

2013 Research Advisory Board (RAB) Meeting

IPHC Offices, Seattle WA

18 November, 2013

RAB members: David Beggs, Tony Blore, Art Davidson, Lu Dochtermann, Jay Hebert, Jim Hubbard, Brad Mirau, Ritchie Shaw, John Woodruff, Rob Wurm

IPHC staff: Bruce Leaman, Steve Keith, Joan Forsberg, Gregg Williams, Heather Gilroy, Claude Dykstra, Tim Loher, Eric Soderlund, Ray Webster, Kirsten MacTavish, Lauri Sadorus, Steve Kaimmer, Ian Stewart, Steve Martell, Ed Henry, Robert Tobin, Dana Rudy, Tracee Geernaert, Lara Eriksen, Chris Johnston

New Issues raised by RAB members

1. Ritchie Shaw – Concerned about the amount of damaged fish seen on his first trip this year near Cape Chacon/Cape Muzon. He has an older crew, which has seen a lot of fish in their day. They saw lots of hook damaged fish, some fresh, some older but similar to crucifier days 10-15 yrs ago. His next trip off WCQCI saw a lot fewer. Seemed more frequent in Dixon Entrance. Some fish looked crucified, some just looked horned off. Ritchie was concerned about the volume of hooks and the numbers of hooked halibut of all sizes that don't survive. Jim Hubbard commented that he was in southeast Alaska-Outside in late July and caught a lot of >60 lb fish but didn't see much PHI. Jay Hebert uses 14/0 circle hooks, fishes deep and hasn't seen much PHI. Jay has always thought that fish come off the gear on rougher weather and that some PHIs happening when fish come off smaller hooks prior to the roller. Similarly, Lu Dochtermann has seen few PHIs in Area 4. Data from the IPHC setline survey shows 70% of injuries are minor injuries and the rate has been relatively flat in Area 4.

Bruce commented that there may be some scope here for experimentation looking at type/size of hooks, rate of haul, and fish size, as well as looking at data collected on the Rebecca B study. There was also a desire to see overlays of PHIs with fishing effort by fishery type. Also potential for a public awareness initiative.

2. Ritchie Shaw – he also talked about seeing chalky fish. He ran into a high concentration of chalky fish in one area, the same area where he saw a lot back in the 1990s. He hasn't seen it since about 1996. Tony noted he saw some in fish from AK; John Woodruff hadn't seen that much in comparison. Tony thinks it is related to area and season. The larger the fish, the less the chalk. One commenter noted that trollers have >50% chalky fish.

On Ritchie's second trip this year, there was lots of chalk, upwards of 20% on the 20/40s. Eric noted that some survey trips which caught a lot of sleeper sharks also had high chalk percentage, so it could also be stress related. Tim commented that lower O2

levels in the environment might cause greater chalk potential. Brad and John talked about their processor experiences and testing. The number of claims has gone up with the higher prices in last five years. Brad noted that the percent at his plant hasn't changed. Brad commented that it would be valuable nice if there were an ASMI-like chart on chalkiness but noted it is probably outside IPHC purview. Bruce noted that it would be useful to have processors provide feedback to fishermen, since a previous initiative by IPHC to act as a repository for chalky reporting staff was not successful.

3. Tony B – Tony's pictures of orange/yellow fish were discussed. He saw upwards of 60% discoloration in some totes from a particular processor. This discoloration is not visible externally. Tony first saw it in fish coming from Russia and China. Is this related to food source or shifts in the dynamics of particular prey? Is this an issue with fish from Area 4? Is it coming mainly from fish caught in 4C? Brad said he's seen this color from Russian and Japanese joint venture fish for over 20 years but it was more uniform throughout the flesh. Members agreed that IPHC could submit the fish to ADF&G Pathology Lab for testing.
4. Eyed vs blind side hooking – Ian saw a high proportion of right jaw (RJ) hooking on his trip with Dave Boyes this past summer. Dave uses swivels. Unclear if swivels have an effect on hooking location. Swivels do make it tough to bait, i.e., the hook flops around. Swivels make a big difference with live quillback fishing (Ritchie). Eric noted that PIT tag releases had hook location recorded so it may be possible to look at mortality by hook location on recovery rates. The Staff research report to the RAB included data from 1993-1994 studies on releases from circle and autoline hooks. These data showed that 80% of fish were hooked on the blind (left) side for both hook types.
5. Size limit – Dave Boyes wants to see MSE process look at lowering the size limit. MSE can also look at effects of a maximum size limit.
6. Area 2B sub-stock – suggested by Dave Boyes. The theory isn't consistent with migration seen from tagging. Tim noted that local production and local recruitment could theoretically create a 'substock', in the absence of migration. Subsequent discussion of movement among areas, especially 4B where larger fish tagged with PAT tags show less movement than other areas, suggesting higher potential for isolation. Ritchie commented that the Strait of Georgia seems to have more fish lately; the sport fishery is catching more there.
7. 'Decimated' stock and rebuilding – Rob asked 'how are we doing'? Is the stock coming back? What are trends in fish size? Ian reviewed the SAA work, the historical story on SAA. Coastwide we're seeing different trends in Area 2 (small trend downwards) vs. Area 3 (large trend downwards) vs. Area 4 (little trend), with no consistent process on a coastwide basis. Bruce reviewed the SAA (NPRB) project and its comprehensive look at potential driving forces in changing SAA.
8. Depredation – John Woodruff commented on observations from his latest trip to Seward and Kodiak. Lot of black cod quota left on the table due to whale depredation. Is IPHC accounting for this with regards to halibut? Bruce noted that the assessment does take it into account though it does not identify depredation directly, instead it is embedded within fishing mortality. He noted that this is the correct place for it, since the fish are on the hooks when depredated. Lu D. noted that he has to move daily to avoid the whales. Jim said that he is seeing a lot of squid, and thinks that keeps whales in the area.

Issues from previous meetings

1. Alaskan observer program – Gregg reviewed the 2013 program design and the recently released data tables. Significant concern by Board members over the accuracy of the estimates due to lower coverage levels than in previous years for trawl fisheries in the Gulf of Alaska. Jay Hebert and Jim Hubbard both related their experiences with observers this past year. The Board had an extensive discussion about observers vs. Electronic Monitoring and members could not understand why NMFS does not follow the Canadian lead in using EM as a logbook validation tool. Bruce also reviewed the errors in the NMFS presentation of wastage in the longline fishery, relative to the normal IPHC reporting since the 1990s. He indicated that the mortality estimates implied by data from the observer program are not likely to be much different than IPHC estimates, when these errors are corrected.
2. Survey expansion – Claude reviewed the expanded survey layouts, i.e., deep and shallow. Ritchie noted a potential for snap gear boats in BC; some guys have larger boats.
3. Snap vs. fixed gear. Members queried the impacts of increased use of snap gear in Alaska. Ian and Bruce reviewed the current use of snap gear in the assessment (only for Areas 2A and 2B). There is currently sufficient fixed gear used in other areas to index stock relative abundance but staff will be looking at the potential to regularly incorporate both data sources during the next year.
4. *Ichthyophonus* – Claude reviewed the past work, and what the staff and USGS are considering for 2014. As yet there is no indication of a cause-effect relationship with halibut mortality or lowered growth rates.
5. Fleets as areas assessment approach – Ian reviewed his work this past year. His first cut at this in 2014 will likely be just as composite Areas 2, 3 and 4. This work is probably still a year away.
6. Repeat capture of small halibut – nothing planned. It is difficult to design an effective study to examine this, but it can be examined as part of the MSE process.
7. Sport discards – discussion of lack of data from most agencies but ADF&G has produced estimates for the first time in 2013. Staff will be reviewing this work.
8. Lactic acid – David Beggs asked if anyone ever measured lactic acid levels in fish. Bruce noted studies on blood chemistry by DFO (Nanaimo) from the 1970s and again in the 1980s.

Ongoing staff research in 2013

1. MSE/MSAB – Steve Martell reviewed the recent MSAB meetings, which have developed objectives, identified tradeoffs and will be examining outcomes. He demonstrated the use of evaluation tools with a simple simulation model and several alternative scenarios of recruitment and bycatch. John and Brad gave their impressions of the process as MSAB members.
2. Tagging studies – Tim reviewed progress on the development of the geomagnetic tags.
3. Size at age (SAA) – Steve Martell reviewed the work the NPRB team is doing – ecosystem effects, bioenergetics, fishery effects, density-dependence, and integrated modelling. This may bring into play the MSAB if fishery effects are found to be involved.

4. Length/weight study – Heather reviewed the work to date. Tony noted that ASMI may have revised their halibut grades, from 10/20 to <20.

IPHC staff selected research proposed for 2014

Bruce and the staff reviewed several projects being proposed for 2014. The RAB was asked for their views and opinions.

1. Hooking success – Ian reviewed the proposal and the need for the information. Ritchie talked about his experiences with fish just mouthing the bait. Jay concurred, though Art didn't believe mouthing was any problem to worry about. Dave Beggs thought that smaller fish are just more aggressive. Bruce noted that we saw a different catch rate for circle vs J hooks. It is clear that direct observations will be critical to interpretation of any results because of the potential effects of 'mouthing' by various sizes of fish. This was very valuable information for the staff to consider in the design of this work.
2. Sex composition of the commercial catch – Ian reviewed this work. There was significant discussion over methods to have commercial fishers mark the fish. Those suggested included using a hole punch to make holes in the opercle, electrical nylon 'zip' ties. John Woodruff suggested going to a particular port and get a vessel group to try out the chosen approach on a pilot basis. There could be a potential for the observer program to assist, although the plethora of existing observer tasks made this unlikely. Various ideas were suggested (e.g., cameras over the dressing table). Ride-alongs were also suggested to look at seasonal variability. Assessment needs are for a season-long collection of data, from all sampled ports, by size of fish. It was noted that genetic testing would be a useful validation tool.

Wrap up on various topics

1. Retention on different types/sizes of hooks - Hook timers were discussed. Ed noted that one would need to measure how much force is needed to pull a hook out. Hubbard uses soft hooks, and resets the straightened hooks. Jim also noted that Mustad likely has studies on the strength and characteristics of their hooks. The speed of hauling was also noted as a significant variable in retention of hooked fish.
2. Fish escape and catch verification – The group discussed the use of a mini-sub or ROV to verify catch on the gear prior to haulback. Jay noted that there was some recent work by NMFS with a 1-man sub in the Zhemchug Canyon area. Art talked about an ROV used on the Bowie Seamount. Staff will follow up on these studies.

Closing Comments

Bruce thanked the RAB members for attending this year, given the conflict with the Pacific Marine Expo.