

Committee of Age-Reading Experts

2002 Committee Report

Prepared for the Forty-third Annual Meeting of the Technical
Subcommittee of the Canada-USA Groundfish Committee

May 2002

Prepared by
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CARE 2002 Report to the Technical Subcommittee of the Canada-USA Groundfish Committee

A. CARE Overview, 2001-2002

History - The Committee of Age-Reading Experts, CARE, is a subcommittee of the Canada-USA Groundfish Committee's, Technical Subcommittee, charged with the task to develop and apply standardized age determination criteria and techniques, and operating within the Terms of Reference approved by the TSC in 1986.

1. The last biennial CARE Workshop/Conference was held May 2000, with reporting of events in this 2002 CARE Annual Report to the TSC (see Appendix I).
2. The next biennial CARE Workshop will be held April 23 -25, 2002, with expected attendance by agency members from California, Oregon, Washington, British Columbia, and Alaska.
3. The CARE web page continues to be updated, though with some lag time because of opportunistic use of resources. It is available at <http://www.psmfc.org/care/>.

B. CARE Working Group Reports

1. CARE Manual/Glossary Subcommittee- Shayne MacLellan (chair, report contributor), Betty Goetz, Kristen Munk, Bob Mikus
2. Web Page Subcommittee- Marion Mann (chair), Delsa Anderl, Mark Blaisdell, Brenda Erwin
3. Charter Subcommittee – Shayne MacLellan, Kristen Munk, (more members to be volunteered)

C. Agency Structure Exchanges – Delsa Anderl

Tracking of agency structure-exchanges has been delegated to the CARE vice-chair, currently Delsa Anderl (NMFS). Table 1 summarizes the status of exchanges from 2000-2002.

D. CARE Workshop Business

1. Status of 2000 Recommendations from CARE to TSC

CARE would like to investigate setting up of an email discussion list, "e-group", to facilitate and broadly disseminate common age-reading questions and solutions. Will the TSC support this effort in assuring technical assistance from the PSMFC webmaster, and, would the TSC like to be subscribers to this discussion list?

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2. Status of 2000 Recommendations from TSC to CARE

The CARE membership were advised of the 2000 recommendation from the TSC to CARE at the 2000 meeting. CARE recognizes the TSC benefits from these exchanges, and will work to complete them as production schedules and/or supervisory influences allow.

E. 2002CARE Workshop Agenda (tentative)

A preliminary agenda for the 2002 CARE Workshop is presented in Appendix 2.

Table 1. Disposition of interagency age-structure exchanges, current to April 15, 2002.

EXCHANGE ID NO.	EXCHANGE YEAR	ORIGINATING AGENCY	COORDINATOR	COOPERATOR(S)	DATE INITIATED	SPECIES	STOCK	STRUCTURE	TECHNIQUE	PURPOSE	SAMPLE n=	NO. READERS	% AGREE	AVG % ERR	MEAN VAR	SAMPLE ST.DV	SAMPL E CV	MEAN CV	MEAN D-INDEX OF PRECISION	STATUS	
98-001	1998	WDF	J. SNEVA	ODFW	1998-1999	English Sole		interopercles	SURFACE	training		3								incomplete	
98-002	1998	WDF	J. SNEVA	ODFW	1998-1999	Black Rockfish		otolith	BB	training		3								incomplete	
99-001	1999	ODFW	B. MIKUS	CDFG,IPHC,NMFS	spring 1999	Dover Sole		otolith	BB	annual calibration	50	12								incomplete	
99-002	1999	ADFG-Kodiak	C. WORTON	ADFG-Juneau	spring 1999	Black Rockfish		otolith	BB	calibration	23	2	70%	0.75%	0.3409	0.2892		0.0106	0.0075	complete	sa
99-003	1999	ADFG-Kodiak	C. WORTON	ADFG-Juneau	spring 1999	Pacific Cod		otolith	BB	calibration	21	2	43%	6.65%	0.92857	0.63976		0.0940378	0.066494826	complete	sa
99-004	1999	ADFG-Homer	S. MEYER	IPHC	1999	Halibut		otolith	SURFACE	annual calibration	102		77%	--	--			--	--	complete	sa
99-005	1999	WDFW	J. SNEVA	CDFO,NMFS-Tiburon	spring 1999	Lingcod		fin rays	THIN SECTION	criteria calibration	50-100	3	"high"							incomplete	
99-006	1999	ADFG-Juneau	K. MUNK	CDFO,ODFW	10/25/1999	Rougheye Rockfish	SEA/SCA	otolith	BB	calibration	20	3	10%	9.10%	11.76			0.1222	0.0706	complete	
99-007	1999	ADFG-Juneau	K. MUNK	CDFO,ODFW,WDFW	10/25/1999	Yelloweye Rockfish	SEA/SCA	otolith	BB	calibration	20	7	0%	6.17%	12.57			0.094	0.03559	complete	
99-008	1999	ADFG-Juneau	K. MUNK	CDFO,ODFW	10/25/1999	Thornyhead rockfish	SEA/SCA	otolith	BB	calibration	20	2	--	--	--			--	--	sample compromised	
99-009	1999	ADFG-Juneau	K. MUNK	CDFO,ODFW,WDFW	10/25/1999	Quillback Rockfish	SEA/SCA	otolith	BB	calibration	20	7	0%	7.28%	22.55			0.0951	0.0359	complete	
99-010	1999	ADFG-Juneau	K. MUNK	CDFO,ODFW,WDFW	10/25/1999	Dusky Rockfish	SEA/SCA	otolith	BB	calibration	20	10	0%	6.66%	1.55			0.0851	0.0269	complete	
99-011	1999	ADFG-Homer	C. STOCK	CDFO?	10/1/1999	Lingcod		fin rays	THIN SECTION	calibration	40	?									
99-012	1999	CDFO	S. MacLELLAN	NMFS-AFSC	1/31/1999	Pacific Whiting		otolith	BB		118	?								incomplete	
00-001	2000	ADFG-Juneau	K. MUNK	ODFW,NMFS-AFSC	1/15/2000	Sablefish	SEA	otolith	BB	calibration	20	3	20%	9.83%	2.91			0.129	0.0744	complete	sa
00-002	2000	ODFW	B. MIKUS	CDFG,IPHC,NMFS,CDFO	1/27/2000	Dover Sole(1)	WC	otolith	BB	calibration	?	15			2.951	1.596		0.126	0.0315	incomplete , tentative stats	
00-003	2000	ODFW	B. MIKUS	CDFG,IPHC,NMFS	1/27/2000	Dover Sole(2)	WC	otolith	BB	calibration	?	12			5.012	2.0138		0.1386	0.04	incomplete , tentative stats	
00-004	2000	ODFW	B. MIKUS	CDFG,IPHC,NMFS	1/27/2000	Dover Sole(3)	GOA	otolith	BB	calibration	7	12			57.8649	6.91211		0.2169	0.0654	incomplete , tentative stats	
00-005	2000	ADFG-Juneau	K. MUNK	NMFS-AFSC	3/1/2000	Pollock	GOA	otolith	SURFACE+BB	calibration	200	2	5.73%	13.92%				0.1968		complete	unsa
00-006	2000	ADFG-Juneau	K. MUNK	CDFO	3/1/2000	Thornyhead rockfish	SCA	otolith	BB	calibration	12	2	0%	6.30%	23			0.0891	0.063	complete	sa
01-001	2001	ADFG-Juneau	K. MUNK	CDFO	1/12/2000	Yelloweye Rockfish	SEA	otolith	BB	calibration	50	2	14%	3.51%	3.46	1.86	6.56%	0.0497	0.0351	complete	sa
01-002	2000	WDFW	J. SNEVA	WDFW,DFO,ODFW	2001	Lingcod	WC	fin rays	THIN SECTION	calibration	262	3								complete	sa
01-003	2001	NMFS-Seattle	D.ANDERL	NMFS-AFSC,ODFW	1-Aug	Pacific Whiting	WC	otolith	BB	calibration	59	2	54.2	5.50%			7.80%			complete	sa
01-004	2001	ODFW	P.McDONALD	ODFW,NMFS-AFSC	1-Nov	Pacific Whiting	WC	otolith	BB	calibration	253	3	61.2% & 48.3%							complete	sa
02-001?	2002	NMFS-Seattle	D.ANDERL	ADFG-Juneau	12/??/01	Sablefish(known-age)	NGOA?	otolith	BB	calibration	31	1	35.48%	8.36%	0.6129	0.7828	0.1341	0.11829	0.0836	complete	sa
02-002	2002	ODFW	B. MILLER	ODFW, NMFS-AFSC, CDFG, IPHS	Feb-02	Dover sole	WC	otolith	BB	calibration	20	12				8.69		0.514		complete	sa
02-004	2002	ODFW	P.McDONALD	ODFS,NMFS-AFSC,DFO,ADFG-Juneau	1-Dec	sablefish	WC	otolith	BB	calibration	30	5								incomplete	

Appendix I

COMMITTEE OF AGE-READING EXPERTS

A Subcommittee of the Technical Subcommittee of the Canada-USA Groundfish Committee

2000 Biennial Meeting Agenda and Minutes

NOAA-NMFS AK Fisheries Science Center, Sand Pt. Lab

Seattle, Washington

“Back to Basics”

TUESDAY 5/16/2000

(Breaks approx. 1000-1020, 1200-1315, and 1500-1515)

8:20am Assembly

Non-agenda Announcements, Introductions, Attendance,
Workshop Theme: “Back to Basics”

Approval of Agenda

Approval of 1998 Minutes

Non-assembly Work, assignment

- Summary of Age-reading Methodology updates;
- Discussion of priority species workshop review report for:
 - Primary: Hake, Sablefish, Thornyhead,
 - Secondary: Pollock, Black rockfish, Lingcod (fin)
- Suggest format: date, species, agencies, paragraph of main concern/how it was dealt

Working Group reports

Manual/Glossary (MacLellan, Goetz, Munk)

Web (Erwin, Anderl, Blaisdell, Mann)

- add link to PSMFC or TSC site?

Charter (Munk, Goetz, MacLellan, others)

Structure Exchanges

Break; scope station sign-up

New Business

- Discussion/posting of precision test statistics procedures
- Discussion of other standardized procedures
 - Word-processing
 - Spreadsheets (and formulas!)
 - Electronic images
- Pollock otolith collections from 1960-1979

Recommendations TSC <> C.A.R.E.

1998 Recommendations from TSC to C.A.R.E.

1998 Recommendations from C.A.R.E. to TSC

1999 Recommendations from TSC to C.A.R.E.

2000 Recommendations from TSC to C.A.R.E.

2000 Recommendations from C.A.R.E. to TSC

2:15-3:00pm Equipment Demo by Bartels and Stout (tentative time)

C.A.R.E. Administration: Election of Officers 2000-2002 (possible deferment to Thursday)

2000-2002 Chairperson (nominees: vice chair 1998-2000 Brenda Erwin)

2000-2002 Vice chair/Age Structure Exchange Coord. (Nominees: Shayne MacLellan-DFO)

2000-2002 Secretary/Rapporteur (nominees: Christine Schmale-ADFG)

Adjourn to Scope-work

5:00pm Adjourn for the day

WEDNESDAY 5/17/2000 - THURSDAY 5/18/2000

8:00am Begin scope work

10:00-10:20 Convenience Break

12:00-1:15 Lunch Break

3:00-3:15 Convenience Break

5:00pm End scope-work

Thursday 5/18/00

3:15 late meeting assembly/summary (if needed)

FRIDAY 5/19/2000

Cleanup crew...

OPENING REMARKS:

Kristen Munk, chair of C.A.R.E. 1998-2000, opened the meeting at 8:20 am, May 16, 2000, held at the NMFS Sandpoint facility, Seattle, Washington. Kris spoke briefly emphasizing the theme of the workshop which was "Back to the Basics" - keying in on revisiting basic criteria and calibrations within and between labs.

INTRODUCTIONS:

Participants introduced themselves and stated the agency they represented:

<u>Attendee</u>	<u>Affiliation</u>	<u>Attendee</u>	<u>Affiliation</u>
Charlie Stock	Alaska Dept. of Fish and Game	Betty Goetz	NOAA, NMFS, AFSC*
Christine Schmale	Alaska Dept. of Fish and Game	Charles Hutchinson	NOAA, NMFS, AFSC*
Kristen Munk	Alaska Dept. of Fish and Game	Craig Kastle	NOAA, NMFS, AFSC*
Ruby Young	Alaska Dept. of Fish and Game	Dan Kimura	NOAA, NMFS, AFSC*
Brenda Erwin	California Dept. of Fish and Game	Delsa Anderl	NOAA, NMFS, AFSC*
Darlene Gillespie	Canada Department of Fisheries and Oceans	Jon Short	NOAA, NMFS, AFSC*
Shayne MacLellan	Canada Department of Fisheries and Oceans	Mark Blaisdell	NOAA, NMFS, AFSC*
Calvin Blood	International Pacific Halibut Commission	Nancy Roberson	NOAA, NMFS, AFSC*
Joan Forsberg	International Pacific Halibut Commission	Tim Price	NOAA, NMFS, AFSC*
Linda Gibbs	International Pacific Halibut Commission	Bill Miller	Oregon Department of Fish and Wildlife
Thomas Kong	International Pacific Halibut Commission	Bob Mikus	Oregon Department of Fish and Wildlife
Erica Burton	Moss Landing Marine Laboratory	Patrick McDonald	PSMFC**/Oregon Dept. of Fish and Wildlife
Jennifer Topping	Washington Dept. of Fish and Wildlife	J. Bruce Pedersen	PSMFC**/Oregon Dept. of Fish and Wildlife
John Sneva	Washington Dept. of Fish and Wildlife	Marion Mann	PSMFC**/Oregon Dept. of Fish and Wildlife
Sandy Rosenfield	Washington Dept. of Fish and Wildlife	Stephen Wischniowski	Old Dominion University

*National Oceanic Atmospheric Administration, National Marine Fisheries Service, Alaska Fisheries Science Center

**Pacific States Marine Fisheries Commission

APPROVAL OF PROPOSED AGENDA:

All participants approved the 2000 agenda proposed by the chair (Appendix 1)

MINUTES OF THE LAST CARE CONFERENCE (1998):

Copies of the last meeting's minutes were made available for participants, and they were approved.

UPDATE LIST OF THE SPECIES READ BY EACH AGENCY:

Copies of the age reading methodology and the species aged list were posted for the whole week (Appendix 2) for review and comments. The 1999 TSC report was set out for review as well.

Kris Munk asked that each person document what he or she did during the workshop at the scopes so that a report could be prepared at the end of the workshop. Kris placed a station schedule at the front of the room so people working on primary species of concern (Pacific Hake, Sablefish, Shortspined Thornyhead), and secondary species of concern (Pollock, Black rockfish, and Lingcod) could sign in for specific work times. There were plenty of additional stations for those involved in other species to work on as well. The suggested format of the workshop report was to include: Date, Species, Agencies, main concern and how it was dealt with, and amount of time spent at the task.

Working Group Reports:

STATUS OF THE AGE DETERMINATION MANUAL:

Shayne MacLellan (chair, Manual Working Group) had emailed to several people a copy of the updated manual.

The updated manual had sections added: birthdate, validation, and clearing of otoliths (Appendix 3, 4 & 5). Shayne showed the paragraph on validation so it could be reviewed. It is skeletal and she wants help fleshing it out.

The sections were dated so their history as a living document could be tracked.

The manual is on the website. Shayne asked for help coming up with a nice looking (professional) title page that will look good on the website. She also suggested discussing how to set up an easily downloaded, low-resolution version and also a high-resolution downloadable version for those who want a high quality hard copy.

Brenda Erwin suggested that the images should be a standard resolution and the monitor size set to 72dpi so the user won't have to scroll the image in order to see all of it. She asked for opinions on whether people wanted higher resolution images that were slower to download or lower resolution images that opened right up. She also asked if there was a preference between color or black and white images.

General discussion came to agree that the highest possible resolution was desirable in order to see the structures being discussed clearly.

Steve Wischniowski brought up the FBI (Fisheries Biological Investigations - age and growth lab from Woods Hole) website. Their images are small and low resolution on the actual website, but when you double click on them you download their high-resolution .tif files.

Brenda added that she liked that format; full document with small images in appropriate places, but clickable to bring up a high-resolution image if desired.

Shayne mentioned that she had a zip disk present with the entire manual including images on it, if anyone wanted to look at it, or make a copy of it.

Brenda mentioned that Liza (website support person at PSMFC) would be happy to work with us to incorporate whatever we decided on.

Shayne mentioned that we needed new line drawings for the figures in the manual. The originals had been copied so many times that they were getting sketchy in spots, and didn't come through well when scanned onto a computer. She is thinking about cleaning them up.

Bob Mikus offered to join the manual working group - the new group was decided at this point and it is Kristen Munk, Betty Goetz, Shayne MacLellan (chair), and Bob Mikus.

DISCUSSION OF THE GLOSSARY:

Kris Munk (chair, Glossary Working Group) mentioned that the glossary was completed (see Appendix 6). She asked that rather than have general discussion on terms and definitions, which took large amounts of time with lots of people involved, that any further updates be left just to the manual committee, with distribution of a draft to members for their comment. There was general agreement to this.

With completion of this task the Glossary working group is now subsumed to the Manual Working Group.

STATUS OF THE CARE WEBSITE:

Brenda Erwin (chair, Website Working Group) began the discussion on the CARE website. It is still under construction, she and the other members of the website working group haven't had much time to put into it. Joan Forsberg provided the logo, but Brenda hasn't put it up yet. She asked what the group wanted the website to be, a simple informational site or a question/answer forum for people with specific or general questions? If it became a forum for questions would we have to provide someone to be responsible for maintaining the forum, and if so, who? General discussion ensued about the pros and cons of a forum situation, with most present liking the idea in principle, but not being enthusiastic about offering to run it.

Betty Goetz asked what the URL for the website was.

Brenda gave it (www.psmfc.org/care) and mentioned that there was no direct link from the PSMFC website yet, that the "/care" has to be manually typed in to reach the CARE site.

Kris said that the TSC wanted a link from our site to theirs.

Brenda asked if we were agreed on investigating a forum type page?

Kris mentioned that the only fair way to run a forum page would be to have members take a rotating duty as forum moderator.

Brenda agreed, suggesting every 2 years to coincide with our workshops and officer elections.

Bob asked how often would the moderator have to check the forum in order to provide responses to questions in a reasonable amount of time?

Brenda said daily.

Kris suggested linking the forum to the moderators email account so that individual wouldn't actually have to go to the site to check on a daily basis.

General discussion ensued, during which someone asked why we needed a forum - why not just have a list of experts on individual species with their email addresses posted so people with questions could query them directly? The answer came back that the information provided was lost as soon as the question was answered, and that these questions and answers should be archived to provide future information - part of the "living document" idea associated with our ageing manual. It was also mentioned that all questions should be answered on the forum, not through individual emails, so that everyone could see both the question and the answer.

Sandy Rosenfield asked how long we had to keep these 'questions and answers' on file before our computers (whoever was moderator) got swamped with stored data?

Bob and others answered that after a given period of time all the data would get compressed and archived, either on a machine or a tape/disk.

Brenda asked if people wanted email and snailmail addresses linked to their names on the website.

Kris came back with an emphatic no.

Shayne thought that there should be links to us.

Kris suggested a hyperlink-with the summary of methodologies page that would take them to the person at an individual lab involved with the species in question.

Brenda said that Marion Mann had created a page that was not uploaded yet that was for interested people (non age readers), showing how to extract otoliths, and where to send them for ageing. In the general discussion that followed most people thought this was a neat idea, but some expressed concern at the potential for getting swamped with miscellaneous otoliths by overeager/enthusiastic fishermen (sport or commercial) that wanted to know the age of their big fish. Marion made the suggestion that a disclaimer could be put on the page indicating that this service was being offered only inasmuch as it didn't interfere with workloads - and that it might take some time to get the results back. General consensus was that it was a good idea, but needed the approval of lab managers before instigating.

A general discussion on how question/answer forums began. Craig Kastle said it sounded like a LOT of work. Bob suggested posting another disclaimer about how long it might take to get a response due to workload issues. Kris said that it began to sound like we would need to put a disclaimer on the whole website. Someone asked if we really needed a moderator? She thought that if we had links from the methodology page to each 'expert' we wouldn't need a moderator. People could pose their questions to the expert, it would go up on the forum and on the experts email, that person could respond on the forum once he/she knew there was a question waiting for them. Brenda said a moderator was necessary in any case to make sure that all questions posed were answered. Shayne commented that is was beginning to sound like a huge task, and wanted to discuss it some more - think about it. Kris suggested that perhaps someone would volunteer? Marion offered to try it for a few months. Cal Blood asked if PSMFC would/could do it? Brenda said she would ask them a huge list of questions and see if it will work - then she would ask for a volunteer to be the moderator. Kris asked if we could initially just make it available within the CARE group - just to see if/how it works? Steve suggested setting it up as a discussion group format rather than an open forum. Bob suggested making it a subscription list, similar to the one used by the Optimas Imaging company for their question/answer forum. John Sneva suggested asking the TSC if they could fund 1/4 FTE (Full Time Employee) to run this system. Kris said that the TSC might like this so they could participate more often in the ageing end of things. Someone suggested placing a hit counter on the forum site to help justify its existence (the more hits, the more justification for continuation). Brenda asked how long a test period we wanted - then suggested 2 years (until the next CARE workshop)? Betty said that she thought we could set up a forum in an hour using Listserv software. She said she might set it up for us, or at least be a resource for Brenda. She thinks that EGroups will handle it excellently. Cal asked if we could request the TSC to have PSMFC to fund this? Kris said they already are - through Liza. Brenda asked if Cal meant a dedicated person for the forum. Cal said yes. Kris said that she didn't think that would fly - we can do the recommendation so that it doesn't actually ask for a position though. Dan Kimura said, (for example - from an administrator's point of view), that he would like a

report from the moderator for the test period every couple of months on the amount of time spent moderating, and the amount of activity on the site. Shayne said that she thought the TSC would agree with an internal forum, but probably not an external (public) one. Bob asked Brenda to write up a summary of this discussion and a summary of her questions (to be asked of web people about the do-ability of the forum).

Discussion of a forum was tabled at this point and we went on to other topics.

Charlie Stock asked if we could put up age data sheets from all the different agencies on the website? Everyone liked this suggestion and it was asked that all labs get copies of their ageing forms to Brenda.

Shayne asked that there be examples of stuff like quality control from different labs put on the site as well. Kris asked if that wasn't in the manual. Shayne and others said that it should be added - maybe both in the manual and on the website. It was then said that examples of all general procedures (from each lab?) be included.

CHARTER COMMITTEE:

Kris Munk (chair Charter Working Group) said that in 1999 the TSC supported a proposal that CARE clarify its operation starting with a "proposed CARE Charter" which would be an offshoot of our original Terms of Reference (TOR). This Charter would be based upon the TOR and define protocols for age structure exchanges, terms of officers, etc. For example

- Who is a CARE member versus a participant
- How we go about selection of officers
- Member responsibilities
- Workshops: structure, summary, exchange protocols, when, how long, etc.
- Report format guidelines (exchanges, CARE, , etc.)
- Administrative document

Shayne said that this would be very useful. She has contacts around the world that are interested in the structure of CARE, and it would reflect well on us as an organization to have such documentation.

Steve mentioned that this is why he was present. This type of group (CARE) doesn't exist on the east coast, and he wanted to get one started back there.

Kris said it would basically be an expansion of the Terms of Reference. She also asked if we could post old CARE minutes to the CARE website. Brenda said yes, she could just scan them and post them. Kris asked that all old CARE documents (or copies) be sent to Brenda.

Kris said the Charter working group would continue to flesh out the new Charter, but she wants input from the group on the definitions of a "member" versus a "participant".

A general discussion of member vs. participant ensued. It was requested that we recommend to TSC to have an IPHC person as a CARE member (officially). The IPHC has long participated, but early on it was established that they were invited to participate, not members, because they do not hold a Canada-US Groundfish Committee TSC chair.

STRUCTURE EXCHANGES:

Brenda Erwin (vice-chair/coordinator Structure Exchanges) opened this topic by commenting that the vice-chair is now responsible for compiling all exchange information. Unfortunately, people didn't communicate with her with any results before the workshop, or before the TSC meeting. She wanted to know if the results should go on the webpage, and asked for people to give her an update on the status of both 1999 and 2000 exchanges.

Kris said that the current way of compiling the results only showed the status of the exchanges (what species involved and whether finished or not), and the TSC would really like to have it show things like average percent error, covariance, % agreement, etc.

Sandy said that she only wants this information available to CARE members. She is concerned that exchanges are too small to show reality, and are just for us to use as a check.

Dan said that Sandy was partly correct - the results of specific exchanges will look either too good or too bad. On the other hand, they can provide an indicator that is beneficial and if we trust the end users they should have the information.

Shayne said that we should make sure the limitations of a sample are noted clearly (ie: only one age group, or only one area, etc.).

Kris mentioned that most users are probably aware that they can't use small exchange data to cover the whole population. She also said that she'd like to get all of our past (historical) exchanges in this table as well (we need to get this information to Brenda or current vice-chair).

Bill Miller asked if all exchanges get reported. Kris said they should be. Bill asked about exchanges within a lab or office? Kris said probably not, unless.....well.....maybe..... but no. Shayne said that the TSC is really only interested in exchanges between agencies, Kris added or within an agency but between separate facilities. Also, only post exchange information involving people who production age that species. In summary~Within-lab testing should stay within-lab/agency, with results available if needed.

A general discussion involving types of exchanges, and why and who to include took place. There was still a big concern that people that don't understand statistics (for example: %agreement) will see and misunderstand them (and possibly misuse them).

Bill Miller asked what number of structures aged made a person a "production ager" for a given species? Kris threw out 1000. Bill asked for a formal definition. Kris said we'd work on it (glossary and/or charter working group?).

Darlene asked how many participants should be involved in an exchange, 2 or 3 only? Shayne agreed - each LAB should produce one age no matter how many production readers work on the sample.

John asked who should select the structures for an exchange; the assessment biologist we're working for? Kris said maybe - it will vary depending on the purpose of the exchange. Is it a scientifically tractable study, or an informal calibration exchange?

John asked if TSC requests the exchange who should pick them? Kris answered that if it's a special study then approval must come from a higher level, and that higher level should decide who picks the structures.

Marion asked if we should report exchanges involving species that no one production ages, and who should pick the samples?

Craig said that since it was apparent that there were many diverse opinions on the posting of this data the website should just have a brief report indicating the exchange went on, and giving a contact for more information. On our site have the what/where/why and contact (very little or no data).

Dan asked if we could just post raw data from exchanges? Interested parties can then download what they want and do what they want with it.

Darlene commented that all participants should get results as well as the exchange coordinator.

Brenda suggested a summary sheet annually; each year each lab gets a form from the coordinator which they fill out and send back in.

Kris said that the initiator of the exchange should inform the coordinator when a sample goes out and then follow up on it.

Topic was tabled. Break for lunch.

NEW BUSINESS:

Very brief discussion and resolution as to some standard uses:
Computer Standards:

Save things as Word 6.0/Win95
Save things as Excel 5.0/Win95

Precision Test Statistics:

Everyone uses same 'software' statistics, but the built in functions differ slightly. In the Charter the proper statistics should be specified (i.e.: use Chang, or Chilton and Beamish, etc).

A request on behalf of a NMFS researcher was presented to the group as a whole for collections of Pollock from 1960-1979. The researcher was wanting a time series of data using oxygen isotope (?). No one had a collection for the time period requested.

Nancy Roberson is working on a thesis involving a definitive preparation for Pacific Cod otoliths. The thesis is centered on sections - she is going to age a collection of otoliths from tagged fish. They are mounted in black technovit and sectioned, then aged using transmitted light.

Charles Hutchinson is hoping to work on Shortraker rockfish criteria, and also to validate the first few years of Pacific Ocean Perch, Northern rockfish and Dusky rockfish.

John Sneva asked if anyone measures the first few annuli, and if so do they enter it on data sheets, in database and what axis do they use? Betty and Kris both replied that when the annuli appear unusual they would measure them and note the measurements, often on an age data sheet, but do not otherwise enter them into a database. Kris said that measurements of the first few annuli should be documented on reference sets of otoliths, and changes should be noted over time.

Kris brought up the topic of Don Pearson's Sablefish paper. She wrote a letter to the authors (Don Pearson and Joe O'Malley), expressing concern over the conclusions drawn in the paper, and the way they were presented at the Western Groundfish Conference. Joe O'Malley has written a letter, which he sent to both CARE and Don, expressing his dissatisfaction with the paper, and his desire to be dis-associated with it entirely. Betty wondered if we should address this problem (people presenting/publishing documents that do not necessarily reflect the opinions/knowledge of the ageing community, yet appear to do so to the general public) in our charter some way? No conclusion was reached, but it was decided to formally ask Don if he would like to participate in future CARE forums and try to resolve the apparent disagreement..

Other Work:

Betty is working on Bering Sea Pollock. The question is one of correct identification. Are small Pollock, less than 20cm, really Pollock? Or are they Arctic Cod? Using otoliths she is trying to determine a morphological difference to aid in correct identification.

Brenda says that CDFG is trying to find funds to set up an aging lab specifically for nearshore rockfish.

Kris said that Moss Landing Marine Labs is working on several validation projects: Yelloweye and Blackgill rockfish will be radiometrically validated, and Cabezon is being validated using sectioning (no radiometric).

Marion talked about her upcoming work on Shortspine Thornyhead criteria. She will be comparing thin sections, baked thin sections, cut and burn, cut and bake and possibly some staining. Betty and Shayne said that they would both be working on SST soon as well.

John said that WDFW had re-aged all their archived samples of lingcod finray sections. It appears that they were probably overageing younger fish. Using tagged fish they developed their own criteria and matched up well with the Tiburon lab. They are using scales from tagged young fish to do a "sorta" validation (his term) and hopefully over time will get fish scales from the same fish for continuity in the study. Brenda asked if Tiburon lost funding to work on lingcod...would Washington like samples of small lingcod from California? John said maybe - he would ask Tom Jagielo to look into it.

Kris mentioned that she had noticed a difference in ageing error in lingcod based on sex (increased ageing error in female age interpretation over that in male age interpretation).

Shayne suggested revisiting the measurements for the first three annuli in lingcod.

MICROSCOPE DEMONSTRATION:

Jeff Strayer of Bartel's and Stout Inc. demonstrated new microscopes and cameras. Of primary interest was the increased zoom range available in dissecting scopes (1-12.5 is now common), and the greatly increased optical resolution. Cooled chip digital cameras with a resolution of 1500 X 1300 pixels also drew attention.

RECOMMENDATIONS

Progress on Recommendations between C.A.R.E. and the TSC

1998 Recommendations from CARE to TSC: April 28-30,1998

1998CT-01. CARE recommends an Internet web site be established within the proposed TSC web site on the PSMFC web site to improve the exchange of ideas and information between age readers. This site would also include the ageing manual.

1998CT-01response. Regarding the CARE request for an Internet web page: PSMFC is moving forward to establish a web page for TSC in 1998 which will include a section for CARE. 5/7/1998

1998CT-02. CARE recommends a permanent liaison be established between TSC and the current Chair of CARE to coordinate the exchange of recommendations between TSC and CARE. This position should come from existing membership of TSC (for example, assigning the AFSC representative to TSC to deliver recommendations to CARE, since the CARE meeting has always been held at AFSC). This coordination is particularly important in the year when CARE does not meet.

1998CT-02response. The TSC does not see the need for a permanent liaison between the two bodies. Formal communications will take place between the respective chairs in the form of prompt exchanges of recommendations. The chairs, in turn, will assure prompt dissemination of these recommendations among the members of their committee. 5/7/1998

1998CT-03. CARE recommends more emphasis be placed on age validation. Validation is still the forgotten age requirement. This may have to be accomplished at the expense of production age reading in the short term. Expert readers employed by the agency conducting the research should carry out validation.

1998CT-03response. The TSC supports the CARE's view that work on age validation should be emphasized and recognizes that this may impact the volume of production age reading. An assessment that would benefit most from age validation is shortspine thornyheads. 5/7/1998

1998CT-04. CARE recommends TSC review the Terms of Reference to include the study of other species important to the management agencies. We have seen a rise in the interest of a number of pelagic species in recent years. We respectfully ask that TSC clarify under the Membership and Officers section which "other groups" CARE may include at its conference. Should there be a distinction between participants and observers? (See Appendix 8. The Terms of Reference were last revised and adopted by TSC on June 19, 1986.)

1998CT-04response. After reviewing the CARE Terms of Reference, the TSC does not believe they need revision. The CARE is encouraged to use their discretion to resolve questions of membership and participation. 5/7/1998

1998 Recommendations from TSC to CARE May 5-7, 1998

The CARE raised several issues regarding communications between the TSC and CARE. The TSC responds as follows:

- a. (1998CT-02response)
- b. (1998CT-04response)

1998TC-01. In light of the increased importance of coastal pelagic fishery issues, the TSC recommends that the CARE include a coastal pelagics section in their age reading manual.

1998TC-01response. CARE requested and received permission from CDFG over 1 year ago to insert their existing age-reading methodology into the CARE Manual. Existing technical reports containing the methodology have yet to be received. No agency/age-reader dealing with these species were in attendance at the 2000 CARE workshop. 5/18/2000

1998TC-02. The TSC strongly recommends to CARE that they emphasize "hands-on" work with age structures at their meeting and minimize the number of scientific presentations if they are available at other venues. Given the large attendance at the 1998 CARE meeting, TSC also encourages holding annual CARE meetings which may facilitate increased participation in technical sessions.

1998TC-02response. (Cross-ref. 1998CC-01) CARE recognizes it must return to a more hands-on format. The new Chair of CARE will look into the feasibility of lengthening the conference to allow more time for age-readers to work with problems that can only be solved at the microscope. 4/30/1998

Overall workshop is increased by .5d, and with elimination of age-reading presentations provides a total of 2d for hands on. KMM 5/3/2000

A tremendous amount of effort is required in preparation for biennial workshops, and seriously impacts production reading schedules and other work. CARE members feel annual large-scale workshops would not be feasible, however, small species-specific workshops involving fewer readers may be of benefit for problematic species (for example a "Sablefish Workshop"). TSC members are encouraged to promote funding for these smaller workshops. 5/18/2000

1998TC-03. The TSC asks that the CARE submit a report to the TSC summarizing the results of any age reading exchanges initiated by CARE. The report should include any changes to criteria to be applied by age readers from the agencies involved.

1998TC-03response. In 1999 CARE developed a Structure Exchange table that documents between-agency exchanges and their results. This table was posted to the website to facilitate access by the TSC. 5/18/2000

1998TC-04. The TSC notes that recent lingcod and pacific hake exchanges found bias in ages compared between agencies. The TSC recommends that the CARE work to resolve these differences and report them to the TSC.

1998TC-04response. For hake, NMFS-AFSC and CDFO age readers examined otolith samples at the 1998 CARE Workshop, for age classes 5 & 6 that were of concern. The two readers re-examined a number of otoliths and agreed that over-ageing had occurred due to counting of checks in the vicinity of the 4th-5th years. It was recognized and agreed by both parties that otolith samples of the 1990's were generally less clear than those of the 1980's and that the presence of checks was more predominant. Another exchange of hake samples examined for the CARE 2000 Workshop indicated good overall agreement. There were a few cases where it was difficult to decide if a prominent check had formed in the 2nd year or if it was a small 2nd year. There was no bias in year class for this problem.(SEM) For lingcod fin rays, inter-agency bias in age estimates will be resolved primarily via a structure exchange to be initiated by WDF&G in the summer of 2000. Prior to the 2001 TSC meeting CARE will provide TSC with an analysis of the exchange, including a report on the development of measurement criteria. An addenda in the 1998 Lingcod Age Reading Exchange draft report will also be provided.(JS) 5/18/2000

1998 Recommendations from CARE to CARE April 28-30, 1998

1998CC-01. CARE recognizes it must return to a more hands-on format. The new Chair of CARE will look into the feasibility of lengthening the conference to allow more time for age-readers to work with problems that can only be solved at the microscope. (cross ref 1998TC-02)

1998CC-01response. The 2000 CARE Workshop was held May 16-18, 2000. All of May 16 was spent attending to CARE administrative matters (see 2000 CARE minutes). May 17 & 18 were spent working at five dual stereomicroscopes and two digital camera/monitor stations, resolving disagreement in recent age structure exchanges and/or rough-calibration in pattern interpretation. 5/18/2000

1999 Recommendations from TSC to CARE May 4-6, 1999

1999TC-01. Several species of groundfish are difficult to age and subject to drift in application of aging criteria and require routine calibration. Therefore, prior to the biennial CARE workshop, CARE should coordinate a formal exchange of structures among all production labs to assess precision for priority species. The first exchange should include sablefish, hake and lingcod. The TSC and CARE should review the species to be calibrated at their respective meetings.

1999TC-01response. CARE initiated exchanges for hake, lingcod finrays, and sablefish, with only the latter completed in time for resolution at the 2000 CARE Workshop (see structure exchange summary at C.A.R.E. website). CARE reviewed the list of species from the 1999 and 2000 TSC meetings and have no other species to add at this time. (cross ref. 98TC-04) 5/18/2000

2000 Recommendations from TSC to CARE May 9-11, 2000

2000TC-01. The TSC recognizes substantial time is required to complete self-assessments through interagency age-structure exchanges. These assessments provide valuable information to our processes; the TSC encourages C.A.R.E. to complete these exchanges in a timely manner.

2000TC-01response. CARE recognizes the TSC benefits from these exchanges, and will work to complete them as production schedules and/or supervisory influences allow. 5/18/2000

2000 Recommendations from C.A.R.E. to TSC May 16-18, 2000

2000CT-01. CARE would like to investigate setting up of an email discussion list, "e-group", to facilitate and broadly disseminate common age-reading questions and solutions. Will the TSC support this effort in assuring technical assistance from the PSMFC webmaster, and, would the TSC like to be subscribers to this discussion list?

2000 Recommendation from CARE to CARE May 16-18, 2000

2000CC-01. CARE will pursue test development and use of an interactive email discussion list, "e-group", for a period of 2 years, after which time they will evaluate its efficacy for exchange and documentation of age-reading problems and solutions. If the e- group is found to be inadequate, an electronic forum will be investigated. It is CARE's intention and resolve that only 1 of these exchange media be undertaken in order to minimize the work of maintaining such a forum while maximizing the exchange of information.

2000CC-02. CARE will continue to develop protocol regarding age-structure exchanges and identify this in the CARE Charter. This will clarify procedures in sample storage, handling, turnaround time, calculation of precision and standardization of certain precision terms and formulae, resolution, exchange summarization, etc, which all CARE members should follow.

HANDS ON WORKSHOP – MULTI AGENCY/READERS/SPECIES

CDFO, NMFS, ODFW, WDFW, ADFG attendees, and Bartels and Stout, Inc brought equipment to the CARE workshop, enabling seven workstations, including: 5 dual observation scopes (“teaching scopes”), 1 single stereomicroscope, and 1 stereomicroscope plus tv/computer monitor with image software.

WRAP UP SESSION

Nominations of officers for CARE Conference 2000

The following people graciously offered to fill the indicated positions for the next term, and all were approved by the assembly.

Chair: Brenda Erwin/CDFG

Vice Chair: Delsa Anderl/NMFS

Secretary: Christine Schmale/ADFG)

End Of Session - 2000

Appendix 2

COMMITTEE OF AGE-READING EXPERTS

A Subcommittee of the Technical Subcommittee of the Canada-USA Groundfish Committee

DRAFT

2002 Biennial Meeting Agenda

April 23 – 25, 2002

NOAA-NMFS AK Fisheries Science Center, Sand Pt. Lab

Seattle, Washington

TUESDAY 4/23/2000

8:20am Assembly

- I. Non-agenda Announcements, Introductions, Attendance,
- II. Approval of Agenda
- III. Approval of 2000 Minutes
- IV. Non-assembly Work, assignment
 - Summary of Age-reading Methodology updates;
 - CARE Address/Email list updates;
 - Update software standards
- V. Working Group reports
 - Manual/Glossary (MacLellan, Goetz, Munk, Mikus)
 - Web (Mann, Anderl, Blaisdell, Erwin, others???)
 - Charter (Munk, Goetz, MacLellan)
- VI. Structure Exchanges
- VII. New Business
 - Development of an Age Database (MacLellan)
 - Change CARE's biannual schedule?
- VIII. Recommendations TSC <> C.A.R.E.
 - 2001 Recommendations from TSC to C.A.R.E.
 - 2002 Recommendations from C.A.R.E. to TSC
- IX. Thin-section Presentation (Hutchinson)
- X. C.A.R.E. Administration: Election of Officers 2002-2004
 - 2002-2004 Chairperson (nominees: vice chair 2000-2002 Delsa Anderl)
 - 2002-2004 Vice chair/Age Structure Exchange Coord. (nominees: ?)
 - 2002-2004 Secretary/Rapporteur (nominees: ?)

Adjourn to Scope-work

5:00pm Adjourn for the day

WEDNESDAY 4/24/2002

8:00am Begin scope work

8:30am Thin-section demonstration for those interested.

10:00-10:20 Convenience Break

12:00-1:15 Lunch Break

3:00-3:15 Convenience Break

5:00pm End scope-work

Thursday 4/25/2002

8:00am Begin scope work

3:00pm End scope-work

10:00-10:20 Convenience Break

12:00-1:15 Lunch Break

3:00-3:15 Convenience Break

3:15-5:00pm Late meeting assembly/summary (if needed)

