

ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON FISHERIES

February 5, 2007

8:32 a.m.

MEMBERS PRESENT

Representative Paul Seaton, Chair
Representative Kyle Johansen
Representative Gabrielle LeDoux
Representative Peggy Wilson
Representative Bryce Edgmon
Representative Lindsey Holmes

MEMBERS ABSENT

Representative John Harris

COMMITTEE CALENDAR

HOUSE BILL NO. 26

"An Act relating to aquatic farm permitting involving geoducks and to geoduck seed transfers between certified hatcheries and aquatic farms."

- HEARD AND HELD

HOUSE BILL NO. 74

"An Act prohibiting mixing zones in freshwater spawning waters."

- SCHEDULED BUT NOT HEARD

PREVIOUS COMMITTEE ACTION

BILL: HB 26

SHORT TITLE: GEODUCK AQUATIC FARMING EXEMPTION

SPONSOR(S): REPRESENTATIVE(S) SEATON

01/16/07	(H)	PREFILE RELEASED 1/5/07
01/16/07	(H)	READ THE FIRST TIME - REFERRALS
01/16/07	(H)	FSH, RES
02/02/07	(H)	FSH AT 8:30 AM CAPITOL 124
02/02/07	(H)	Heard & Held
02/02/07	(H)	MINUTE(FSH)
02/05/07	(H)	FSH AT 8:30 AM CAPITOL 124

WITNESS REGISTER

DR. JIM SEEB, Chief Fisheries Scientist
Division of Commercial Fisheries
Alaska Department of Fish & Game (ADF&G)
Anchorage, Alaska

POSITION STATEMENT: Related ADF&G's support for the goal embodied in HB 26, with the caveat of inserting the word "sterile."

CYNTHIA PRING-HAM, Mariculture Coordinator
Division of Commercial Fisheries
Alaska Department of Fish & Game
Juneau, Alaska

POSITION STATEMENT: During the hearing of HB 26, answered questions.

RAY RALONDE, Aquaculture Specialist
University of Alaska
Alaska Sea Grant Marine Advisory Program
Anchorage, Alaska

POSITION STATEMENT: During the hearing of HB 26, expressed the need for more research.

ALAN AUSTERMAN
Juneau, Alaska

POSITION STATEMENT: Stated support of the concept embodied in HB 26.

JEFF HETRICK
Qutekcak Shellfish Hatchery
Seward, Alaska

POSITION STATEMENT: During the hearing of HB 26, expressed interest in allowing a demonstration project to determine how well geoducks live outside of their larval drift zone.

DAVID OTNESS, Oyster Farmer
Seward, Alaska

POSITION STATEMENT: During the hearing of HB 26, described ADF&G as having a "can't do" attitude.

BOB LINVILLE, Oyster Farmer
Seward, Alaska

POSITION STATEMENT: During the hearing of HB 26, testified that aquaculture in Alaska has huge potential that has been stifled by the regulatory process.

WILLY DUNNE

Kachemak Bay Conservation Society
Fritz Creek, Alaska

POSITION STATEMENT: Expressed concerns with HB 26, specifically regarding the lack of reference to "sterile" and "subtidal culture."

GARVAN BUCARIA
Wasilla, Alaska

POSITION STATEMENT: Expressed concern with "railroading" this proposal [embodied in HB 26].

ACTION NARRATIVE

CHAIR PAUL SEATON called the House Special Committee on Fisheries meeting to order at [8:32:36 AM](#). Representatives Wilson, Johansen, Holmes, and Edgmon were present at the call to order. Representative LeDoux arrived as the meeting was in progress.

HB 26-GEODUCK AQUATIC FARMING EXEMPTION

[8:32:48 AM](#)

CHAIR SEATON announced that the first order of business would be HOUSE BILL NO. 26 "An Act relating to aquatic farm permitting involving geoducks and to geoduck seed transfers between certified hatcheries and aquatic farms."

[8:34:43 AM](#)

The committee took an at-ease from 8:35 a.m. to 8:36 a.m.

[8:36:18 AM](#)

DR. JIM SEEB, Chief Fisheries Scientist, Division of Commercial Fisheries, Alaska Department of Fish & Game (ADF&G), provided the department's support of the goal of HB 26, which is to promote mariculture throughout Alaska. He pointed out that the department has been working for a number of years with the industry and the Seward hatchery to "identify pathways for success and pathways for responsible regulation." He recalled that at least two proposals have been co-authored with different operators to help them adopt and develop the methods for creating sterile shellfish for culturing in Alaska. Unfortunately, one of these programs was subsequently terminated. The department promotes the ambitions, and supports

the goals of HB 26; however, not without some concern for the wording of the bill as it does not stipulate "sterile" shellfish. He pointed out that as worded, the bill proposes to permit the free movement of fertile geoducks throughout the Gulf of Alaska (GOA), including areas outside of the geoducks native range. He cautioned:

Whenever entities get involved in introducing new species, there can often be a lot of unintended consequences. The states that have gone through these kind of activities, during the last decades, have ... encountered unintended consequence, after unintended consequence. For that reason there was a lot of effort that was put into this production of sterile fish and shellfish for aquaculture and mariculture. The marine ecosystems are made up of intricate food webs and it's ... not possible to forecast the outcome if we introduce new species. ... Unfortunately, sometimes there are ... fatal impacts that occur that can destroy local ecosystems.

DR. SEEB stressed that economic and social hardships can occur when introducing new species into areas. The department would expect to be able to promote responsible culture of sterile stocks and avoid potentially catastrophic risks. Geoducks are high fecund and are highly mobile in the larval drift stage, with possibly hundreds of thousands of eggs from each female able to drift for great distances. He underscored that ecological consequences would not be isolated to the competition that may occur on the beaches but also throughout the food chain.

[8:40:36 AM](#)

DR. SEEB pointed out that the larval drift zones were established with input from the industry. At the Seward facility seven species of bivalves are reared. These are species that are indigenous to the GOA. He advised that it is important to maintain the genetic integrity of local stocks and to identify the larval drift zones to provide the industry guidelines on where stocks can be located in regard to the drift zones. The larval drift zones are liberal, based on ocean currents, winds, and water temperature. In summary, Dr. Seeb reiterated that promoting the movement of fertile geoducks outside of their native range can be risky, resulting in unintended consequences. However, by changing the bill language to "allow the movement of sterile geoducks," those risks would

be removed. He stressed that there would not be industry support for the movement of fertile geoducks, and the Seward facility shares the department's concerns for the movement of fertile geoducks. The current Alaska statute disallows the movement of sterile stocks of fish, and this bill will correct that oversight.

[8:43:15 AM](#)

REPRESENTATIVE HOLMES asked what is the status for creating, or the availability of obtaining, sterile geoducks stocks.

DR. SEEB responded that sterile geoduck stocks may not be available. The initial sterility research was performed primarily on oysters, and the bivalve work has not been completed on geoducks. He described the two methods of sterilization: thermal pressure shock and chemical treatment. Levels for these methods have not been established to sterilize geoducks. He opined that this work may not be a priority for the [Seward hatchery] at this time because its efforts are focused on developing cultures for so many species at one time. Neither is the facility meeting the incoming requests for seed in the GOA. He speculated that delaying the hatchery's efforts wouldn't place any hardship on the facility while it ramps up its sterile techniques. In further response to Representative Holmes, he responded:

I think that the way to handle this would be for the Seward facility to take the leadership role in developing sterile geoducks, and this might be a market niche that they could use to even export geoducks to other states.

[8:45:59 AM](#)

CHAIR SEATON clarified that sterilization techniques are available for oysters, but not for geoduck clams.

DR. SEEB explained that the sterilization techniques have been widely applied to many species of fish and shellfish. He offered that the state currently produces sterile rainbow trout for introduction into non-indigenous waters. Having been well researched for a number of decades, these techniques should be adaptable to geoducks and other species.

[8:46:50 AM](#)

CHAIR SEATON underscored Dr. Seeb's comment that adapting this technique from one species to another should prove to be "simple."

[8:47:05 AM](#)

REPRESENTATIVE JOHANSEN inquired as to whether a sterile species has ever been able to naturally adapt and become productive; with adverse effects.

DR. SEEB advised that oysters are highly fecund, similar to geoducks, and in sterile oyster beds a natural reversion rate of 1 in 10,000, or lower, does occur. In further response, he stated that he is not aware of this occurring in other species. Additionally he explained that the sterilization process is identical for all species via application of a thermal, pressure, or chemical shock. He emphasized:

Because the process is the same in all species the "simple" ... challenge is to find the right dosage to disrupt that [reproductive] process. I'm not aware of it ... ever having failed in any species.

[8:48:54 AM](#)

CHAIR SEATON pointed out that the larval drift zone is apparently the single criteria being cited for denial of a farm permit, or for transport of seed beyond natural habitat range. He asked:

When you address[ed] the larval drift zones, and you said that [actually] addresses a different problem, and that problem was ... [maintaining] a genetic dilution of a local stock - how then are you saying that the larval drift zone, although it ... doesn't apply in this case, is the full reason for the denial of the permit.

[8:49:56 AM](#)

DR. SEEB responded that prior to the drift zones being identified as a concern, laws existed to preclude the introduction of non-indigenous fish. He cited section AS 16.35.210, directing attention to the committee packet and January 30, 2007, letter from Tim Barry, Attachment #4, page 4, paragraph 3. This identifies the various prohibitions against introducing non-indigenous fish. This statute was in existence

prior to the development of the larval drift zone. The larval drift zones were designed to deal with species that appear statewide, such as Weathervane scallops, and provide the industry guidelines on transporting stocks between zones.

[8:51:52 AM](#)

CHAIR SEATON said: "Now we have a situation and that is ... [larval drift zone] is the number one issue." He drew attention to Mr. Barry's January 30, 2007, letter titled "Attachment #2 Alaska Larval Drift Zone Development," second paragraph, and paraphrased from the written statement [original punctuation provided]:

The Mariculture industry had the need for 1) transporting mollusks to farms within the natural range of the species where threat species does not presently occur and 2) transporting mollusks to farms outside the natural range of the species. Issue No. 1 for transport within the natural range was considered a low risk. ... Issue No. 2 on transporting outside the natural range was not considered as existing regulations proscribed transfer outside the "documented" range of a species.

DR. SEEB noted that he didn't prepare the aforementioned paragraph. He related his understanding that the language is discussing a larval drift model developed by the Alaska Sea Grant [Marine Advisory Program], Ray Ralonde.

[8:53:42 AM](#)

CHAIR SEATON directed attention to the next paragraph in the aforementioned document and highlighted the following sentence:

From this collaborative effort it was assured that **reasonable precautions** were in place that would protect wild stocks of species that support commercial fisheries or may support developing fisheries in the future and yet ensure continued growth of the mariculture industry.

CHAIR SEATON questioned, "So, there's nothing in this bill that is contrary to that; is that correct?"

DR. SEEB pointed out that HB 26 promotes the introduction of species beyond their native range. He explained that the larval drift zones were designed to provide a regulatory framework for

limiting the transport of one stock of a species into an area where another stock of the same species resides. Since geoducks don't occur in the northern Gulf of Alaska, this doesn't apply, he opined.

8:56:30 AM

REPRESENTATIVE JOHANSEN inquired as to the depth of science available on geoducks.

DR. SEEB informed the committee that geoducks don't occur naturally in [some portions of] Southeast Alaska as the larval drift doesn't extend past Cape St. Elias for many species, including geoducks. Therefore, it might be the case that geoducks wouldn't be able to reproduce or thrive in Southcentral Alaska.

REPRESENTATIVE JOHANSEN inquired as to whether geoducks reproduce in Southeast Alaska where they naturally occur.

8:57:56 AM

CYNTHIA PRING-HAM, Mariculture Coordinator, Division of Commercial Fisheries, Alaska Department of Fish & Game, stated that geoduck studies for Alaska are minimal. Most studies have been done in the State of Washington where the conditions differ from those in Alaska. She said there is no knowledge as to whether geoducks are spawning "here" or drift from British Columbia. Ms. Pring-Ham informed the committee that bivalves, including geoducks, are episodic in their reproductive strategy. Therefore, under certain conditions they will reproduce, but they may only reproduce every 30 years. In further response to Representative Johansen, Ms. Pring-Ham confirmed that generally the department approaches this with caution in terms of the management of aquaculture and commercial fisheries. She emphasized that although the department is trying to learn more about geoducks, the department doesn't have resources for that particular research and thus has to do so on an opportunistic basis. She mentioned that genetics are also an unknown factor with geoducks as well.

9:00:25 AM

MS. PRING-HAM, in response to Chair Seaton, said that because geoducks don't occur in Southcentral Alaska there won't necessarily be impacts on the geoduck wild stocks. In response to Representative LeDoux, Ms. Pring-Ham reiterated that the

department doesn't have any genetic information on shellfish in general for Alaska. However, this spring the department will collect geoducks during surveys for commercial fisheries. Hopefully, the department will take some genetic information in Southeast where geoducks occur.

[9:01:37 AM](#)

MS. PRING-HAM explained that the department does not have the funds to collect samples specific to this species; however, when conducting surveys for other projects, the samples will "opportunistically pick a few samples up" to be provided to a laboratory for genetic analysis. To Representative LeDoux's follow-up question, she responded:

Unfortunately, we [the department] don't have a mandate for this, ... doing research for ... shellfish. Most of the monies are going to other commercial fish endeavors; ... we have to do it on an opportunistic basis. I have a little money in mariculture [division] to try and get some of the analysis done.

MS. PRING-HAM, in further response to Representative LeDoux, deferred to Dr. Seeb regarding what it would take to perform "some real research" on geoducks. In response to Chair Seaton, Ms. Pring-Ham confirmed that the department's situation is captured, in the letter titled "Attachment #2 Alaska Larval Drift Zone Development," by the following statement: "The department doesn't have funding currently to improve our understanding of the distribution, genetics, and life history of bivalves/shellfish in Alaska including larval period, larval drift zones, mechanism for larval retention, reproduction, and other biological information to identify the stock structure of these invertebrates and plants species."

[9:03:38 AM](#)

CHAIR SEATON surmised then that the state will be slow in coming with this information and mariculture permits in Southcentral and Western Alaska will be denied because there is no information.

MS. PRING-HAM related that the department will attempt to garner funding sources elsewhere to undertake research. In fact, professors at the University of Alaska - Southeast are interested in performing genetic research on geoducks and are

seeking funding sources through the [Alaska Sea Grant Marine Advisory Program] and National Oceanic and Atmospheric Administration (NOAA). She expressed hope that additional outside sources in collaboration with the department will be able to obtain additional life history information.

[9:04:53 AM](#)

REPRESENTATIVE WILSON highlighted that many species have been preserved in Alaska due to research. She inquired as to how long it would take for ADF&G, were it to obtain funding, to perform research that would allow this type of mariculture. She then inquired as to the possible consequences of introducing geoducks in Southcentral Alaska.

MS. PRING-HAM, referring to the timeframe in which the department would be comfortable, reminded the committee that in terms of genetics the populations are in Southeast Alaska. A study comparing the brood and wild stock study can be performed within a year or two, with adequate analysis. Furthermore, to obtain samples from multiple areas would take multiple years unless research funding is secured. In terms of the cost for analysis it would be \$30,000-\$60,000 for genetic analysis, which doesn't include the collection [of the samples].

[9:08:15 AM](#)

REPRESENTATIVE WILSON then asked if there is any possibility that introducing geoducks in Southcentral Alaska would harm those in Southeast Alaska.

MS. PRING-HAM directed the committee's attention to a map of the larval drift zone. In response to Chair Seaton, she specified that the stock going to the Seward hatchery comes from West Gravina/Vallenar Bay.

[9:09:33 AM](#)

MS. PRING-HAM related her understanding that Representative Wilson is concerned of a possible situation in which, by chance, the seed from Southcentral became viable, and the geoducks reproduced. Since geoducks are very large and dig almost three feet down, they take up a lot of biomass. Once that seed is introduced, the predators are attracted and prey on the seeds and those predators attract their predators as well. Therefore, the predator-prey interaction/relation may change dramatically. There isn't enough knowledge, she opined, as to what would

happen in such a situation. The only way to perform an experiment is to actually [introduce the geoduck seed], which may actually cause the problem and would require multiple research projects. She recalled Chair Seaton's earlier remarks regarding the studies performed in the State of Washington in which the benthic organisms increased after the harvest of geoducks. The aforementioned is partly caused because the benthic zone has been stimulated with nutrients/food for other organisms.

[9:12:48 AM](#)

REPRESENTATIVE WILSON restated her concern with regard to negative impacts on Southeast Alaska.

MS. PRING-HAM reminded the committee that geoducks occur naturally in Southeast, and currently all of the geoduck farms are located in areas where geoducks are prevalent. However, that may not be the case for the next set [of geoduck farm sites]. She noted that there are a couple of intertidal sites that are devoid of any geoducks.

[9:14:09 AM](#)

CHAIR SEATON posed a situation in which a wild population became established in Kodiak, and asked if there would be an impact on the geoducks in Southeast that are located in a separate larval drift zone than those in Kodiak.

MS. PRING-HAM answered that the larval drift zones are fairly distinct, and therefore the currents won't come down and displace/interfere with geoduck populations in Southeast Alaska.

[9:14:45 AM](#)

REPRESENTATIVE HOLMES inquired as to the department's concerns with introducing geoducks that may reproduce in Southcentral Alaska without prior research.

MS. PRING-HAM reiterated that such a situation would possibly impact the ecosystem, ranging from the tropic levels to marine mammals. The aforementioned has occurred in the Lower 48 when [non-native] species have been introduced and displaced native species, resulting in disastrous situations. Transferring aquaculture species from one area to another makes them an exotic species [in the area in which they aren't naturally occurring]. For instance, British Columbia has five [larvall]

zones and they don't transport from one zone to another until they are sure that there aren't genetic, disease, or ecological issues. In fact, there is a committee of essentially federal and state members to scientifically review applications. The State of Washington has a similar situation and aquatic farms must stay within the three zones for geoducks as they have concern for disease.

[9:17:57 AM](#)

REPRESENTATIVE HOLMES posed a situation in which the department, under existing statutes and regulations, received an application for a geoduck farm in Southcentral Alaska. She asked whether the department would have the latitude to approve it if the science was in place and the department was convinced that was safe.

MS. PRING-HAM answered that such a decision would be inconsistent with the current regulations and statutes in that geoducks couldn't be transferred from Southeast Alaska to Southcentral Alaska because it would cross larval drift zones. In further response, Ms. Pring-Ham provided the committee a handout entitled "ADF&G Testimony on HB 26 (Legal Perspective)" and directed attention to the fourth bullet, which read:

Allowing the unconstrained transfer of geoduck seed as proposed in section 2 of the bill would also require modification to regulations adopted based on current statutes." The regulation that would be in violation in this circumstance is "5 AAC 41.295(d) which prohibits transport of stock between aquatic farm, hatchery, and stock acquisition sites except within an approved larval drift zone."

[9:20:05 AM](#)

REPRESENTATIVE HOLMES inquired as to how difficult it would be to change the aforementioned regulation to accommodate a situation in which the department has the science and felt it was safe [to transport geoducks to Southcentral Alaska] or there were sterile geoducks.

MS. PRING-HAM said that the regulation could be changed such that it perhaps referenced House Bill 226 changes and specified "except for geoducks." She explained that essentially one zone is being created between Southeast and Southcentral Alaska for geoducks. However, she highlighted that there are other species

that inhabit all areas within Southeast and Southcentral Alaska, such as little neck clams and cockles. Again, there isn't enough genetic information to know whether those are different problems. Furthermore, some of those shellfish have diseases and the disease provisions wouldn't allow the transfer of diseased shellfish with diseases that aren't in other areas. She noted that normally drift zones are used for that purpose.

[9:21:50 AM](#)

CHAIR SEATON clarified that HB 26 only applies to geoducks, for which genetics isn't an issue. The bill simply addresses whether the department can use the established drift zones as a preventor from allowing farms in any place else in Alaska.

[9:22:54 AM](#)

REPRESENTATIVE LEDOUX related her understanding that the department is concerned that if geoducks are allowed in Southcentral Alaska, they could displace the indigenous species. She surmised that the aforementioned would occur in any location where species are enhanced through mariculture or hatcheries.

MS. PRING-HAM reminded the committee that with salmon it took quite some time to develop provisions to ensure that hatchery-produced salmon didn't impact wild stock. Many genetic policies went into effect with regard to salmon. Ms. Pring-Ham said that the department has made [similar] attempts with shellfish.

[9:24:06 AM](#)

REPRESENTATIVE LEDOUX clarified that she isn't referring to genetics, but rather is referring to the actual displacement of the naturally occurring fish or geoducks. She asked, "In other words, if you start out with just this little, tiny population of salmon or this little, tiny population of geoducks, and then through aquaculture you enhance it, why aren't you afraid that all of the other fish are going to be displaced?"

MS. PRING-HAM said that she can only discuss the aquaculture species. She explained that [the current aquaculture farms] are defined areas leased by the Department of Natural Resources (DNR) and where ADF&G allows aquaculture. Ms. Pring-Ham said she doesn't have enough information to know the impacts those organisms have on existing organisms. "In terms of the geoducks, they're in areas where there are, at least commercially, a number of geoducks that would ... attract and

support a commercial fishery," she related. Therefore, certain areas have been isolated for use with aquaculture.

[9:25:30 AM](#)

CHAIR SEATON clarified Representative Ledoux's question to be that in this case [ADF&G] is saying that the [transfer of geoducks] may have large ecological ramifications. However, millions and millions of salmon fry are let out to actively feed and move around without the same [concern]. Furthermore, salmon are predators rather than filter feeders. Moreover, there are oyster farms throughout the state and these oysters do put out larvae, and again without the same concern with regard to the ecosystem. Therefore, he inquired as to why geoducks are more of a concern than salmon or oysters.

MS. PRING-HAM, noting that she isn't an expert on salmon, pointed out that over the last 20 years many scientists have discussed the hatchery-produced salmon and its relationship to wild stocks. She then reminded the committee that with salmon, the salmon hatcheries are enhancing existing wild stock populations. However, there are no known naturally occurring geoducks in Southcentral Alaska. Ms. Pring-Ham acknowledged that there could be impacts in Southeast Alaska where geoducks already naturally occur, but it should be minimal because of their existence.

[9:28:18 AM](#)

CHAIR SEATON then referred to the document titled "Attachment 3 Shellfish Importation Prohibition and Disease Policies" and read the following: "In the stock of geoducks so far examined the pathology labs have found no pathogens (agents or parasites) of transport significance in the brood stock collected for the hatchery of the spat produced at the hatchery." Chair Seaton surmised then that the concern is in regard to the possibility of disease, albeit low, that hasn't been detected in the wild stock or the farmed stock.

MS. PRING-HAM noted her agreement. She informed the committee that the department annually reviews the brood stock of the geoduck seed for disease. Thus far, there has not been a disease, of those listed on Attachment 3, recognized in this species. Geoducks are a shellfish species that doesn't have any potential pathogens that would be harmful to humans.

[9:31:07 AM](#)

CHAIR SEATON, again referring to the document titled "Attachment 3 Shellfish Importation Prohibition and Disease Policies" and read the following: "Likewise there have been no pathogens of transport significance reported in the literature for geoducks either in BC or WA," and Alaska, he added. He asked if that's correct.

MS. PRING-HAM confirmed that there are no pathogens currently in Alaska geoducks.

[9:31:30 AM](#)

REPRESENTATIVE WILSON asked if geoducks have diseases elsewhere.

MS. PRING-HAM said that she doesn't have that information, but offered to obtain it for the committee. She reminded the committee that Alaska's geoducks can only come from Alaska's [wild stock] and Alaska's geoduck hatchery. The geoducks in Southeast, she reiterated, don't have any pathogens. In further response to Representative Wilson, Ms. Pring-Ham acknowledged that there is the possibility that a disease found in geoducks in other areas might occur in Alaska's geoducks. However, typically diseases are transferred by something that can transfer the pathogen.

[9:33:13 AM](#)

REPRESENTATIVE JOHANSEN referenced the State of Washington and British Columbia's policies and procedures for a similar mariculture industry, which he characterized as a model of an effective process that could be applied in Alaska. He acknowledged the "hesitancy" held by the department to support this measure due to the lack of base-line science. He asked, "What needs to happen for the department to get that process rolling?" He mentioned that it would take time to implement such a process, and therefore he inquired as to the time required to produce a marketable geoduck.

MS. PRING-HAM responded that the department doesn't have data to establish the growth rate of geoduck clams in the waters of Alaska. However, the department estimates that it takes 7-8 years to produce a marketable geoduck in Southeast Alaska, and about 9-10 years in Southcentral Alaska. She underscored that the department does not have growth data for Alaska waters and the available growth information is based on research from British Columbia and the State of Washington. She said,

Again, there's probably no study we could do in Southcentral that would make us feel safe that introducing geoducks there would not cause a problem to the ecosystem. Once you introduce something, you've started the whole chain reaction. ... I did mention that you could do studies in Southeast just to see the impacts within a plot, but again, the food chain is so complicated that it's hard to design a study. You can design the changes to the benthic organisms ... but we just don't have a good handle on the ramifications to this particular project.

[9:35:44 AM](#)

REPRESENTATIVE JOHANSEN commented that this has been done elsewhere, and it seems that the department could follow that lead. This could be a major addition to those fishermen who fish only four to five months of the year. Representative Johansen noted his support of the goal [of geoduck farms], but he also expressed concern with regard to the lack of science.

[9:36:38 AM](#)

MS. PRING-HAM mentioned that there are sites in Southcentral, which are a result of House Bill 208 that designated areas that are potentially suitable for farm sites. Some of these sites are suspended oyster sites while others are intertidal sites. She related that 106 acres are available for that, of which 19 are located in Southcentral Alaska.

[9:37:21 AM](#)

CHAIR SEATON recalled that House Bill 208 mandated that the department issue permits because the department was not moving forward with any of the leases based on uncertainties.

MS. PRING-HAM confirmed that House Bill 208 designated 90 sites, 60 of which were suspended, 20 intertidal, and 10 subtidal. She recalled that 158 [sites] were designated as possibly suitable for farming. However, the aforementioned didn't include data on the wild stock and thus bio mass surveys must be performed prior to approval. These sites have been through a preliminary approval process and through the Alaska Coastal Zone Management Program review process and are available.

[9:38:46 AM](#)

CHAIR SEATON clarified that his point is that the legislature had to make a policy call and mandate through statute that the department would issue permits.

MS. PRING-HAM confirmed that, and opined that it was a great idea to have designated areas. The aforementioned has been contemplated for additional geoduck sites as well. However, that would require funds.

9:39:27 AM

MS. PRING-HAM, in response to Representative LeDoux, explained that the State of Washington has the highest concentration of geoducks, as they range from southern California up to Yakutat. The State of Washington has zones, not necessarily larval drift zones, most of which to prevent the transfer of disease. British Columbia has zones also and areas dedicated in which aquaculture is performed. Ms. Pring-Ham said that she didn't know if there are areas in the State of Washington or British Columbia where geoducks currently exist but didn't before.

REPRESENTATIVE LEDOUX expressed her belief that it would be important to know whether the things of concern for the department occurred in these locations where geoducks have been introduced in places where they didn't live before.

MS. PRING-HAM noted her agreement that it could be important. However, she pointed out that the State of Washington and British Columbia have fairly extensive groups to review transport issues of genetics.

9:42:49 AM

REPRESENTATIVE HOLMES inquired as to whether the department would object to the introduction of sterile geoducks.

MS. PRING-HAM opined that although a policy hasn't been established, the comfort level would be higher if the geoducks being introduced were sterile. In fact, there are oysters in Southcentral that don't reproduce.

9:44:40 AM

RAY RALONDE, Aquaculture Specialist, Alaska Sea Grant Marine Advisory Program, School of Fisheries and Ocean Sciences, University of Alaska, provided an outline of his experience in

the field which amounts to almost 30 years. Mr. Ralonde said that he is present to provide the committee with information and education concerning aquaculture and the larval drift zone. He then informed the committee that in 1992 he published a paper to the United State Japanese Aquaculture Panel Symposium regarding the interactions between cultured species and naturally occurring species in the environment. The paper included the concept of larval drift in a descriptive fashion rather than a definition. Mr. Ralonde emphasized that there are enormous amounts of missing information that is essential on this matter. Furthermore, genetic studies don't always proffer the answer.

MR. RALONDE explained that the larval drift zone concept was based on the concept that shellfish put eggs and sperm in the water where they unite and create larval forms that drift from three weeks to a couple of months. At that point, they settle and grow to adulthood at which point the cycle begins again. How far the larvae drift is debatable, he opined. The larval drift model was based on the current velocities in the 1990s and the life history cycles of blue muscles and scallops, the two species on which there is the most information. He said that he took the developmental rates, water temperatures, and current velocities to determine the farthest location these larvae could potentially drift. Therefore, a blue mussel, for example, reproducing at Prince of Wales Island in the Alaska coastal current could settle anywhere along the coastline as it could reach up to Yakutat. Furthermore, if larvae drifted into the right current in the inside waters, it could drift all over Southeast Alaska. Mr. Ralonde opined that the currents, winds, temperatures, and tides are very complex and thus the larvae could drift anywhere. The aforementioned led to his finding that Southeast Alaska could have large mixed populations. When reviewing the possible drift of larvae in northern Southeast Alaska, it would be difficult for a larvae within its normal life history to make it from northern Southeast to Southcentral Alaska.

[9:51:07 AM](#)

CHAIR SEATON asked if the farming of geoducks in Southcentral or Western Alaska would pose any large potential hazard to any commercial fishery or ecosystem.

MR. RALONDE said that's a question he can't answer because of the vacuum of knowledge in Alaska. "The idea that you can pick one species and transport it to another [location] and have it do well and not have it impact, is very difficult to deal with,"

he opined. For example, when Pacific oysters were brought from Japan to the Northwest it did create an enormous industry, but an oyster (indisc.) was transported with it. In 1998 the industry argued that shellfish should be grown where they are known to grow. At the time, the department didn't want farmed shellfish grown on top of wild stocks. Now, the situation has reversed. Mr. Ralonde said that there hasn't been enough research to make any determinations on the matter.

[9:53:30 AM](#)

CHAIR SEATON reminded the committee of the department's statement that it would never conduct a study in Southcentral Alaska to provide any information.

[9:53:56 AM](#)

MR. RALONDE mentioned that he didn't have the opportunity to explain all the processes that transpired, but he highlighted that the larval drift zones were created in a rational way.

[9:54:10 AM](#)

CHAIR SEATON said that there would be further hearings on this bill in the House Resources Standing Committee.

[9:54:32 AM](#)

ALAN AUSTERMAN stated support of the concept embodied in HB 26. The bill addresses an area that needs a lot of work by the legislature, with regard to economic growth. The problem, he opined, is that the department was established to manage wild not farming or cultured stocks. Therefore, the department's largest problem is trying to manage these dual [populations]. Therefore, Mr. Austerman opined that the legislature should determine whether ADF&G or DNR should manage farming. The farming of shellfish is one of the largest economic development areas of seafood in the state. Mr. Austerman related his concern that if this bill doesn't move forward or some resolution to [the geoduck situation] occurs, there could be impacts on the crab industry which is interested in re-populating various areas.

[9:56:58 AM](#)

JEFF HETRICK, Qutekcak Shellfish Hatchery, noted his agreement with Mr. Austerman's comments with regard to the industry's

experience with the conflict created by a resource agency managing a farming activity. Perhaps if the aforementioned was reviewed, some of the issues could be resolved. Specific to HB 26, Mr. Hetrick highlighted that the state has world class fishery pathologists. He noted that he isn't too concerned with pathology being an issue for transport because the brood stocks from hatcheries are carefully scrutinized. With regard to geoducks in particular, the question is whether geoducks would be reproductive in the new region in which it was transferred, and if so would that be problematic. Although it seems unlikely, it is unknown. Mr. Hetrick expressed interest in allowing a demonstration project to determine how well geoducks live outside of their larval drift zone.

[9:59:42 AM](#)

REPRESENTATIVE WILSON asked whether geoducks in British Columbia and the State of Washington are located in areas in which there wasn't a geoduck population prior to farming.

MR. HETRICK replied yes, adding that such even occurs in Alaska, although it's a much smaller scale.

[10:00:57 AM](#)

DAVID OTNESS, Oyster Farmer, speaking as a third generation commercial fisherman, opined that people on the coast are being "choked off." Viable species, he said, are necessary. He described ADF&G as having a "can't do" attitude, which has resulted in this legislation demanding that there be an opportunity to develop this industry as the rest of the world is. Mr. Otness concluded, "I'm rather emotional about this because I've seen [ADF&G] doing this for years; these resources are ours, they're not [ADF&G's]."

[10:02:41 AM](#)

CHAIR SEATON announced that HB 26 would be held over.

[10:03:09 AM](#)

BOB LINVILLE, Oyster Farmer, expressed the need to provide ways in which Alaska's young people can make a living in industries such as aquaculture. He recalled his time as an oyster farmer and related that it's difficult under the current regulatory regime to move ahead. Aquaculture in Alaska is a huge potential that has been stifled by the regulatory process. Therefore, he

opined that whatever the legislature does to encourage geoducks would be helpful in making aquaculture viable. Mr. Linville stated that he hasn't heard anything that is concerning and that "he'd like to see this happen."

10:06:07 AM

WILLY DUNNE, Kachemak Bay Conservation Society (KBCS), stressed the importance of including the word "sterile" in HB 26 as it would alleviate many of the department's concerns. He highlighted the testimony from the university representative and the shellfish hatchery representative who didn't know the harm that would result in an ecosystem when a non-native species is introduced. Mr. Dunne underscored the well-managed fisheries of Alaska and Alaska's product that is in high demand due to its natural and clean qualities. The department has put a lot of effort, concern, care, and thoughtful consideration into policies that keep the fisheries well-managed. This bill could potentially have disastrous consequences on the coastal ecosystem by reversing a policy that doesn't allow the introduction of non-native species, he opined. He stressed the need to have further scientific input to the passage of this bill. Mr. Dunne recalled that at Friday's hearing, the sponsor mentioned that he was referring to "subtidal culture." However, that's not included in the bill. He said that the intertidal culture of shellfish presents another suite of problems and issues, including public access. Mr. Dunne related that KBCS might be a little less concerned if HB 26 was restricted to the subtidal culture and to sterile geoduck stock. In conclusion, Mr. Dunne said that he would provide the committee with a position statement and more facts from KBCS.

10:10:20 AM

GARVAN BUCARIA informed the committee that he used to fish for halibut on a limited basis in Prince William Sound, which is when he discovered oyster farms in the area that denied [vessels] protected anchorage. Mr. Bucaria, drawing upon his experience in zoology with regard to invertebrates, highlighted that there are many variables in the environment and thus suggested that the reference to certified hatcheries be specific to certified hatcheries in Alaska. Then drawing from his time working with the marine resources branch in California's department of fish and game, he related that oyster spat from Japan was placed in the beach to climatize prior to placement in areas of Tomales Bay. The containers in which the spat was carried contained toxic materials which tainted some of the

native bivalves in the area and rendered them somewhat inedible. Mr. Bucaria highlighted that the resources belong to everyone and haste can make waste when trying to get the economy going. Therefore, he expressed concern with "railroading" this proposal. He pointed to the many negative effects in Alaska relative to the introduction of Atlantic salmon in British Columbia and Washington. Therefore, Mr. Bucaria opined that ADF&G should retain the primary lead in this matter in order to minimize the possible negative effects of introductions, whatever the species.

[10:14:00 AM](#)

CHAIR SEATON said he would ask ADF&G whether the language "certified hatchery" would be restricted to an Alaska certified hatchery. He pointed out that currently no importation of anything other than oysters is allowed and there is no intention through HB 26 to import geoduck seed.

[HB 26 was held over.]

[10:14:34 AM](#)

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Fisheries meeting was adjourned at 10:15 a.m.