

RAB Meeting Minutes – Wednesday, November 14, 2007

The 2008 RAB meeting took place on Monday, November 10, 2008 at the Watertown Hotel in Seattle. Members of the RAB present at the meeting were:

Lu Dochterman	David Beggs	Brad Mirau
David Boyes	Jim Hubbard	Rob Wurm

Regrets: Richie Shaw, Tony Blore, John Woodruff

IPHC staff present at the meeting were:

Erica Anderson	Bruce Leaman	Gregg Williams
Claude Dykstra	Tracee Geernaert	Lauri Sadorus
Linda Gibbs	Eric Soderlund	
Heather Gilroy	Aregash Tesfatsion	
Kirsten Gravel	Robert Tobin	
Steve Kaimmer	Huyen Tran	
Thomas Kong	Ray Webster	

Review of Ongoing Research

The Board was aware of most of the projects undertaken by the staff and a summary of research was distributed prior to the meeting. We reviewed two projects in detail: the snap/swivel experiment; and, the removal experiment.

Snap/swivel experiment

Steve Kaimmer presented the preliminary results of the experiment conducted in summer 2008 in B.C. The experiment involved 288 skates of gear set in 8-skate sets of paired gear. In short, there was a small and non-significant effect of swivels on CPUE for legal-sized fish (80.8 vs. 76.6 lb/skate), although there was a marginally significant reduction in the number of legal-sized and sublegal sized fish on swivel gear. There was likewise very little effect on bycatch composition between the two gears. There was also no effect of the direction of threading the hook, since the swivel on the hook negates the previously-shown advantage of front-threading the gangion to the hook.

RAB members had noted an advantage in CPUE (lb/skate) when doing previous comparisons of swivel/non-swivel gear. Similarly, a Mustad study had shown an approximately 15% improvement in catch rate with swivels. The RAB discussion of the results of this experiment suggested that the advantage of swivels may not be evident in shallow water because there is relatively little time for hooked fish to spin the gear when hauling from shallow water. Since the advantage of swivel gear is perceived to be less lost fish due to spinning up the gangions, the relative advantage of the gear might only be seen with deeper sets.

Removal experiment

Ray Webster reviewed the preliminary results of the removal experiment. The sampling was conducted on five sets of four-station clusters during the 2008 IPHC grid survey in the Yakutat region.

Issues Raised by RAB Members

1. Gear Spacing

Richie said that in certain areas where the fish distribution was spread out and larger-sized fish predominated, a fisher with more hooks/skate who was setting more skates/set didn't catch more fish than a fisher that has fewer hooks/skate and set fewer skates/set.

But in areas where high densities of smaller-sized fish were found then the fisher with more hooks and more skates caught *a lot* more fish than the other fisher described above.

David always assumed that smaller spacing will excite the other fish that see that other fish are eating the bait (the greater # of hooks multiplies the # of fish caught).

Lu mentioned that during the derby days spacing was shorter but now with lower fish densities the fishermen use longer spacing.

Staff commented that most research showed a direct relation of lbs/skate and spacing. The 2005 hook spacing experiment showed a plateau of catch rate at 16' spacing but densities of fish were very high. The experiment was repeated in 2007 in a lower density area and showed the continuous increase of catch rate with spacing.

2. Size Limits/Large Female Spawners

David would like the IPHC to consider regulating the upper size limit of fish that can be caught. Other fishermen are concerned by even more restrictions. Catching larger fish increases the consumer's concerns about consuming heavy metals and mercury and the consumers are not well-informed on the subject. David believes that an upper size limit would alleviate concerns for public consumption of heavy metals and mercury.

Bruce responded by saying that the mercury concern is not just cut and dried. Mercury concentrations and their effects are now well-documented. The average size of halibut in the marketplace is 33 lbs which is a size that is not too much of a concern for mercury levels. The bottom line is that for the average consumer mercury exposure is not too much of a concern but it is also a personal risk-management issue. He also referred the Board to the backgrounder on consumption from the Alaska Dept. of Environmental Conservation, which gives a very balanced review of all previous studies.

Gregg added that continued consumption of large fish is where mercury exposure can become a health threat. The concern is more for sports anglers who catch one big fish and feed on that one fish throughout the year, more so than the consumer who goes and eats halibut at a restaurant where chances are, the fish was about 30 lbs.

David said that his big thing with mercury levels is that there is a huge amount of public misconception and that is where their efforts need to be – educating the public.

As a processor, Tony mentioned that there is also a marketing problem with large fish when they have 'qc' tests performed and those fish cannot be sold if they don't pass the accepted mercury levels test.

Bruce said that we all need to work with the agencies that deal with the public to make sure that the correct information is being passed on to them.

Gary's concern though is how to get the large fish off the hooks without killing them.

Lu replied that he's consistently caught large females that he has cut loose and the appeared to remain viable.

Bruce said that with respect to sparing large females, if the concern was simply the # eggs that they produced it would be a simple matter, however recruitment success is not simply the number of eggs produced but is governed largely by environmental conditions. There is evidence that larger females not only produce more eggs but that their eggs are actually more viable, however the effect is quite small. He also said that the key factor in having large females is that the fishing mortality rate is correct, so that sufficient number of females live to older ages.

Heather mentioned that IPHC needs to know if large fish were being/would be released as it can be a legal issue for fishermen.

Bruce also mentioned that to lower the size limit would result in an increased yield of small sized fish because there would be so many of these out there (30" fish), if the fleet actually fished to a lower size limit. If the fleet behavior did not follow the above there would be an increase mortality of the existing exploitable population and it would be the worst situation. The female spawning issue needs to be dealt with, with information and education.

3. Sport Fleet Expansion

Brad explained how in Canada 88% of the catch limit was allocated to the commercial fleet and 12% to the sports fleet. He said the big issue is that the sports fleet doesn't seem to be counting their fish accurately and this has a consequence on the amount of quota the commercial fleet then receives. He said the average sports charter license catches 15,000 lbs of halibut in one year.

Bruce pulled some numbers out of his hat: in 2006 the sports fleet went at least 185,000 lbs over their quota and in 2007 they could be 300,000 lbs over the 12% allocation. IPHC finally got DFO to admit that they can't use JO Thomas' numbers. Average weights may come from a combo of IPHC survey and Creel survey data.

David said that in 2005 he remembers that the sports fleet went 400 – 450,000 lbs over.

Bruce said that the focus needs to be on piece counts as well as average weights (DFO has a license file that is never used to obtain the data that are needed).

Richie asked why validators could not be present at major offloading sites (lodges, piers) to get these counts. Why can't they implement something similar to what they have done for commercial fishing accountability?

Bruce answered that there are some 400,000 sports fishing licenses in Canada and DFO appears to be responding to the political weight of the sports fishing lobby.

4. 'Pus' Pockets

Brad said that he had 100's of halibut this year with pus pockets in their flesh. He wants to know what causes this and he wants to avoid miscommunication/fear mongering before misguided rumors start spreading.

Tony said that he's seen pus pockets too and they were found in the flesh from the belly cavity to the back. He said that he has seen an equal amount of pus pockets this year at his plant but more jellied halibut than in previous years.

Brad and Tony both keep claims records that document pus pockets.

Brad mentioned that pus pockets are really a problem as they lose the entire fish whereas with chalky you can still use part of the fish. Would like to have samples analyzed and is willing to pay. Can staff help arrange contacts with a lab. Claude to supply contact information for the ADF&G lab in Palmer, to Brad

5. Consequences of Integration

Brad said that there has been an exodus of fishermen from traditional fishing spots to areas where there is less cod. He wants to know what the consequences of this will be 5 to 10 years down the road with respect to halibut and/or cod stocks. He wants to know if IPHC is concerned with 60% of the halibut being fished from just a few small areas.

Bruce said that the concentration of effort is definitely an issue, if it is occurring. The concern is that there seems to be a higher degree of site fidelity in halibut than was previously thought and will this bring up a redefinition of the exploitable stock? How much mixing of the stocks is there? He mentioned that there is 20% movement of tagged fish which equates to a lot of movement with respect to a management. The question is, is there enough movement between stocks to replenish the movement of without redefinition of the exploitable stock?

Richie explained some of his concerns with respect to traditional Langara fishermen that have moved to the 800 line. He said they used to fish around Dixon Entrance and the Sitka spot back in the day but now there is hardly any halibut in those spots at the same time of year. He said that the 800 line and the 'City' are hot spots now and he is wondering if the fish are going to be depleted from those areas also. And then what are the fishermen going to do?

Bruce answered that the survey then takes on greater significance and becomes more critical in terms of whole population estimates. Fine-scale research is important in terms

of research. The issue at hand is what is the definition of the exploitable stock that is broadly based in its productivity.

Richie wants to know what the mortality rate is at hot spots like the '800 line' compared to the 16% mortality rate that is used overall because so many small fish are caught and released in those areas and where the same fish are caught and released not just once but several times.

Lu said that he looked at bycatch data in Area 4A and found that the trawl fishery accounts for 8 million lbs of mortality in 4A alone. He said that they could do a tagging study on the small fish to verify the mortality rate on fish that are caught and released several times.

Bruce said that the '800-line' issue is not a stock assessment issue but rather a local depletion issue. There is not a clear research direction on this topic but the staff will try to examine this and bring ideas forward to the Board.

6. Participatory Research

Brad said that fishermen have a plethora of information and experience and wonders if this wealth of knowledge/experience could be used by research.

Bruce said that DFO is overwhelmed with the data that they have from integration. IPHC does not have the capability to analyze all the data. We could consider entering all the log data for 2B logs so we can enter and analyze that data.

David asked if e-logs would be helpful to us. He said that PHMA has been talking about those for a while.

Heather, Bruce, and Kirsten spoke about the direction IPHC wants to take with respect to e-logs. There is definitely very high interest in developing this option, especially on the Canadian side as we would more than likely have a very difficult time getting any 'extra' data from DFO as data sharing with other agencies appears to be hampered with DFO by freedom of information issues.

7. Wind Farm discussion

Dave Beggs raised the issue of a proposed wind farm on Dogfish Bank off the east coast of the Queen Charlotte Islands. He wanted to know if this was a halibut nursery area that might be negatively impacted by the development. Bruce noted that DFO had conducted trawl surveys in this area since the 1980s and suggested David contact Jeff Fargo of DFO at the Pacific Biological Station in Nanaimo

Richie Shaw thought very few fishermen used that spot.

Tim thought the DFO survey didn't get under 25 fms and much of the ground that may be impacted is under 25 fms. Bruce noted that the survey did historically fish

shallower than 25 fms. Tim thought the ground was a nursery area for English sole as well as other flatfish, including halibut. Bruce confirmed that there were juveniles of many flatfish species in this area.

8. Profilers

Bruce discussed the staff's desire to equip all survey vessels with water column profilers. It will become increasingly valuable to have observations of water characteristics, as the impacts of global warming are expressed. He also noted that our request for funding includes a component to contract vessels to occupy a set of stations monthly, on 20 transect lines, from October through March. These additional observations would provide a connection between the high-density snapshot of ocean conditions obtained on survey stations, with annual processes occurring when survey vessels are not present.

9. Depredation

The issue of whale depredation was raised again this year as a very significant impediment to prosecution of the fishery. Whereas historically this has been a problem mainly in Alaska, it is becoming more prevalent in B.C. as well. David Beggs fears that the fishermen aren't taking the threat seriously. He believes that it is important to get them to start changing their fishing behaviour before it becomes a problem.

Dean Adams discussed his experience with Sperm and Killer whales in the Aleutians. (1984 - ~2000). He said they were confined to the waters between North Cape on Atka Island to Sanak when he used to fish. But now they've expanded their area of impact along both sides of the chain. He was disappointed to hear they are in BC now.

Richie talked about he and another skipper getting hit this spring off Langara. He suspects the sound of the hydraulics chummed the Orcas to the boat.

Sperm Whales not yet seen as a big issue in BC.

David Beggs was concerned that the transients have changed their diets and are now after the easy meal – fish rather than mammals. Bruce relayed the presentation from a scientist at the National Marine Mammal Laboratory that was received by the Commission at last year's annual meeting. The scientist presented very convincing evidence that Killer whales in the Bering Sea were either fish eaters or mammal eaters and they did not cross over. Bruce admitted that he was skeptical of this finding at first but after listening to the evidence he believes that it is correct. For that reason, it would be important to provide as much evidence from photographic observations (since Killer whales can often be identified uniquely from photographs) for this process.

Dean said that it's essentially a surgical process now and the whales are able to eliminate halibut and sablefish from the gear when they target a vessel. Orcas are a serious threat in his opinion but the Sperm Whales seem to be increasing in intensity and impact. He is at a loss on what to do.

Claude provided a summary of the depredation conference he attended last year. Older whales are still gun shy so to speak around vessels because it is believed they retain a fear of vessels arising during periods when commercial whaling was permitted. The younger whales, having been raised after whale hunting was banned, have no such fear. He outlined some of the research and mitigation measures that have been brought forward. Acoustic studies have shown that long range attraction of whales results from the noise of the vessel's propeller cavitation. Hydraulic noise is high frequency and is rapidly attenuated in water, whereas low-frequency cavitation noise can be transmitted for tens or even hundreds of miles. Experience in the southern oceans has shown that sudden changes in propeller RPM create the most cavitation noise and that a light touch on the throttle when working the gear can be very effective at reducing attraction of whales. Claude also noted that dealing with depredation requires a consistent and fleet-wide action. Any deviations in harvester activities that promotes attraction of whales will result in learning by the whales and will undermine efforts to mitigate depredation.

David Beggs would like the IPHC to write an information bulletin to fishers on this issue with background information on behaviour and how to mitigate depredation.

10. Trap Retention of halibut as a tool to mitigate rockfish bycatch and whale predation and allowance of halibut retention by sablefish pot vessels

The Board has discussed this issue previously, in the context of researching trap capture of halibut as a mitigation measure for mammal depredation and bycatch avoidance. Bruce raised this issue again in the context of a regulatory proposal received by the Commission, for approval of halibut bycatch retention by vessels fishing for sablefish in Area 4, if the vessel has halibut IQ to cover the retention. The Commission approved a similar regulation for Area 2B last year, over the objections of the staff.

The staff has several issues with this proposal. First, it is difficult to define what bycatch means, in comparison to targeting. There is not historical data with which to assess the level of legitimate incidental catch. Second, introduction of trap gear fishing for halibut could create significant gear conflicts on the fishing grounds between trap and longline gear. At present, there is some spatial segregation between the two gears, because directed sablefish fishing tends to be deeper. Third, the introduction of trap fishing could create big boat/small boat access issues because bigger boats are required to store and handle traps. While there is always some big boat/small boat issue in terms of capability for fishing in particular times and areas, authorization of trap fishing could exacerbate this conflict. Fourth, staff is concerned about opening up the issue of alternate legal gears for halibut, because of concern for trawl capture of halibut. A substantial percentage of trawl encounters are juvenile halibut and increased mortality through retention or even increased mortality from highgrading through the catch, would be a negative impact on the stock. Last, the Commission will have data issues with trap caught halibut in terms of how to integrate this information into our databases and assessment process.

Dean felt that halibut are so small in the Aleutians he would be worried traps would trash the halibut like the brown crab fishery has in Alaska. He was also concerned about the need to ensure spatial segregation between the two gears. Right now, it exists, but any targeting of halibut by trap boats would create conflict on traditional halibut grounds.

David Beggs supports the gear type as a method for sablefish vessels to retain if they have IQ. He felt the data obtained would be worthwhile. The majority of the Pacific Halibut Management Association in B.C. is against the proposal, competition for leased fish is part of the opposition. He also thought more fishers would support it if there was more publicity about depredation. However, he thought halibut in pots prevented sablefish catch. He would not support it as a target fishery yet but maybe later

Lou felt that the only reason the halibut fleet exists is because of its long history of single gear management. If other gear retentions were introduced it could be the beginning of the end of the IPHC and the halibut fishery.

Richie thought DOT inspections were also an issue as most of the LL boats would fail the more stringent requirements for stability with traps aboard.

There was a query on the halibut bycatch currently reported in the BC pot fishery. Bruce reported that it is estimated at less than 15,000 lbs/yr at this point but that there would be a huge incentive to target halibut at \$5/lb.

The Board thought that hooks have a better control over bycatch and careful release which might be an argument for no change in gear permissions. The consensus was that there were many more negatives than positives associated with permitting trap fishing for halibut.

10. Research for 2008 reviewed by Gregg

1. Staff outlined their proposal to examine the effects of swivels and perlon gangions on CPUE in Area 2B.
 - a. Dave Beggs thinks its more of a blackcod problem than rockfish
 - b. Richie- in 1981 live quillback rockfish fishery increased CPUE 50% with the circle hook and then another 20% when the tying was changed
 - c. Richie said that perlon made a rigid line into the circle hook and did a better job of fishing (28" gangions)
 - d. Dave B – should fish early and late to avoid rockfish bycatch i.e. Mar-early May and then Oct/Nov
 - e. Gary said may get a lot of lingcod or dogfish catch too. Yelloweye, silver-gray and quillback rockfishes will be problems for bycatch.

After additional discussion on design issues, staff agreed to incorporate RAB suggestions and email a revised proposal for review comments in the new year.

The issue of Larocque impacts on the ability to conduct the experiment was raised. Richie thought we could get around the Larocque decision by contracting with a vessel and using their quotas instead of us selling the fish. We could put it in the contract that they would have to use their own quotas for the halibut and bycatch and IPHC could pay a usage fee for the vessel and crew.

11. Stock assessment workshop and review

Bruce gave a short review of the workshop and external review. Summaries of both, plus staff responses, have been posted on the IPHC website:

<http://www.iphc.washington.edu/halcom/meetings/workshop2007/wrkshp2007.htm>