

**PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
HORSESHOE CRAB MANAGEMENT BOARD**

**Radisson Hotel Old Town
Alexandria, Virginia
May 10, 2007**

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ATTENDANCE

Board Members

Terry Stockwell, ME, proxy for G. Lapointe (AA)	Howard King, MD DNR (AA)
Sen. Dennis Damon, ME (LA)	Bruno Vasta, MD (GA)
Pat White, ME, (GA)	Jack Travelstead, VA, proxy for Bowman (AA)
Rep. Dennis Abbott, NH (LA)	Kelly Place, VA, proxy for Sen. Chichester (LA)
John Nelson, NH (AA)	Louis Daniel, NC (AA)
G. Ritchie White, NH (GA)	Jimmy Johnson, NC, proxy for Rep. Wainwright (LA)
David Pierce, MA, proxy for P. Diodati, (AA)	John Frampton, SC (AA)
William Adler, MA (GA)	Dr. Malcolm Rhodes, SC (GA)
Vito Calomo, MA, proxy for Rep. Verga (LA)	Robert Boyles, SC (LA)
Mark Gibson, RI (AA)	S. Woodward, GA, proxy for S. Shipman (AA)
Eric Smith, CT (AA)	Gil McRae, FL (AA)
Pat Augustine, NY (GA)	April Price, FL (GA)
Gordon Colvin, NY (AA)	Bill Johnson, FL, proxy for Rep. Needleman (LA)
Brian Culhane, NY, proxy for Sen. Johnson (LA)	Karyl Brewster-Geisz, NMFS
Peter Himchak, NJ DFW, proxy for Chanda (AC)	LeAnn Southward Hogan, NMFS
Erling Berg, NJ (GA)	Margo Schulze-Haugen, NMFS
Dick Herb, NJ, proxy for Asm. Fisher (LA)	Tom Meyer, NMFS
Roy Miller, DE, proxy for Emory (AA)	Wilson Laney, USFWS
Bernie Pankowski, DE, proxy for Sen. Venables (LA)	

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Aaron Hurd, DE DFW

Staff

Vince O'Shea
Robert Beal

Nichola Meserve
Brad Spear

Guests

Lisa Callahan, Atlantic States Fisheries Journal
Charles Givens, Atlantic States Fisheries Journal
Wilson Laney, USFWS/SAFCO
Arnold Leo, Baymen's Assn.

Michael Litchko
Fred Layton, Jr.
Perry Plumart, American Bird Conservancy

The meeting of the Horseshoe Crab Management Board of the Atlantic States Marine Fisheries Commission convened in the Washington Room of the Radisson Hotel Old Town, Alexandria, Virginia, on Thursday, May 10, 2007, and was called to order at 9:45 o'clock, a.m., by Chairman Roy Miller.

CALL TO ORDER

CHAIRMAN ROY MILLER: Good morning, everyone. I'd like to call the Horseshoe Crab Board meeting to order if I may.

APPROVAL OF AGENDA

Does everyone have an agenda for this particular board meeting? If so, are there any suggested changes or additions to the agenda? Pete Himchak.

MR. PETER HIMCHAK: Mr. Chairman, I just think under the other business there will be a mention of horseshoe crab aquaculture activities and I'll leave that up to members of the public to explain that project.

PUBLIC COMMENT

CHAIRMAN MILLER: Thank you. Are there any others? Seeing none, I'll move on to our now revised procedure for public comment. I would invite any public comment at this time on any items now covered under our proposed agenda items. Is there anyone from the public that wishes to make a statement at this time? Seeing none, I'm going to – there is a hand. Sir, please state your name and your affiliation if you have one, please.

MR. FRED LAYTON: My name is Fred Layton. I'm a commercial waterman from New Jersey. I represent the 34 horseshoe crabbers that is left in the state. Last year we started for horseshoe crabs what we call positive mortality replacement. And what we're trying to do is we had tanks we set up.

And we got a real late start but we did get some eggs and stuff and we put them in our tanks with sand and stuff and we were able to hatch them out. And we didn't have a whole lot but at least we had some success in that. And then this year we're working with Rutgers and some other doctors and scientists and all.

And we're going to try raising them in nylon stockings and putting them in the sand at the beach. And then when they get where they say they're mature enough to put into the tanks, we're going to

put them in the tanks for, to hatch out. Then we're also going to try some in that, right from the beginning right in our tanks in the sand. And then we've got upwellers in there and everything. So we're still in the experimental phases so that's where we're at there. Thank you.

APPROVAL OF PROCEEDINGS

CHAIRMAN MILLER: Thank you, Fred. Bill Adler reminded me that we hadn't looked at the proceedings from the previous meeting. Are there any changes or additions to the proceedings from the August 15, 2006 meeting? I had one that puzzled me. It was something that Pete Himchak said. I'm looking at a second paragraph on the last page, Pete. It says, "flow-through systems trying to keep bungle growth down" etc cetera, etc cetera. I presume that's a typo, Pete. Bungle growth?

MR. HIMCHAK: That should be fungal.

CHAIRMAN MILLER: Thank you for that clarification.

MR. HIMCHAK: It just shows me for not reading the proceedings, Roy.

CHAIRMAN MILLER: **Any other suggested additions or changes to the minutes from the previous? Seeing none, I'll assume they're approved as written.** We've already covered public comment. I'm going to move on to Plan Review Team reports and I'll call on Brad Spear.

PLAN REVIEW TEAM REPORT

MR. BRADDOCK J. SPEAR: Thank you, Mr. Chairman. The compliance reports are due February 1st. The state reports were included on the briefing CD as well as the two plan review team reports. The Maine report was submitted late and there are copies available. If anyone would like one there are copies in the back. You can raise your hand and staff will hand them out. Their report was included in this report; it just wasn't included on the briefing CD.

The 2006 bait fishery, the reported coastwide landings were slightly over 833,000 crabs. You can see how that compares with past years in Table 1 and Figure 1. It was up about 8 percent from the previous year and down about 13 percent from the previous five-year average. New Jersey implemented its moratorium.

And there was a harvest of about 3,000 crabs but it

appeared that the demand and effort had shifted to other states, mainly there were increased landings in Virginia and also from New York north to Massachusetts. Both Delaware and Virginia exceeded its quota in 2006. Delaware has since implemented a moratorium. The plan review team felt that that should cover the overage. And I think Virginia exceeded its quota by about 3,000 crabs so its 2007 quota will be reduced to just about 150,000 crabs.

The District of Columbia did not submit a report. As I said, Maine submitted its report a few months late. However, the plan review team does find that all states are in compliance with the plan at this time. Maine, New Hampshire, Potomac River Fisheries Commission, South Carolina, Georgia and Florida request de minimis. And the plan review team finds that they do quality and that they, the board should grant them de minimis status for 2007.

There were no significant enforcement cases in 2006 but there were a few minor violations in a few of our states. Looking at the biomedical fishery, there were 367,914 crabs brought to biomedical facilities for bleeding. Of those, there are about 60,000 crabs that came from the bait market and then subsequently returned to the bait market. Those crabs were counted against state quotas.

And if you look at Page 5 on the 2007 review of the fishery management plan there is a table in there that looks at the past few years of biomedical harvest and estimates of mortality. For 2006 the coastwide mortality estimate for crabs for biomedical use was just under 50,000 and that is below the threshold that is spelled out in the FMP of 57,500 crabs. The mortality estimate and the number of crabs brought to biomedical facilities was up about 8 or 9 percent from 2005. However, the plan review team recommends no action at this time.

Moving on to research and monitoring, some updates from 2006, the Virginia Tech Horseshoe Crab Shorebird Research that is ongoing and has been funded as a line-item in the NMFS budget got another \$542,000 in the FY07 budget. There is reports from NMFS that this money has kind of run out as a priority within NMFS and that the FY08 funding is uncertain.

I know Virginia Tech has started other efforts to try and find money for those research projects. One of those that is very important to this board is the Virginia Tech Benthic Trawl Survey. And in 2006 we have seen increases in most stages of males and

females. The report was handed out to you at the beginning of the meeting.

The technical committee hasn't met since this report was released so there hasn't been any official comment or reaction to the report, nor with the spawning survey. But the next time the committee meets it will discuss these and report back to the board. But it does look positive based on the past couple of years' trend.

And the spawning survey, as I said, activity, spawning activity appears to be stable over the past eight years or so. The spawning survey continues to be the best tool to monitor changes in spawning activity in the bay. And that concludes my report.

CHAIRMAN MILLER: Any questions for Brad on that report? Pete Himchak.

MR. HIMCHAK: Brad, I'm going back to the Addendum III with the biomedical questionnaires that are required for at-sea culling of horseshoe crabs and I know how many were brought to the bleeding facilities but how is the compliance on the actual monitoring of what is not, of what is the mortality, any mortality associated with at-sea culling of horseshoe crabs?

Because, quite honestly, your estimate would have to, if there is not full compliance your estimate of mortality would be an underestimate and the 57,000 target, how close, we could be there or a little bit over. I still feel uneasy with the at-sea culling issue. Thank you.

MR. SPEAR: The at-sea culling reporting is spotty, I would say. It's not all harvesters from all states report consistently across the years so that is an issue that remains.

CHAIRMAN MILLER: Pete.

MR. HIMCHAK: Roy, if I could follow up, then, I think there has to be more diligence in addressing the issue because it was a major component of Addendum III, the burden put on the states as a compliance requirement. And let's face it, every time we do regulations we exempt the biomedical utilization of horseshoe crabs because of the target that was established in the original FMP. And if we do not have full confidence that we are below that target, then we're on shaky ground as to keeping them exempt from management options. Thank you.

CHAIRMAN MILLER: Any other comments to that

point? Any suggestions in that regard? Thank you, Pete. I'm going to revisit a previous agenda item due to some uncertainties in our new process.

There were a couple of gentlemen who signed the public comment sign-in sheet who did not raise their hand when I asked for public comments concerning items that do not appear on our agenda so I'm going to give those two folks another opportunity if they wish to provide public comment at this time on any item that's not covered under the agenda. Are there any additional public comments at this time? Yes, sir. All right, Perry, go ahead, you're first. Perry, please put on the mic and identify yourself, please.

MR. PERRY PLUMART: Perry Plumart with the American Bird Conservancy. I'm director of conservation advocacy. I would just like at the appropriate point in the process, if I can, to comment on the Horseshoe Crab Shorebird Technical Committee proposal. I don't know when that would be appropriate.

CHAIRMAN MILLER: We're having an update under Agenda Item 5 on the shorebird meeting. Would that be the appropriate time to comment?

MR. PLUMART: I think so.

CHAIRMAN MILLER: Okay.

MR. PLUMART: Thank you, Mr. Chairman.

CHAIRMAN MILLER: We'll hold it until then. I think there was another hand. Is that Mike in the back there?

MR. MICHAEL LITCHKO: My name is Mike Litchko. I'm from New Jersey, a horseshoe crab representative for the state fishermen. Last year in February the Atlantic States here has had a letter signed by O'Shea and Preston Pate and Mr. Lapointe that there would be an investigation into research misconduct through the ASMFC or the U.S. Fish and Wildlife.

And I wanted to know what the, or, I'm sorry, it was March 7th, 2006, that there would be another independent peer review of research misconduct for the sound science of the red knot issue. And I want to know the, what has transpired out of that and how far that has gone and if there is an independent peer review being done about it. I mean, it's 14 months later so it's an ample amount of time to have something reviewed and investigated.

CHAIRMAN MILLER: I'll look to Vince O'Shea.

All right, I'm going to call on Brad for a response to that.

MR. SPEAR: The independent peer review was being conducted as part of the U.S. Fish and Wildlife Service's review of the status of the red knot and that review has been completed. And the conclusion was the species was listed as a species of or on the Candidate Species List for the Endangered Species Act. It is a, I believe a Priority 6 so it is worthy of protection but there are other species of higher protection. That review verified the information that I believe you are talking about.

MR. LITCHKO: Actually, no, it wasn't because what you're referring to is something that was a year prior to that. This happens to be something different from that. And, also, in the U.S. Fish and Wildlife Service there was a petition to de-list the Candidate Species of the red knot for research misconduct. That was done last year or so, so I believe the U.S. Fish and Wildlife's time has expired to answer that petition on that.

But I'd like to pass around a letter from the GOA that has, that, actually it was filed in February of 2006 or, I'm sorry, in November of 2006 but the letter here is stamped May 2nd from the U.S. Fish and Wildlife that they are going to be investigating fraud in the science of the red knot/horseshoes crab issue.

So I just wanted to make that part of the record, that I don't know what provisions that you're going to have when you find out about the research of this red knot, on how it was, on how the science has been manipulated and omitted and the omission of geographic area and the ever-changing numbers of the birds. Something has to be done about this. And you're spending all this money on research and the needs and all these needs and you absolutely have no results.

The U.S. Fish and Wildlife was supposed to do an assessment. The assessment was done in 2005. Two years later you still have no assessment. But the numbers in that assessment have been appearing in court documents, in your proceedings here, but nobody has that assessment report.

And it was paid for by Congress and it was paid for by the states. And it does not exist here. But, what we do have is some of the court proceedings that was done by Steven Ouellette who is a federal lawyer who filed complaints against the State of New Jersey for the action that they took on the moratorium. And in there gives the status report numbers of red knots.

And the problem with that is that those numbers that were provided in the court record do not match the numbers that provided here to the council and the Shorebird Technical Committee that provided here as a peer review report. Those, the assessment shows that in some years – we were all led to believe in 2005 that the red knot numbers were down to like 15,000. Well, now in the court papers they're up to 32,000.

And in 1990 the numbers were documented here to this council and to the Shorebird Technical Committee – all told you that they were 45,000. Now in these court papers now they're 70,000 which leads me to believe that the reason that these numbers are ever-changing numbers was because if the courts were to have a peer review of this extinction line, curve as they call it, that the red knots would have been extinct two years ago but they had to bump these numbers up.

And they changed these numbers. And the problem with this is that we're all here because we believe that the numbers that they're telling us is true. But when they can just arbitrarily take and change the numbers from year to year and then here, and here you're all voting on all this stuff and trying to get all this money to do this research, what have you accomplished? What have we accomplished here?

The red knots aren't declining in the Delaware Bay. They just moved over to the Atlantic Coast where they don't survey. And the status assessment would show you that the numbers are over there, but they don't want that out. They don't want you to know that. They just want you to know that they're declining and they need all the research money and the needs for this.

But, anyway, I want to pass around these papers that are here from the state that show that the horseshoe crab numbers that were provided in 1995 are higher numbers than what the Shorebird Technical Committee members provided and the graph of the court which shows the numbers are even higher, and the state surveys which shows the numbers are totally different.

And without them bumping up the numbers of the red knots, the red knots would be extinct two years ago. But if the courts were going to have a peer review these people realized that they can't have those low numbers in there because anybody who was a scientist who would review that would realize it's not matching and it doesn't add up.

And let me remind you, too, that according to the State of New Jersey in 1997 with a signed affidavit from the environmental groups and Dr. Larry Niles that the red knot or the horseshoe crabs would be extinct this year, totally extinct. And I know we all know that that's a far cry from the amount of horseshoe crabs that we have in our trawl surveys and the information that we have today.

So, my main problem that we're having today is that the suppression and the distortion of the science could have serious consequences for the future of this Atlantic States Marine Fisheries Commission for allowing this pay-to-play environmental policies to drive this organization. We have problems in all of our fisheries.

We're spending money on birds and research on horseshoe crabs and stuff. I understand. We need the research for it but the problem is it's not sound science. And it doesn't add up. And, quite frankly, all of New Jersey's fisheries are in dire straits. There is something wrong with all of our fisheries. And it starts right from the food chain in our nurseries and tributaries.

You need to start with the pesticides and the contaminants that are in the water and the bacteria that's released by our waste treatment facility plants that are releasing the bacteria that's causing a lot of our problems. The bacteria that they release eat all the juvenile, the eggs, the larvae. It attacks all that. And that's where we're having our problem.

You're trying to regulate our fisheries from the top-end like on a flounder you want to give them 18.5 inches. Well, there should be a pyramid that each line, every time somebody catches a fish it should add up. I mean we should be catching 6-inch fish, 6-inch flounders, 8-inch flounders, 9-inch flounders, 10-inch flounders, 11, 12. It should go on up.

We should have a pyramid of fish that we should notice that this changed, that what you're doing is working. But it's not. You either catch illegal fish or the ones that are illegal you don't see them next year. They don't grow up to that size. I mean the weakfish collapsed in the Delaware Bay. I mean there is a telltale sign of something seriously wrong. And if that's the case, the weakfish should have gradual peaks of where their sizes are and we don't see that nowhere. And –

CHAIRMAN MILLER: Mike, I'm going to give you one minute to wrap up if you would, please. We've

just about expended the allotted time for public comment. Thank you.

MR. LITCHKO: All right, well, thank you very much. I appreciate you listening to me. And I hope that everybody here realizes that, you know, the horseshoe crab and red knot is one issue. And of course we're here meeting on that but we've got to have sound science. And without sound science we can't have environmentally-driven policies rule our fisheries and all the fishermen and the general public's trust and all safety be sacrificed for a few individuals to receive money from or, as I'm going to say, stocks from these chemical pharmaceutical companies that hurt our fisheries. Thank you.

CHAIRMAN MILLER: Thank you. I would suggest that we move on to the next agenda item. If anyone wishes to comment on any of the issues that Mr. Litchko raised, that would be a good opportunity to do so. So why don't we move on to the update on joint meetings with the U.S. Fish and Wildlife Service Shorebird Technical Committee. I'll once again call on Brad.

UPDATE ON JOINT MEETINGS WITH USFWS SHOREBIRD TC

MR. SPEAR: Thank you, Mr. Chairman. This will be brief. In the 2007 Action Plan the board allocated funds for a joint meeting of the Shorebird Technical Committee and the Horseshoe Crab Technical Committee. Thus far these committees have kind of had a back-and-forth about, you know, I think this is your jurisdiction; I think this is your jurisdiction. And there has been problems with communication so the thought was to bring them together to develop a more effective working relationship.

One of the first projects that they'll be looking to tackle is a joint modeling approach. And there has been several different models suggested. And this meeting, which is scheduled for the fall, will begin to get at that issue. There will be more updates coming as we move forward but right now it's scheduled for October of this fall.

CHAIRMAN MILLER: Any of the board members have comments regarding the Shorebird Technical Committee, their reports to the commission, etc cetera? I see a finger wagging. Gordon Colvin.

MR. GORDON C. COLVIN: Thank you, Mr. Chairman. I'm glad to hear Brad's report that

suggests a greater degree of kind of collaboration and an attempt to get the work of the board's Horseshoe Crab Technical Committee and the Shorebird Technical Committee aligned a little better.

I think that's a positive step and I'm hoping that that will also help lead to kind of regular updates on the status of shorebirds that will accompany and, as I say, be in alignment with the information that we're getting from our own folks on the horseshoe crab status.

I think it would be useful for the board to ask the Shorebird Technical Committee to prepare relatively I think consistent reports to us, that we have some reason to expect that we can track the status of shorebirds a little more systematically than I think we have in the past. And I think by working together and meeting together more often that's likely to occur.

So I have a motion to offer, Mr. Chairman, that, if I could, recognizing that the Shorebird Technical Committee is not specifically an ASMFC-founded and directed committee. It's a committee that works with us. I think we can request perhaps their advice to the board on a more regular basis and that's the purpose of my motion.

So if I, I'll read it. It's up on the board. **I move that the board request the Shorebird Technical Committee develop indices of the population status of red knot and other depleted shorebird species that utilize horseshoe crab eggs as food during spring migration and report to the board annually on the status of these bird populations relative to such indices.**

It would be my expectation, Mr. Chairman, that those reports would accompany the status reports we receive through our technical committee and plan review team on the status of the horseshoe crabs so that we would have kind of a parallel, as I said, aligned package of information on the status of these resources. Thank you.

CHAIRMAN MILLER: Thank you, Gordon. Is there a second to the motion?

MR. VITO CALOMO: Second.

CHAIRMAN MILLER: Vito Calomo. Any discussion on the motion? Pete Himchak.

MR. HIMCHAK: Roy, I'd like to offer a friendly amendment to the motion to include the horseshoe crab egg requirements needed for the bird

populations since that is the second objective of the FMP. So what I believe is what the Horseshoe Crab Stock Assessment Subcommittee needs is not only the horseshoe crab population status but the second layer of the surplus eggs that are needed to support the migratory shorebirds.

CHAIRMAN MILLER: Is there a seconder to that? Well, let me see since that was offered as a friendly amendment, does the maker of the motion consider that a friendly amendment?

MR. COLVIN: I'm not sure. That starts to get in the middle of the issue between the status of the birds and the status of the crabs. And my thought, Pete, might be that that's an issue that the two committees need to work together on. I'm looking, the motion is looking to get the shorebird committee to tell us what they can on a standardized approach to the status of the birds.

That information about their nutritional requirements is the next level of information that perhaps should be addressed down the road. I think perhaps not quite yet, at least not by this motion, that perhaps by something subsequent. That's my sense of it. I think it's important information but right now we need to know what the status of the bird population itself is I think on a regular basis.

CHAIRMAN MILLER: Pete, a follow-up.

MR. HIMCHAK: Okay, I guess I'm thinking too far down the road but I mean if you don't know the status of the birds as a start then you would not need, then you would not know the egg requirements of the bird population so I'll withdraw the friendly amendment to the motion.

CHAIRMAN MILLER: Any further discussion on the motion? Seeing none, I'll make the offer for public comment on the motion. Is there any public comment on the motion? All right, are we ready to vote? Do you feel you need a caucus? I saw heads shaking. Let me put it this way, is there anyone opposed to the motion? If so, please raise your hand. The motion carries unanimously, then. Thank you, Gordon. Brad reminded me we needed to discuss de minimis status. Brad.

MR. SPEAR: Thank you, Mr. Chairman. We're looking for a motion from the board to approve de minimis status for Maine, New Hampshire, PRFC, South Carolina, Georgia and Florida.

MR. PLUMART: Excuse me, Mr. Chairman.

CHAIRMAN MILLER: I couldn't see who was talking.

MR. PLUMART: I didn't know if it was appropriate to give a public comment on the formation of the joint committee now. I didn't want to address the motion.

CHAIRMAN MILLER: Why don't we, since we're in the midst of the de minimis why don't we hold for just a minute, Perry, and I'll come right back to you, okay?

MR. PLUMART: Thank you, sir.

CHAIRMAN MILLER: Go ahead. I think I saw Dennis Abbott's hand first and then John Nelson.

REPRESENTATIVE DENNIS ABBOTT: Thank you, Mr. Chairman. **I'd like to make a motion for de minimis status for the states of Maine, New Hampshire, Potomac River – not a state but the Potomac River – South Carolina, Georgia and Florida.**

CHAIRMAN MILLER: Is there a second to this motion?

MR. WILLIAM A. ADLER: Second.

CHAIRMAN MILLER: Bill Adler. Any discussion on the motion? Bruno.

MR. BRUNO VASTA: Thank you, Mr. Chairman. I think you also, as a friendly amendment to that, could add the District of Columbia to de minimis status.

CHAIRMAN MILLER: I'm reminded that they didn't send in any report but they didn't have any landings so, there is certainly no harm in including them in that, as I see it. Are we ready to vote on the motion? John Nelson.

MR. JOHN I. NELSON, JR.: Yes, just a technicality, Mr. Chairman, is there, are the entities required to submit a report and then request de minimis if they so desire?

CHAIRMAN MILLER: That's a good question. I would think that that would be the appropriate way to proceed. Perhaps we ought to defer on D.C. for purposes of this motion until they submit a report of no harvest. All right, so the motion includes Maine, New Hampshire, Potomac River Fisheries Commission, South Carolina, Georgia and Florida.

No further discussion on the motion? Any public comment on this particular motion? Seeing none, is there any opposition to this motion; any abstentions; any null votes. Then the motion carries unanimously. Thank you. Now, Perry, why don't you come forward and state your concerns, please.

MR. PLUMART: Thank you, Mr. Chairman. I think it's a very important step forward in combining the Horseshoe Crab and Shorebird Technical Committees because I think that too often the sound and hard science of the shorebird situation has not been given the same weight as the horseshoe crab science by some members of this commission and by some others.

And so I think it is a good step forward that we combine the two and that both the shorebirds and the horseshoe crab science be given equal weight. And then I know that, especially because significant actions affecting the horseshoe crab fishery have been taken by this commission and by several states, including yours, Mr. Chairman.

And so I think it's very important that the science be considered of both the horseshoe crabs and the shorebirds in tandem. And I think it will help make for better policy outcomes and better decisions by the commission. Thank you.

CHAIRMAN MILLER: Thank you, Perry, for those comments. All right, let's move on to other business. Pete Himchak, you had mentioned an item concerning horseshoes crab aquaculture activities.

MR. HIMCHAK: Mr. Chairman, I believe that Mr. Layton from the public commented on the pilot study they attempted last year and that they are building on this year. And the State of New Jersey has issued a scientific collecting permit to essentially take horseshoe crab egg clusters and there be two parts of it, trying to determine hatching rate by incubation of egg clusters in beach sediments. And they're working with, in cooperation with Dr. Nancy Jackson and Dave Smith, program down there studying beach profiles.

And then they're taking other clusters of eggs and again quantifying the egg clusters and then putting them in open and closed systems for determining hatching success and then tracking the hatched horseshoe crab eggs through the season and develop food sources for them and measure them and see how far they can grow them out. I think that's what is planned. Thank you.

CHAIRMAN MILLER: If I may ask a question or two, Pete, Dr. Nancy Jackson is with which institution?

MR. HIMCHAK: She is with the New Jersey Institute of Technology in Newark, New Jersey. And she gave a presentation to our marine fisheries council which was really informative on the critical nature of the beach, the gradient of the beach, as far as the optimum levels within the tidal range for hatching the horseshoe crab eggs.

And that's why the investigators that we issued the permit to are working in collaboration with her as to where to place these eggs and then leave them in the sediments until maybe the end of June and then compare that with the tank cultures, the open and closed tank cultures.

CHAIRMAN MILLER: If I may ask one more question, Pete, is the objective of this work eventually leading to a stock enhancement or is this primarily a research investigation to learn more about the factors that affect hatching success and so on?

MR. HIMCHAK: I would say the latter, Roy. They are studies to primarily determine hatching success and to build on whatever we can, whatever knowledge we can gain in 2007.

CHAIRMAN MILLER: Thank you. Does anyone have any further questions concerning that research either from Pete or from Mr. Layton? Seeing no hands, is there any other business to come before this Horseshoe Crab Board this morning? Ritchie White.

MR. G. RITCHIE WHITE: Thank you, Mr. Chairman. I just happened to read the letter that was being passed around and that probably should be made part of the record because it shows that the GAO is not conducting an investigation so that might, you might want to add that into the minutes.

CHAIRMAN MILLER: All right. I haven't had an opportunity to see that letter yet, myself. But there was another letter that was in our distribution package that Gordon Colvin sent around. We should at least note that that was in our package as well. It was a well thought-out letter from a gentleman named Sam Respali. Do you wish to comment on that, Gordon, or were you just providing it for our information?

MR. COLVIN: Well, I'm providing it for your information but I think it's an important issue that the

board should be aware of as this program continues to go forward. And you know Sam, I thought, very eloquently from the perspective of an affected fisherman has communicated to us about the changes that have occurred since our Horseshoe Crab Management Program has gone forward and the sentiments that he expressed, I thought, so well, had been expressed to us by many, many other fishermen.

And I, from talking to members of the board I've heard that similar sentiments have been expressed by fishermen in other states. Horseshoe crabs are getting awfully valuable. And that's causing major changes in pressure, pressure on enforcement, changes in the patterns in which the crabs are marketed.

And, you know, the reduction of availability of crabs in the Delaware Region and the demand that that has fostered is creating shortages elsewhere because market forces are causing the crabs to get moved around. And it's a real challenge. I'm not sure what the answer is but you know most of us probably, historically what Sam describes is probably what happened.

You know, we needed a few crabs for bait at home, you got them at home and that was it. There was no interstate commerce in horseshoe crabs. They were a local bait commodity that the fisheries kind of informally worked out. Now all of a sudden that's all changed. We've got tractor-trailers full of crabs that fishermen have been paid two bucks for going from you know, Southern New England and New York headed south. Wow.

And it's creating shortages to those traditional fisheries up north. And, as I said, it's really changed things around. We have people involved in the fishery that never were because they can go make a thousand bucks in a night and all they need to do is get an old pickup truck and spend the night walking the beach. And, you know, you multiply that by a few weeks in the spring and a lot of money gets made in a short period of time, not how this resource was used historically.

So, we've seen some unintended consequences in our management program. It seems to me that at some point it would be useful for the board to take a hard look at those things and ask themselves what can we do to not necessarily turn the clock back but at least address the problems that have been, that are being experienced now by the fishermen that never had to deal with these prices and these shortages, particularly the conch fishermen and the eel

fishermen.

And I mean it's gotten to the point where some of our fishermen have said that we need to close the borders, no export of horseshoe crabs. Our lawyers don't like that very much but that's, you know, it's gotten to that point where they're actively talking about it. And how do we meet the demand? We had to close Delaware Bay down so how do we meet the demand that that's creating? How does that vacuum get filled? And you know is there a way to fill it other than what's going on here?

CHAIRMAN MILLER: Thank you for calling that to our attention. Wilson Laney.

DR. WILSON LANEY: Thank you, Mr. Chairman. Two points, one I guess to the point Gordon was just making, and it's more of a question I guess is, can this board get an update on what the status is of the development of the artificial bait that was supposed to, if memory serves correctly, mimic or duplicate the substance in horseshoe crabs that attracted eels and conchs to those baits in the first place?

If I remember, we had a discussion several years ago, it seems like, about the fact that there was a very good likelihood that someone might be able to develop an artificial substitute that would preclude the need for horseshoe crabs as bait. So I don't know where that work was going. I think, Jack, it might have been in Virginia, I'm not sure. But I'll leave it to Brad or Jack to respond to that.

And then the second point, to Mr. White's mention of the fact that the GAO was not conducting an investigation. That is technically correct but based on the letter, they passed along Mr. Litchko's complaint to the Office of Inspector General of the U.S. Department of the Interior who, in turn, has passed it on to the Fish and Wildlife Service.

And I wish I was prepared to update you on what the status of the service's investigation was, however, Dr. Geiger didn't brief me on red knots because it wasn't on the agenda, I guess, before this meeting. But I will pursue, I will pass along the information, the concerns that Mr. Litchko expressed to the board and I will pass that on to Dr. Geiger and hopefully he can update the board at the next meeting. Thank you.

CHAIRMAN MILLER: Thank you, Wilson. I'll just take a moment, if I can, informally to provide an update on the first item you mentioned, Wilson, specifically regarding artificial bait research because I have some familiarity with this particular research,

at least the research that's being conducted under the auspices of Dr. Nancy Targett at the University of Delaware College of Marine Studies.

Dr. Targett has been investigating the creation of an artificial bait for several years now using localized funding sources, primarily supplied through the Department of Natural Resources that I work for. This particular research has not yet resulted in a bait suitable for distribution; however, they have made some significant progress in recent months.

And what they're attempting to do is extract the attractive protein sequence from horseshoe crab eggs and put it into an inner-bait matrix so that an entirely artificial bait can be used instead of horseshoe crabs. Now they've made some significant progress in synthesizing an appropriate matrix, that is a substance that, about the size of a toilet cake, if you will, that will hold the attractive amino acid sequences and distribute them over a period of time so it's not all released at once but it will be more of a timed release over a couple of days.

They've made some progress with the bait matrix. Where they have bogged down is in the identification of the attractive specific amino acid sequences that formulate the principal attraction in the horseshoe crab eggs. They're still using egg extracts and other substances from the eggs to put in the bait for any field testing which is being conducted this spring using some local watermen to help in this particular field testing endeavor.

I am encouraged in that a major corporation has joined in this research effort and that is the Dupont Company has thrown their hat in the ring with the University of Delaware. And the Dupont Company brings many years of experience with product formulation, synthesis, marketing and distribution. And so I'm encouraged that with that corporate might, if you will, that this particular research will bear fruit in the next couple of years.

Unfortunately, it does not appear that it's going to be a short-term solution to the bait needs. I still look at it as a long-term project that has great potential to meet bait needs but it's not ready at the present to serve as a substitute for the use of horseshoe crabs. So that's a quick update, an informal update. I can provide more information as can Dr. Nancy Targett. She's Dean of the College of Marine Studies at the University of Delaware. Anyone have any questions or comments on that research? Gordon.

MR. COLVIN: Well, not on that research, Roy, but I

recall reading an article recently in I think Commercial Fisheries News about a commercial venture – was it in Maine or Massachusetts –where lobster and crab baits were being developed and beginning to market them. Does somebody know something about that?

CHAIRMAN MILLER: There is such a research effort up there and I confess to being less briefed on that. If there is anyone on the board that knows more about that particular research, I encourage you to speak up if you do. Bill.

MR. ADLER: Yes, there is a, what they call, they call it a "puck" because it looks like that. And it's, we've been working on or the industry has been working on artificial baits for quite a while of various kinds. I know the famous one is the hide stuff. But this particular one I haven't got back anything yet as to how successful it is because it's really just starting to get put out into the marketplace, basically, to the fishermen.

So probably by the end of the year we'll probably have some idea whether this puck concept works. And it's more of the same stuff of trying to get the basic amino acids, as you say, or whatever the thing is, that is in the bait that can attract the lobster. And so probably I know that this year it seems to be the first year that it's going to be sort of distributed. And we may have some answers by, you know, the end of the season whether it is a joke or whether it worked or what.

CHAIRMAN MILLER: I have heard second-hand that the University of Delaware has been in contact with those folks as well so hopefully there is some coordination going on there. Anything further to come before this board? Gordon Colvin.

MR. COLVIN: Just a quick suggestion, following up on that. This is clearly an issue that is of real interest to the board and long-term has huge potential payoff. And I'm wondering whether perhaps it's an issue that the plan review team can track and report to us on, on a regular basis as time goes on, just a status of bait alternative development. Thanks.

CHAIRMAN MILLER: I think that's an excellent suggestion. We can pursue that. Dennis Abbott.

REPRESENTATIVE ABBOTT: I have a separate short item. In the medical end of things I hadn't noticed the amount of harvest being approximately equivalent to about one-third of the total harvest. I understand they only have a 15 percent mortality and

I have no problems with that, nor do I have any problem with the biomedical fishery.

But I have a curiosity about the fact that there are four companies involved in this indicating that each of them, if they were equal, were probably handling 90,000 crabs a year. I am interested in knowing the source of those crabs, geographically, and also the geographic return area. Are we upsetting things?

Are we doing anything that would have any affects on populations locally? Are we enhancing populations in one place while depleting them in another place? So, I was wondering if it was possible for one of the companies to provide us with some detailed information regarding how far afield their crabs come from and where do they put them back? Are they putting them back in one general area? It might be interesting to know some of those things.

CHAIRMAN MILLER: I don't have the answers to your question. I'm going to acknowledge Brad. Also, I don't think that's an unreasonable request that we could make of one or more of these companies to provide us with an update on that information. Brad.

MR. SPEAR: Thank you, Mr. Chairman. The plan review team does have access and contacts with these companies and would be happy to look for this information. It is in the original FMP a requirement that states that harvest crabs for biomedical use take those crabs, bleed them and return them to the waters from which they came. So it is the states' individual responsibility to ensure that that process is occurring, that they are returned to the waters. But we, the plan review team, as I said, will look into this.

REPRESENTATIVE ABBOTT: A further comment.

CHAIRMAN MILLER: Certainly.

REPRESENTATIVE ABBOTT: In reading the report I do note that at the end of the biomedical paragraph that it says, "while monitoring of biomedical harvest and use of crabs has improved under the addendum inconsistencies remain in reporting amongst the states" so I think there probably is a desire for more detailed information. I would appreciate it if maybe the board would, at a later date, have a report offered by one of the companies at their convenience.

CHAIRMAN MILLER: Certainly we can ask. Anything further for this board? Pete.

MR. HIMCHAK: Well, Mr. Chairman, I mean this

goes back to my original comment on how close we are to the target and yet we know we have some underestimates in mortality associated with the process. Perhaps at least we could – it says here "the PRT remind states that they are required to obtain the information".

I thought this was a compliance requirement under Addendum III so if the information is spotty, perhaps the reminder should be a little more, it should be a strict reminder for 2007 so that when we come up with an estimate of mortality associated with biomedical utilization then we have a more, we have a more precise estimate of what it is.

CHAIRMAN MILLER: Thank you for that suggestion, Pete. Malcolm.

DR. MALCOLM RHODES: In the South Carolina report if you look it is actually some pretty good specific data on the number of horseshoe crabs that are collected. We have one biomedical company, Charles River Endosafe, and they collected 61,000 in two fairly specific constrained areas.

And all those horseshoe crabs are returned to the same areas within 12 to 16 hours. And the numbers collected, the male-to-female ratio, weights, all of those were documented so it's very clear and specific data from South Carolina about the number that were collected, that were dead and where they were returned. So it's in your briefing book.

OTHER BUSINESS

CHAIRMAN MILLER: Thank you. Any further comments at this time? Hearing and seeing none, is there a motion to adjourn?

ADJOURN

MR. THOMAS MEYER: **So moved.**

CHAIRMAN MILLER: Tom Meyer and second was Pat Augustine. Any objection? Thank you very much. Meeting adjourned.

(Whereupon, the Horseshoe Crab Management Board meeting adjourned on Thursday, May 10, 2007, at 10:45 o'clock, a.m.)

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