from the Limited Access Area (LAA) and I am not sure that the current management strategy we have set up there is performing optimally. I expect to have to do a round of local meetings in Zone 1 to discuss some possible alternate ideas for the area with industry this spring as I am open minded to any new ideas for this area. However, overall, I have been cautiously optimistic about the rotational areas as they are performing better than I had expected. On December 27 we put into place [two Emergency Closures](#) in [Pleasant Bay](#) and [Lower Englishman Bay](#) as those areas had been heavily fished, exceeding their target harvest threshold and contain significant amounts of sublegal scallops which required protection. They were smaller, inshore closures within larger [rotational areas](#) which remain open for harvest. At this point, there are a few areas that I am keeping a close eye on, but really the point of this meeting is to have a mid-season check in to see how things are going across the state before we move forward with any additional management actions. We will have a couple of science updates to make for a more informed discussion and the commissioner is here to list to what you have to say.

ME DMR SEA SCALLOP MONITORING & ASSESSMENT

K. Kelly: We conducted a full scale survey of Cobscook Bay in October 2014 where we observed the highest harvestable biomass in our time series of 595,200 lbs; the previous time series high was observed in the fall 2012 survey where 385,400 lbs of harvestable biomass was observed. In the size frequency chart we can track the different year classes that are coming up through to the fishery. You can see last year there was a strong year class just under the legal measure (101.6mm) that fully recruited to the

fishery this season, driving this large increase in harvestable biomass this year after the area was heavily fished last season. While we do detect another year class coming up around the 75mm size mark, those scallops won't recruit to the fishery for two more seasons.

J. West: How fast do they grow? Seemed to grow fast this past season, wont those come into the fishery next year?

You can see when you compare this to the 2013 size frequency chart, you are able to see that strong year class that recruited up to the fishery just under the legal size measure (101.6mm) peaking at 95mm, while in the 2014 chart, that next big year class is a bit further out, peaking at 75mm. Some of those scallops may start to recruit up next season, but the bulk of them wont until the following 2016-17 season.

On December 18 & 19 and January 5 & 6, we conducted our in-season surveys after 9 days of fishing (3 weeks) and 18 days of fishing (6 weeks). In our December survey, we actually observed a 20% increase in the relative abundance, however, this was our first time conducting this in-season survey, and I believe that was an anomaly due to improperly assigning the survey stations in Cobscook, possibly oversampling the "hot spots" and it resulted in an overestimate. This was the first time doing this, so we had to work out a few things the first time around. But, for the second in-season survey in January, I believe we addressed the sampling issue and I trust that data. So, in January, we observed a 21% decrease in the relative abundance to the original October full survey abundance after 18 days of fishing.

M. Jones: Do you account for tide when you conduct your tows? When the tide is coming in, scallops will open up to feed making them easier to catch.

B. Anderson: It affects our catch. You are out there all day – how do you account for that?

K. Kelly: We don't account for tide in our tows, but we control the time of tow and tow distance. We have also been conducting port sampling in the area with at least one team there to sample each week, and sometimes two at different locations around the bay. Here we look at Catch Per Unit of Effort (CPUE) which we measure in the volume of legal scallops per tow hour from the interviews we conduct. We actually observed an increase in the CPUE in the second week, which is interesting, however we have observed a 27% decrease in the area since the fishery began December 1.

R. Swenton: What controls do you use to account for the tides or break downs?

K. Kelly: We have a standardized set of questions that we ask fishermen such as what is the size of the gear, the actual tow time not steam time. We then accumulate the data and come up with an average. We have moved away from the sea sampling on different boats as it is difficult to control for differences in gear, horsepower, fishing knowledge/experience and moved to the fishery-independent in-season survey this year.

B. Anderson: It matches what we see. As the season goes along, people are staying longer. It is taking them longer to get them.

P. Cox: Yes, but a 27% increase, where the longest it takes is 2 hours is really only 15 minutes longer from the start of the season.

C. Guenther: What is your total number of boats in the area compared to the number of boats you are port sampling? That will give you your control. What is that percentage?

T. Cheney: The number of vessels fishing the area has remained fairly stable at 75 vessels.

J. Wodjenski: It is about 20-25%. In the 5 days we have conducted port sampling trips, the lowest number of boats sampled was 9 and the highest 19, so I would say on average we are sampling 15 boats. The smaller hang drags are pulled out of this data here to correct for that and we weed out the outliers that are high or low due to possible human error.

K. Kelly: I know there has been a lot of concern regarding the clappers in Whiting & Dennys Bays (WDB). We have been tracking them in our survey and are using density as a metric, which is the number per meter square and if different from abundance, a better indicator. We found the density of clappers peaked in 2013 with WDB to be slightly higher than Cobscook proper. While this year it was lower overall, it was higher in January compared to October this year in WDB. The next survey in the first week of February we will be doing more work on WDB. The overall biomass in this area is half of what it was when it first opened in 2012

at 83,000 lbs. This year it there was 44% less biomass there compared to last season (72,000 lbs.) and it started this season out with 40,700 lbs.

J. Boyce: I think the number of clappers are down due to the increase effort in the area and the drag will break them up.

A. Mays: I haven't seen any while diving to speak of.

M. Jones: I have seen the green crabs really thick along the edges of the tows while diving as they are going after what is left on the shells when they are thrown back. They are going right in the shells to eat them.

K. Kelly: I also have a graph on the percentage of clappers observed in the catch. It was highest in 2013 for both areas, and dropped in 2014, but was higher in WDB than Cobscook. We expect this percentage to increase as the harvest will remove the legal scallops and the clappers remain, so that percentage will go up. However, I believe it is more useful to look at density. We also have conducted weekly sea sampling trips in the Little Kennebec/Englishman Bay Area where we are tracking CPUE. The first two points were from the "inside" area that was eventually shut down, the rest are from the "outer" area. You can see, like Trish was saying earlier, that catch rates have remained relatively stable, except for those first week from inside which was really high. It is incredible to see a catch rate of almost 1000 liters per tow hour in this area. Only a few years ago this area was like a desert and now there are lots of year classes and some great recruitment going on here. It is really encouraging.

J. Wodjenski: In regards to the tides question from early, we take Lat/Lons for the start and end of the tows so we know exactly how much ground is covered, the tow length, but there are other factors we can't control for.

M. Jones: The tides will close them up though and they blend into the bottom, making them harder to catch. When the tides are coming they are feeding and open up.

ME DMR PILOT TAGGING PROJECT

J. Wodjenski: I would like to know what folks think about the possibility of next season having a few guys that we ask a standardized set of questions of each week from a few different areas across the state next season. Think about it and let us know as that information would be very helpful.

We conducted a small tagging study this spring where we tagged 851 scallops on June 9, 2014. We recorded shell height, scallops were marked with alpha-numeric codes of A 1-500 and B 1-351 with a red non-toxic Sharpie marker and returned at 4 different locations in Cobscook in the Lower Bay and then in East Bay. The goal was to look at growth and movement. To date, we have recovered 29 tagged scallops so far - 4 from our fall survey and 25 from fishermen. We realize we got the word out to industry a little late this year to help us with the returns and we didn't get Lat/Lons from folks, but appreciate all those who got them to us or Lisa Leighton. Overall, we found the following growth information:

- Avg. growth of sub-legals with starting shell heights of 93.5mm to 101.3mm = 8.2 mm (1/3 inch)
- Avg. growth of legals with starting shell heights of 101.6 mm to 108 mm = 7.3 mm
- Avg. growth of legals with starting shell heights of 110 mm to 118 mm = 4.3 mm

Our data so far suggests that smaller scallops grow faster than larger scallops and this concurs with growth data from NOAA and other previously published studies. Next year we want to incorporate a new tagging study into the fall survey for better re-capture rates and use fall survey tow sites as tagging study return sites, we will tow directly over return sites during survey and plan to have earlier communication to fisherman. We also want to give industry some incentives to provide us with the Lat/Lon data so we can get better movement data – possibly T-shirts, hats or D&D gift certificates as rewards??

T. Cheney: Going back to James West's question before about that peak of scallops at 75mm. This data shows us that those scallops really will take two years before the bulk of them will recruit up into the fishery.

R. Swenton: If you conduct the survey over a longer period of time, you can see when the fastest growth happens.

J. Wodjenski: The summer is normally the fastest growth as it is warmer, but this could vary on location.

B. Anderson: There used to be buoys that reported the temperature in Cobscook and along the coast. Cobscook is a productive area, but relatively cold.

P. Cox: The salmon sites freeze over earlier around Bar Harbor compared to Cobscook.

J. Wodjenski: I want to end by saying thank you to all those who have participated in our port sampling efforts. The first few weeks were miserable with driving rain and I appreciate that after a long day fishing, you really don't want to be talking to us. We do get refusals, and total understand, but really do appreciate when folks stop to take the time to talk to us and give us information. Thank you.

T. Cheney: Thank you to both Kevin and Joe for your presentations. Now I would like to turn it over to Alex and the council to let us know how the season is going in their areas and then we will go to the audience.

DISCUSSION: 2014-15 SEASON

A. Todd: Down in Casco Bay area (Zone 1), it is just an average year. Closed areas opening up are what folks remember in their more recent memory, which was really good, but I would say it is back to what it was before. I don't see a big benefit, but I don't think our area is like Cobscook Bay either.

P. Cox: In Cobscook (Zone 3) we are having another great year, I don't think it has changed a lot. Scallops are bigger this year than they have ever been.

K. Kelly: Our 2014 fall survey is showing the meat size is the biggest we have seen since 2002-03 in Cobscook. [The average 4 inch scallops is producing a 21 count meat (U21); in 2006-07 it was the lowest we observed at a 26 count meat (U26).]

A. Mays: My season has been great! The Bass Harbor (Zone 2) area used to once be a hot spot, but has been in the doldrums for a decade. All that was there were ancient scallops that you couldn't even shell. It was a complete bust for a decade. I didn't have any expectations for it this year and it was great! As a diver, I was really impacted at the begging of the season as dives are going wed-sat with a 2 day overlap with draggers so bad visibility. For 3 weeks in a row we got 2 inches of rain on Tuesdays and could see anything. Because of the rotations, people are jammed up into spots and I couldn't go into those areas on the drag-dive overlap days, so I have been working on the periphery. But everywhere I have gone, even after the area was towed, I see 4-5 year classes of scallops. I have been doing 50-60 lbs. a day, which is good scalloping for a diver. Water is deeper here, so harder diving, so I can't stay as long and do as many dives, so to have that kind of catch has been amazing. Not as good as a LAA last year when I got the limit each day, but I haven't been this excited about the rebuilding process until this year. Every time I drop in there are a lot of scallop to harvest and also seeing small ones that will be there when areas rotate open again in a few years.

T. Miller: Our area down off Tenants Harbor (Zone 1) is a little harder scratch, and Muscle Ridge is depleted. The LAA is no different than the outside open areas, it hasn't lasted. Mostly word of mouth, as I have only been there one day. Down Friendship way was not as good as last year, Vinalhaven is a little better. Hard scratching, I think we need to think about what to do in our area for next season as we don't have the same thing happening as what Andy said. We need to have that conversation.

J. Boyce: Some places in my area (Stonington, Zone 2) came back great, but so limited in where you can fish and boats are crammed in. Over in Vinalhaven you have to go deeper and deeper, but so many boats there that you can't explore spots. Most of bottom is mud in this rotation. I would like to see areas be bigger. The high amount of pearls and nasty meats, which is almost a clapper to me, terrible meats in places where always were nice meats. I think that something could work on a bigger scale. I like the backyard fishing and don't want larger areas, don't want to travel more than 15 miles. For every season it is closed is it two growing seasons, which I think it too long.

A. Mays: Look at the conversation we are having - we didn't have this 5-6 years ago and each year we have had more and more active participants and having people land their 3 buckets this late into the season was unheard of. Everyone wants a spot to have to themselves for 3 weeks, but I really like to see other boats making money. It is a huge economic benefit. I know it varies geographically. But what I have seen for 10 years of going to the same spots and seeing nothing, I am now excited! If your gear is selective with 4 inch rings, you are not seeing the 3.5 inch scallops that are everywhere. I hadn't really thought of the 2 season closure, for every year closed it is 2 growing season. But, I am not willing to jump off the track of what we have.

J. Boyce: When you cluster boats in an area, it can't be good. We are selective of where we can catch them, as we can't tow every spot that has scallops.

A. Mays: We all like to go to the spot with great recruitment, but then you need to move on. I dive new spots and find 30 scallops. I'm optimistic!

M. Jones: I am also seeing all year classes.

A. Mays: Seeing barren areas now with multiple year classes.

M. Jones: I can sweep them into my bag - that is so rare. And a few of the edges it is like someone dumped them in a furrow. Diving in 1980s in Massachusetts they were like that had to clear a spot to put the anchor. All year classes from thumb nail size to nice dinner plates. They are everywhere.

J. Wotton: I haven't been yet, but have I have been talking guys in my area (Friendship, Zone 1). It is the complete opposite as what you are seeing, I am very disappointed – the LAAs were a bust, and now just as good outside. The majority of people think it is time to rethink things and maybe try another approach.

C. Guenther: Tad and Jim have been collaborating in muscle ridge project. Maybe at the next SAC meeting we can have Caitlin Cleaver present to see if that closed area is showing same thing as everywhere or something different. It could possibly help inform that discussion.

D. Horner: why did they (Zone 1) not do rotational management like us in Zone 2?

A. Mays: They came up with alternate plan of retaining LAA.

D. Horner: We didn't have a choice though. We had to take it or would have had a reduced season. They didn't take it and still got 70 days. Will that be reevaluated?

T. Cheney: Each of the three zones took three different rebuilding approaches; one 1 retained LAA, Zone 2 Rotational Management and Zone 3 a restricted 50 day season and lower 10 gallon daily limit. It is obvious that we need to reevaluate the Zone 1 approach.

T. Fogg: We saw a die off in late 1990s that contributed to why areas were deserted. We are all fishing on the same seed-set, you just didn't fish them until this year. How you can say the rotational plan is working?

B. Gordius: I've seen more young stuff this year than last 10 years!

A. Mays: They didn't just fly in. They were able to put 2-3 years of growth in and all the sudden you have 10-15 count scallops and steady recruitment.

M. Alley: Andy – you don't think scallops move?

A. Mays: The smaller ones yes, but not the bigger ones. I put scallops in funny little places that someone wouldn't go and I have gone back 2 years later and they are still there.

D. Horner: Why are pearls worse than ever?

A. Mays: Not sure.

J. Ackley: Everything is going great in our area (Jonesport, Zone 2). Everyone is getting the limit, there are plenty of scallops around. It is taking a little bit longer now to get them. We have 3-4 times the boats this year, so to big beds have been cleaned up, but they are there, you just gotta go find them. A lot of the guys feel with the 3 year rotations that areas so small that jamming 70 boats in little areas is not good. A prime example was [Sand Bay \(Roque Harbor/Lower Englishman Bay\)](#) and due to weather, it got pounded, so it was good that you closed that when you did. We would like to have the 2 year rotation to spread the boats out more and get a longer season out of it.

J. Boyce: All the lines

J. Ackley: And the lines inside lines (Targeted Closures)!

R. Alley: What was the percentage that has been landed in Cobscook Bay? How much longer is it going to stay open? What are the boats that are estimated to be there? There are another 40-50 heading down there for next week.

T. Cheney: At this point, after 18 days we have 21% of the biomass removed, which is 2/3 of the way to our 30% harvest target. If it remained at the current amount of 75 vessels, I would estimate it could last another 9 days or three weeks for a total of 27 days. But if 50 more boats show up, it may only last 6 more days. We are going to move up our survey schedule and conduct the next in-season survey on Feb 5 & 6, which is after 6 days of fishing. That information will help inform us as to when we will possibly have to shut the area down.

M. Alley: It would have been better to keep the area open these past two weeks. Those boats came out of there and have put more pressure on our area around Jonesport.

T. Cheney: We had originally recommended a 32 day season for Cobscook, which was not accepted by the SAC and industry. The only way we were willing to agree to the 50 day season that you guys wanted for there was if we had that 2 week break to review our in season survey data as we didn't know how many boats would show up and even if it would be able to reopen for the second half. However, this year because 50 less boats were down there, the area has had less effort overall, and it will open back up for a few more weeks at least.

J. Ackley: Any way to keep parts of it open longer and keep some boats there?

T. Cheney: Our next survey will help inform that. For example, we will have more work done in WDB to know if possibly that area or St. Croix could remain open for a bit long, for example.

R. Swenton: One of the things we need is consistency. The fishery doesn't know when it is going to close; buyers don't know if they can buy. Something we talked about last June is that you don't get your data in a timely fashion. It's your responsibility to turn in those reports in a timely fashion.

T. Cheney: What we really need is a swipe card with daily reporting for this fishery. We are working on that.

M. Alley: Cobscook is getting pampered and we are getting the shaft for it!

Public: We know when Cobscook gets closed the boats will come west. Our fishing days are limited already, since they closed Lower Englishman Bay, as now we gotta fish outside. A bunch of small boats that haven't been able to fish those days, but the big boats can. Everyone is not getting that limit every day as we haven't been able to fish. I've been lucky to get a couple days in, sometimes one day due to a break down. A lot of days we haven't been able to fish. They come west, and you shut us down, that is not fair!

P. Keliher: We acknowledge that there are big boat and small boats - we need to take that into consideration. The other piece of that is we could talk about slowing Cobscook down. Does it prevent boats from going down there in the first place if a day was taken out? Give me some ideas. I'm not here to make a decision, want to see if we can't make modifications to slow it down.

R. Leach: Go back to 4 days a week in Cobscook. That put a lot of pressure on the rest of state as you can get 3 buckets outside and have a 4 day week. Everything would have been stretched out better; instead than other places got hammered because not as many boats went to Cobscook.

P. Keliher: It is always a balancing act every year of how Cobscook will affect the rest of state. Each year the rotations change and we look at that and take it into consideration when setting up the seasons.

A. Mays: It is in the very near memory of having [Cobscook shut down in a few days](#). It seems to me that we are in a way different place in where the stocks are now there. I know we are trying to figure out how much is removed. But it weakens the Departments case when you closed it down last year and go back this year and there are more scallops there. If the stock had

rebounded and we have 2-3 times of what is there now, do we have to be so tight? If the stock is smaller, on a fine line, so yes. But outside with big catches and the amount of boats, and with a couple of more days would it really have an impact on it? It seems like a lot of places it is built back up, so there is a lot more room to think differently of what is happening in the fishery.

P. Keliher: So what you are asking is can we be a bit more risk averse? I have heard that we live and die by the science. We have used the science to set the bar, but we go way beyond that and use industry information heavily. I have heard from folks that you didn't do shit, and this is just a cycle. Others say this is working. At the end of day we have seen improvements, others like Jim Wotton have said it is not so great. Every place is different. Taking the science, industry input, MPO into account, I think we show that information is coming together. The survey tows they just did is lining up with what we are estimated for removals with boat counts and CPUE. So that tells me we can bring more confidence to the table. In my mind, we are going to be a little less risk averse.

A. Mays: What about WDB?

K. Kelly: That area has dropped about 44% from 2013.

Murphy: That proved my point that these areas only perform in the first few years. In Machias Bay there is going to be double what Cobscook has next year. On your surveys, in the LAA first few years we get exponential growth. Biggest return is in first two years. WDB did best first few years. Dr. Dvora Hart told us they grow the most in the first few years the most. We should take and drag that place right out and start over. That is why the area around Machias is performing much better. You need to fish it down to nothing and it will come back better. Cobscook has been 4 years rebuilding. Machias Bay had 2 years, and came back better. This is biggest year that Cobscook had in years, and with half the boat and lower limit, we are not even going to get 30 days out of it.

T. Cheney: A big reason the biomass in WDB is down this year compared to last year as in an effort to keep the fishery open down there for a few more weeks last year, this area got overharvested. There were 100 boats there the last day and they removed a huge amount of the product from the area.

T. Brawn: DMR has learned the lesson that the first week of 2011 they got the limit by 9am the first day and by noon the end of the week. DMR is learning what works and what is not and they don't want it to go back to what it was. Cobscook used to complain about everyone going down there and if we could bring the rest of the state back. Now that is happening. Each of the three zones should have a say of what happens in their own zone, however, I know it is a statewide fishery.

M. Jones: Pat, you said that every area is different. I really hope that the rest of the state doesn't get closed down when Cobscook does. A lot of guys are waiting for March as the weather gets better.

P. Keliher: Just because we close Cobscook it doesn't mean that we will shut rest of state down.

M. Jones: It will take the fleet a week to even find places to fish, so there will be a drop in the catch at that point. Not fair to judge everyone because it is different.

J. Ackley: A lot of boats will drop out too.

P. Keliher: Eastport breakwater, all those boats displaced and then more boats coming down. Will there be enough room for everyone Paul?

P. Cox: It won't be a problem, there is enough place for them all to go.

J. Ackley: Cobscook used to have 167 boats fishing there.

O. Moody: Globe Cove is full.

M. Jones: On you license maybe should pick a zone like urchin fishing.

J. West: You pick your zone, and I'll pick the state of Maine!

B. Anderson: I wanted to follow up with what Jim said; I have been seeing bigger scallops and others say they are seeing more scallops. I would rather have a 2 year rotation with more of the coast open. Not there yet, but it is something that we could start talking about. Open more bottom up and give us more access to more areas every year. I have seen a general improvement. When we closed everything, I couldn't catch them. Now I am seeing way more scallops. A lot of different sized stuff, a lot of good sized stuff. I would like to look towards more open areas with protected areas.

M. Jones: The efforts are working, but some areas are just dead.

B. Anderson: There are some dead scallops and clappers, but not in the deeper water.

M. Jones: It's the green crabs - they don't go into the deeper water.

J. Boyce: He was saying going to only one year closures – that is two growing seasons.

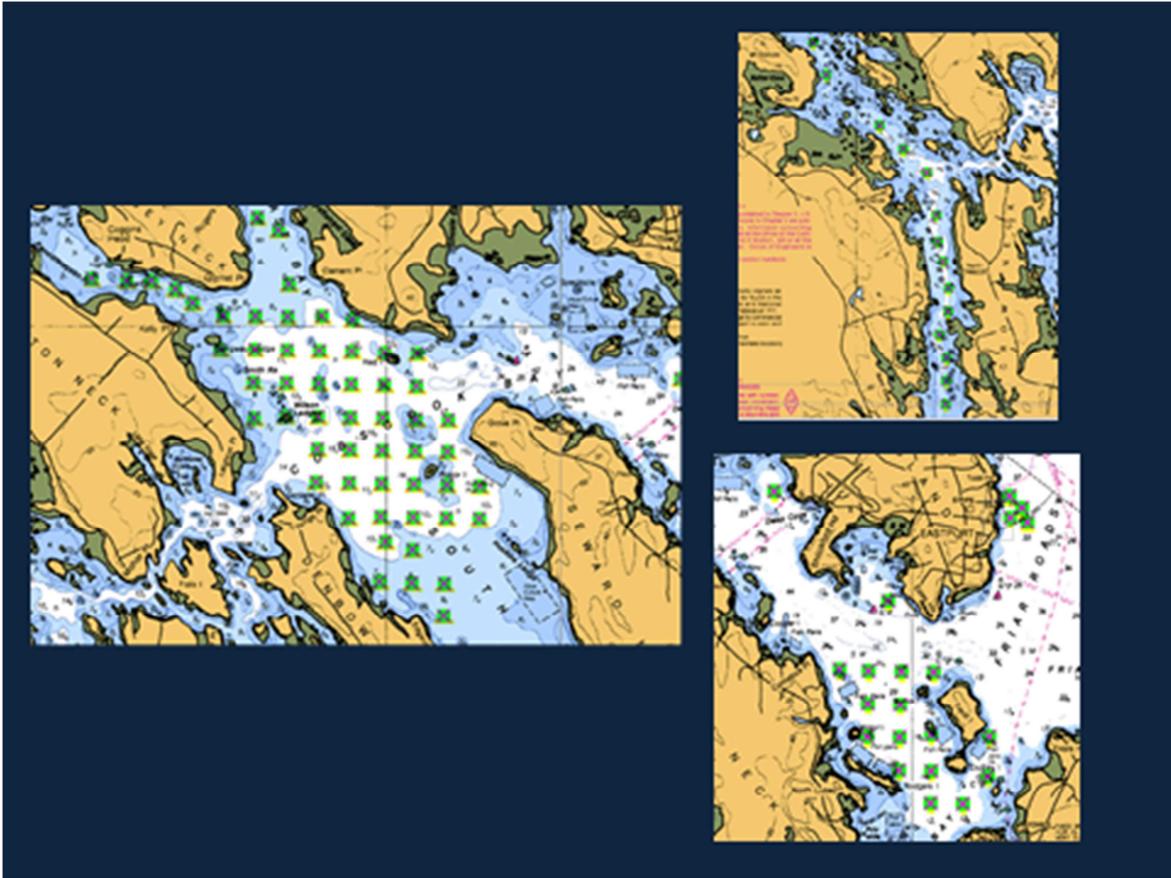
B. Anderson: Want to throw an idea out there. What if we take days out of the season in Cobscook to stretch it out?? Maybe leave just Wednesdays open so have all Cobscook Bay and the WDB LAA open are the same time so folks can spread out. Just a thought. Look at taking days out of the week in other areas to slow it down rather than come to a complete stop. Gradually slowing the season down would be better.

M. Jones: Maybe have a trigger to put that in and then it drops to 2 days. I would rather have a chance to go than none at all.

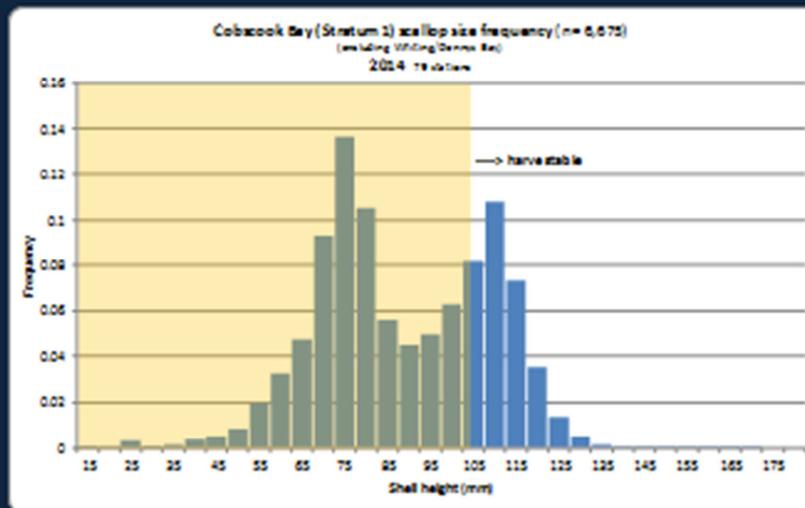
B. Anderson: If you take days out, when you go back once a week the scallops redistribute back into the drag track.

Meeting adjourned at 8:15pm.

Appendix A
Kevin Kelley's Slide Presentation



**Cobscook Bay proper
fall 2014 scallop survey:**

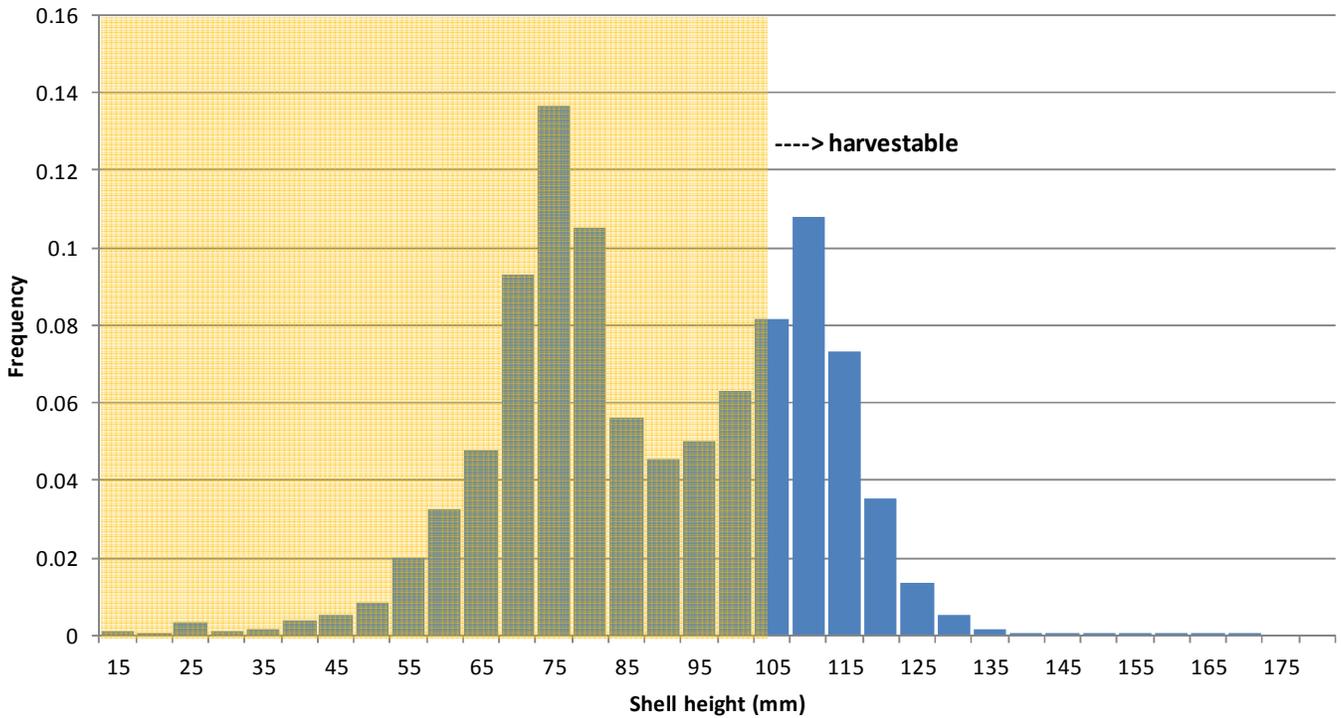


- 30% of scallops @ 4.0-4.7 inch shell height

Cobscook Bay (Stratum 1) scallop size frequency (n = 6,675)

(excluding Whiting/Dennys Bay)

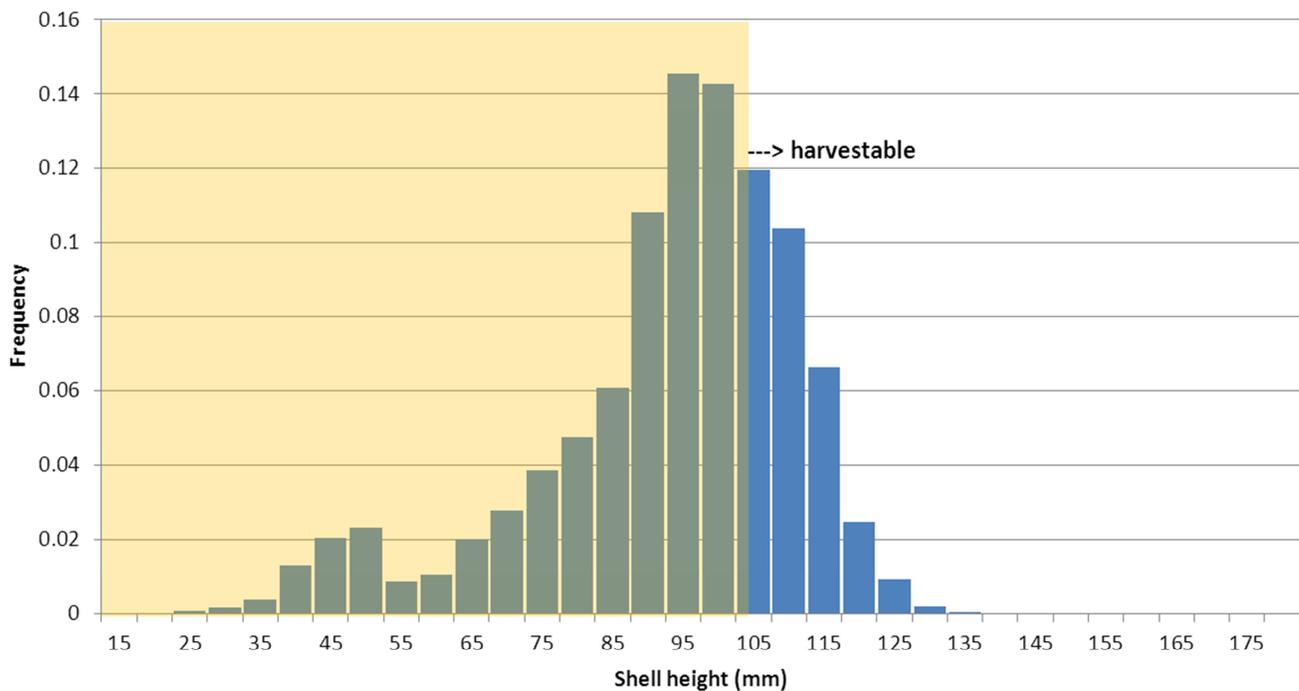
2014 79 stations

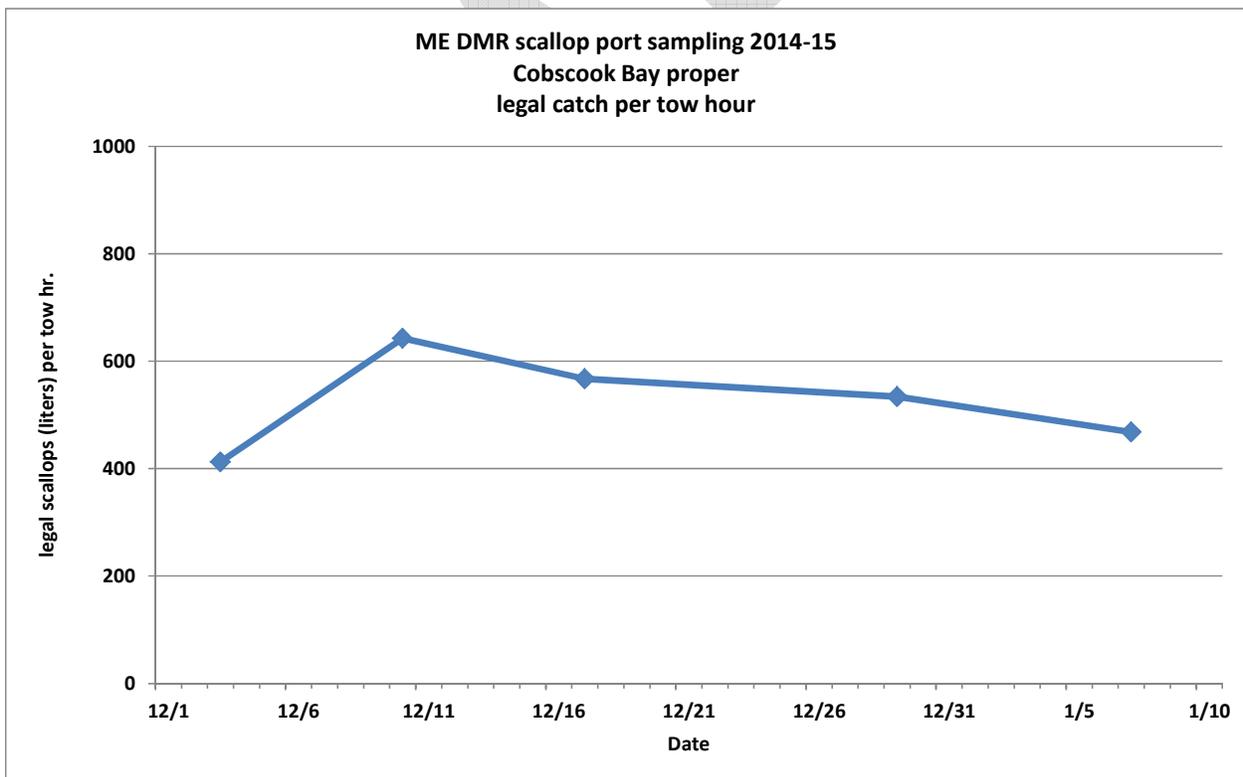
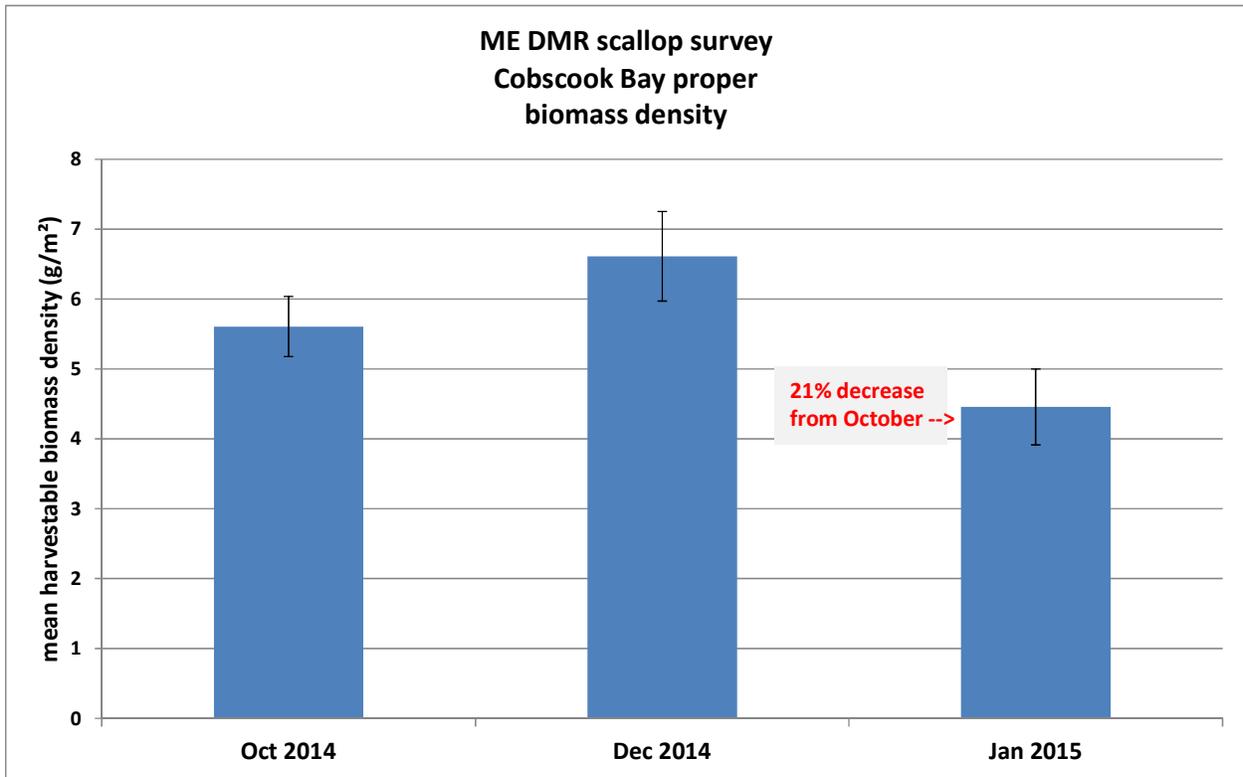


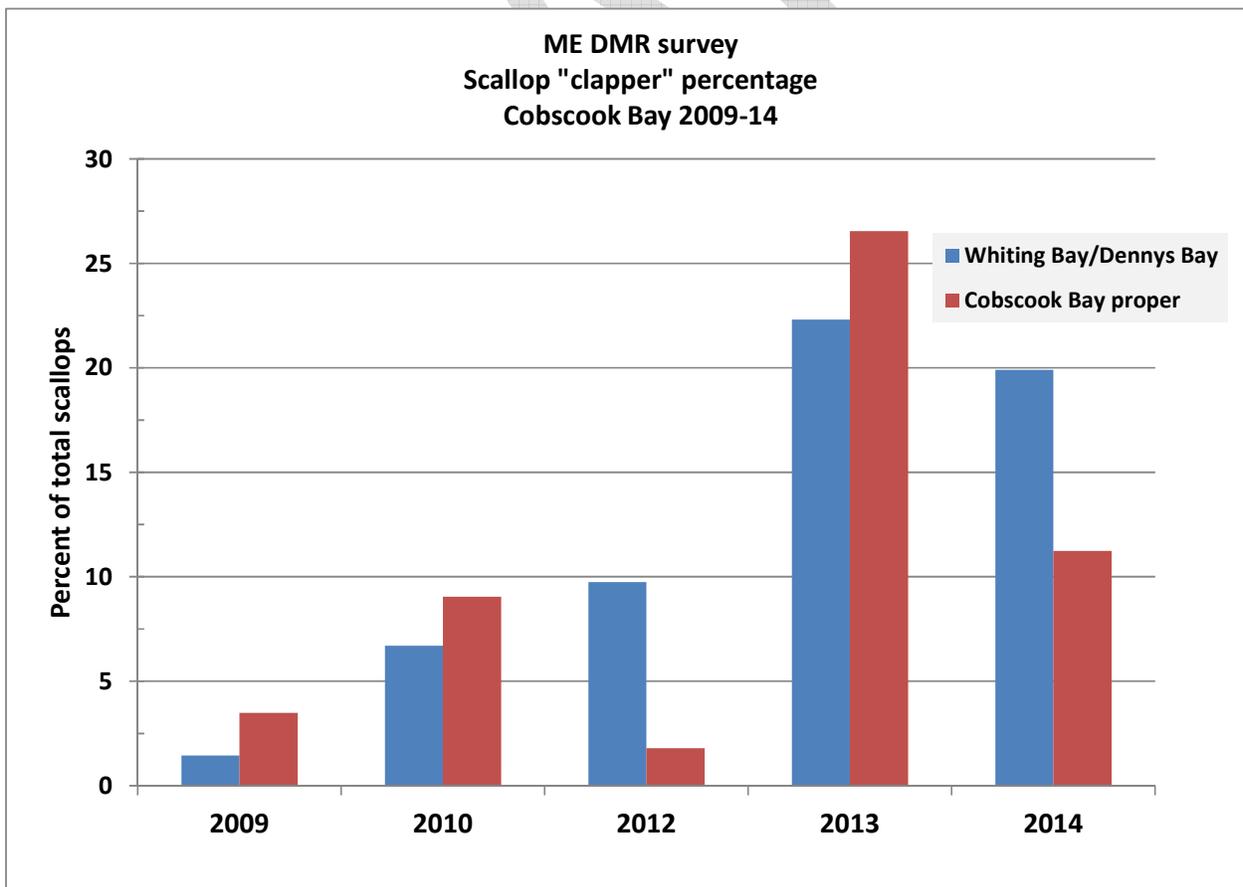
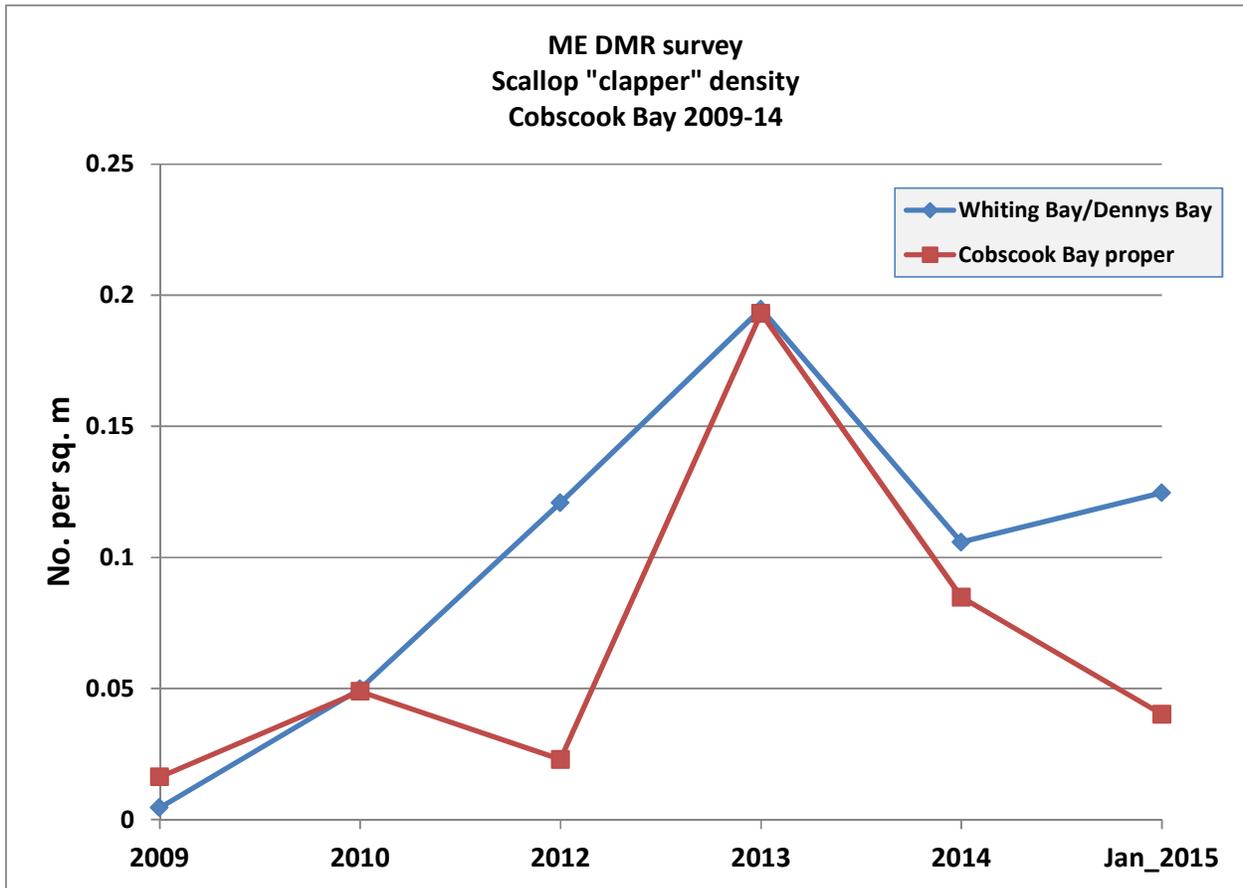
Cobscook Bay (Stratum 1) scallop size frequency (n = 6,598)

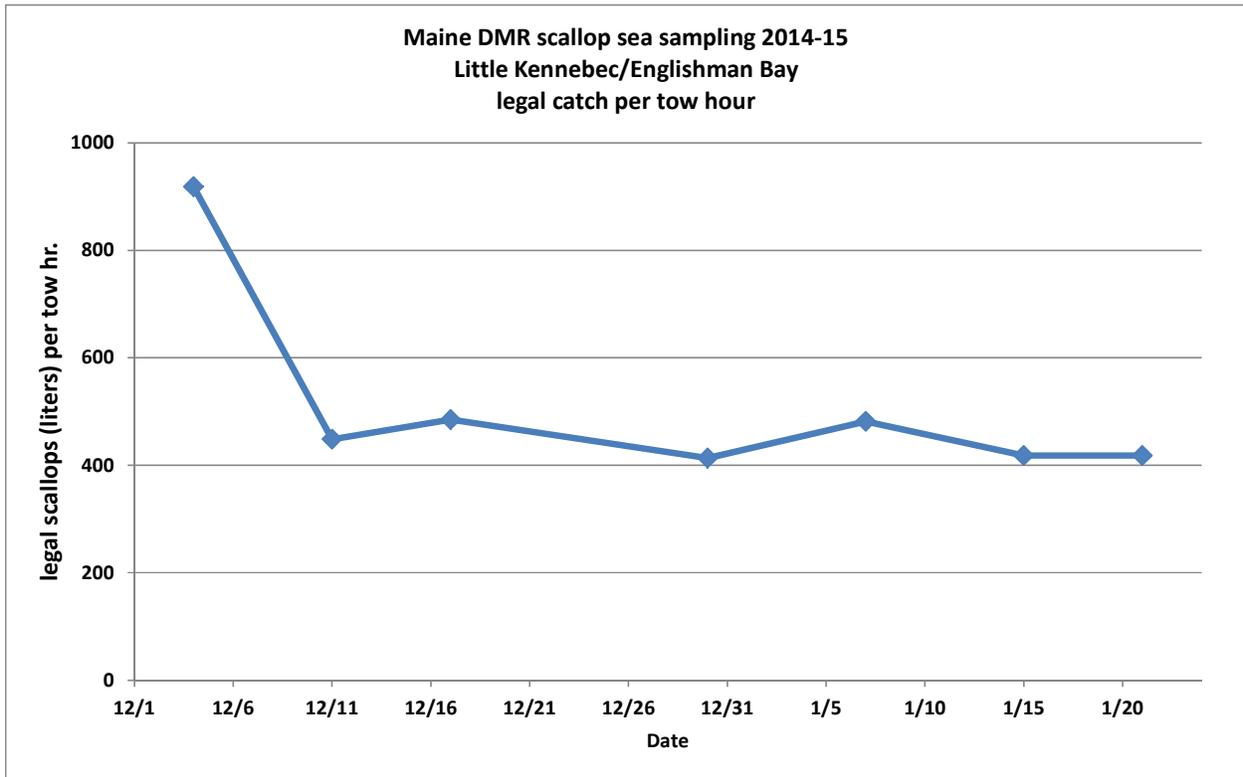
(excluding Whiting/Dennys Bay)

2013









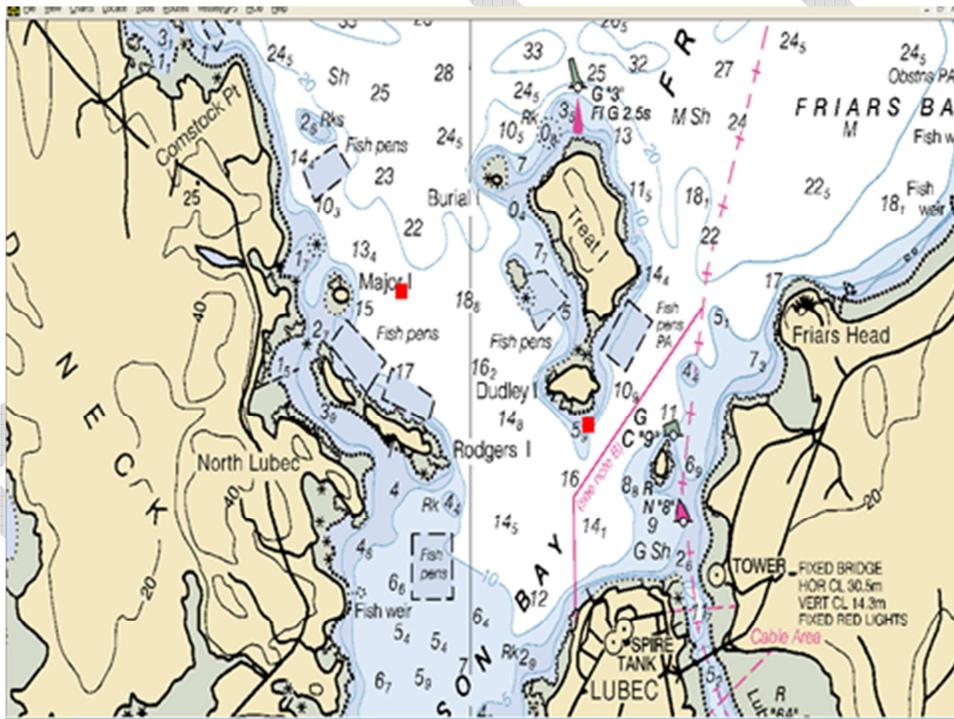
Appendix B
Joe Wodjenski's Slide Presentation

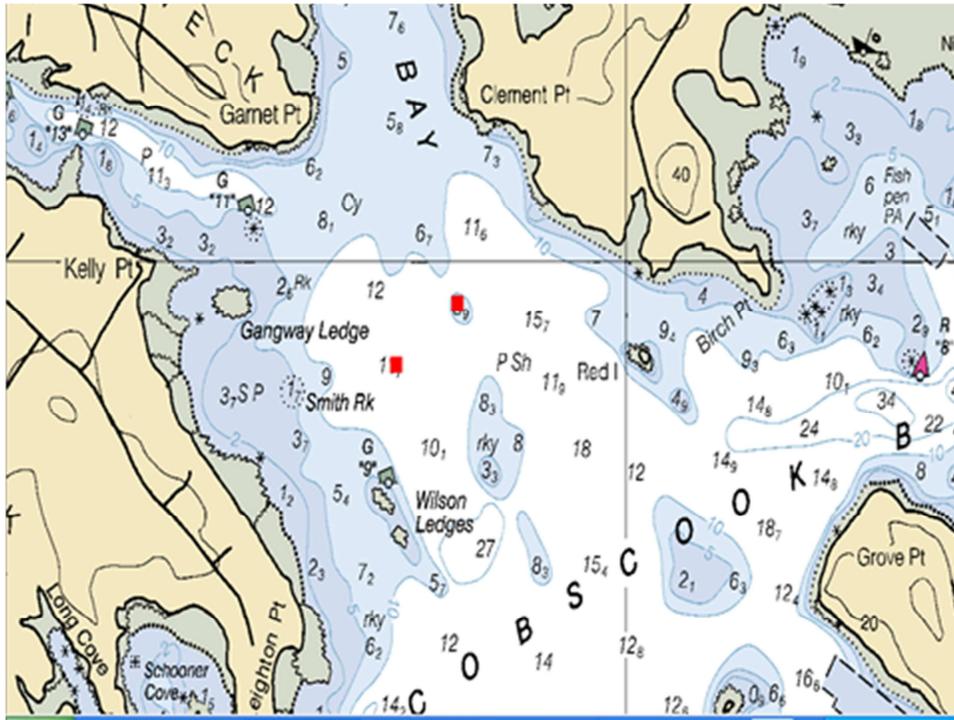
2014 Pilot Scallop Tagging Survey



Cobscook Bay

- Tagged 851 scallops, recorded shell hts.
- June 9 2014
- Scallops marked A 1-500 and B 1-351
- Red non-toxic Sharpie marker
- Returned at 4 different locations
- Looking for growth and movement data





Current Results

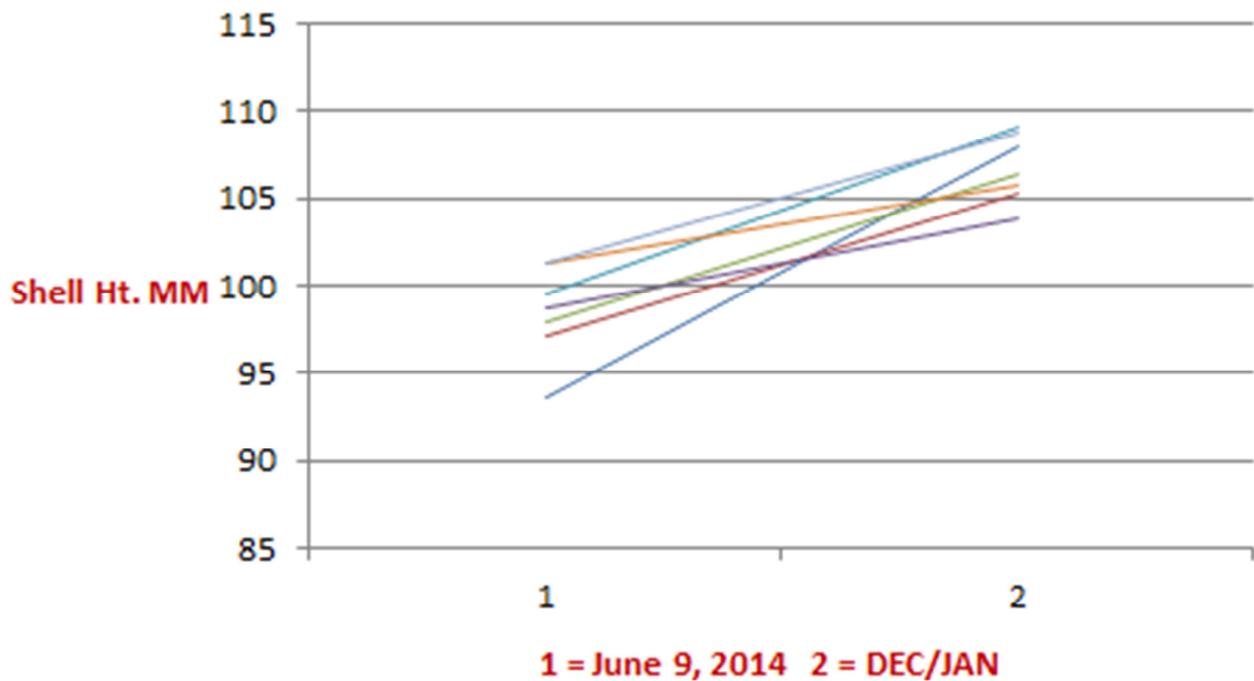
- Recovered 29 tagged scallops so far
- Avg. growth of sub-legals with starting shell hts. of 93.5mm to 101.3mm = 8.2 mm (1/3 inch)
- Avg. growth of legals with starting shell hts. of 101.6 mm to 108 mm = 7.3 mm
- Avg. growth of legals with starting shell hts. of 110 mm to 118 mm = 4.3 mm

Current Results

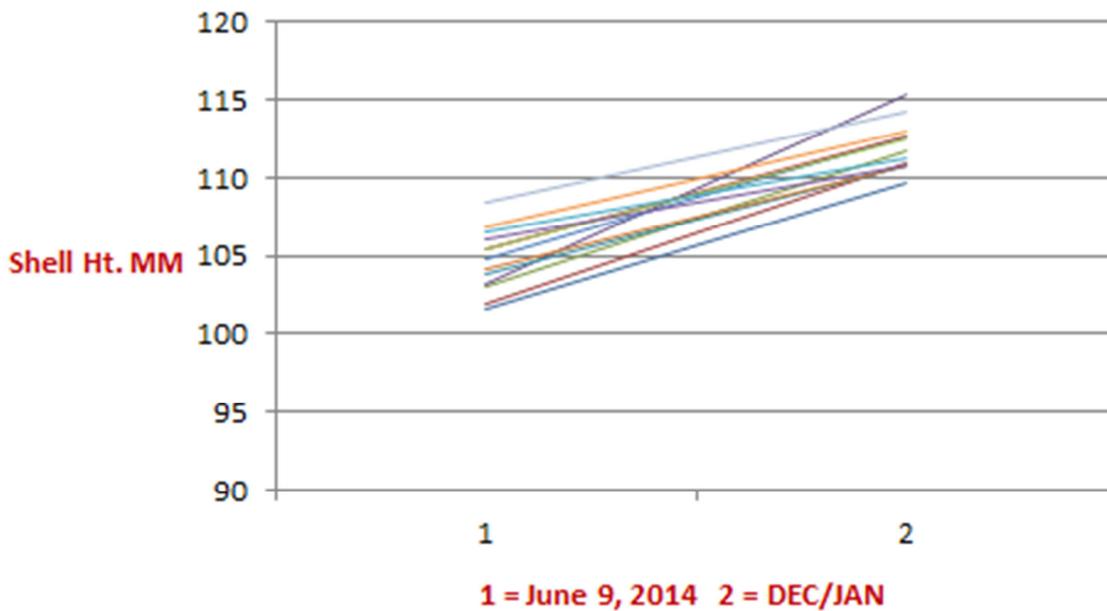
- Our data so far suggests that smaller scallops grow faster than larger scallops
- This concurs with growth data from NOAA

Growth of Sub-legals

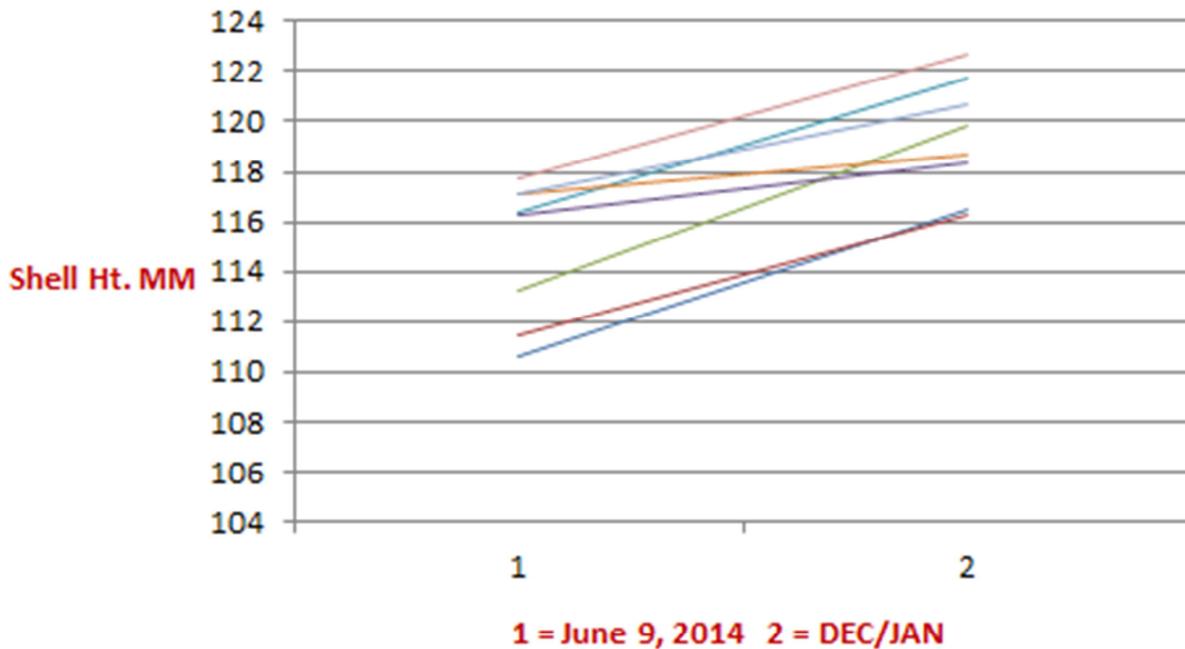
Avg. = 8.2 mm



Growth of Legals 101.6 – 108.4 Avg. = 7.3 mm



Growth of Legals 110 – 118 Avg. = 4.3 mm



Improvements for next year

- Incorporate new tagging study into fall survey for better re-capture rates
 - Use fall survey tow sites as tagging study return sites
 - Tow directly over return sites during survey
- Earlier communication to fisherman
- Incentives
 - T-shirts, hats or D&D gift certs??

Thank you for returning tagged scallops to us!

Thank you for your time and patience during port sampling!!

