C.A.R.E. MEETING MINUTES APRIL 21-23, 2009

SAND POINT, SEATTLE, WA

TRAYNOR ROOM

Tuesday, April 21

I. CALL TO ORDER: Shayne MacLellan, (CDFO) CARE chairperson, called the meeting to order at 8:30 am, April 21, 2009 at the NMFS Sandpoint facility, in the Traynor Room, Seattle WA. MacLellan welcomed everyone to the meeting. She passed out copies of the agenda and the minutes from the last meeting which was held in 2008 in Nanaimo, BC.

II. Host Statement: Host Delsa Anderl (NOAA-AFSC) went over the safety information for the NOAA facility. She then spoke about Dr. Dan Kimura (NOAA-AFSC) retiring in January 2009. She introduced Dr. Dan Ito as the interim replacement for Kimura. He welcomed the CARE members and stated that they are an integral part of the ecosystem mission, specifically age and growth. Anderl said that the position has since been permanently filled by Dr. Tom Helser.

III. Introductions: Participants went around the room and introduced themselves stating which agency they worked for. This information can be found in Table 1. Participants also contributed how long they had worked for their agency and some of the species they have aged.

IV. Approval of 2009 Agenda: approved (Appendix 1)

V. Working Group Reports:

1. TSC meeting/2008 CARE report: by Kris Munk (ADFG). Munk attended the Technical Sub Committee Meeting in Seattle, May 6-7, 2008. She reported that all agencies present at CARE were represented as well as a California constituent. As the CARE representative, Munk prepared and submitted the 2007 CARE report to the TSC as well as summary of the 2008 CARE workshop. There were no TSC to CARE recommendations.

2. CARE manual: This update was provided by Betty Kamikawa (NWFSC). Kamikawa said that there hadn't been much activity by this working group since the last meeting in 2008. She suggested an update to the manual covering ageing techniques for hake, sablefish, Dover sole and maybe sardine. She also stated a need for QA/QC and basic statistics in the manual. MacLellan suggested that Kamikawa get together with the rest of her committee to work on these ideas and report back at the end of the CARE workshop.

3. Age structure exchanges: This update was provided by vice-chair Sandra Rosenfield (WDFW). She stated that there were 4 Sablefish, 2 Hake and 2 Pacific Cod exchanges. These exchanges were still in progress.

4. Charter Committee: This update was provided by Kris Munk. Munk said that during the past year the Charter Committee had convened and had updated the Charter. The one major thing they had done was to add a "CASE Invoice Protocol". The committee also added an "Edit Log". Munk said that the Charter should be reviewed by all CARE members and that suggestions and approval would occur by the end of the CARE workshop. New suggestions by Munk included a completed report to the TSC and a

report on how to do the minutes. She would also like to see a link from the agency that originates an exchange to the Age Structure Exchange Case Invoices on the website. MacLellan said that she would like the incomplete information on the invoices filled in. She would also like to see CASE forms updated. This information should be forwarded to Rosenfield, vice-chair, within a month of this meeting. Start with present exchanges and work backwards to 2006.

5. **Website**: Update was given by Jon Short (NOAA-AFCS). His comments were that the website was coming along nicely. The 2008 minutes were up but they needed to be approved. The production numbers for each agency and the methods used for ageing had been added as well. The CARE web forum has been launched. Nikki Atkins (NWFSC) is the content manager and Short is the tech manager. MacLellan stated that some things are missing from the website. She would like the exchange table updated. Also, she said that the working groups and charter group were lacking in content and an index for the charter would be helpful. This was also to be discussed under Topics for Discussion #2a. MacLellan asked Atkins to write up options of how to report the missing information on the website. This information is to be provided at the end of the workshop. Short continued his update by saying that CARE members have a 3 year period to evaluate the Care website forum. He also encouraged the members to check the Care website forum weekly and respond to questions that were posted.

6. Forum: Update provided by Atkins. She suggested we all use the email at the website to contact other CARE members or to relay announcements either instead of or along with regular agency email. The CARE website is care.psmfc.org. Atkins went on to say that she checks into the forum on a regular basis. Members can post photos, files or questions. MacLellan asked Atkins to put together an example of how the forum works. The forum is still in the test phase and she is waiting to see if it is used at all. Darlene Gillespie (CDFO) asked how long before Atkins would respond to a question. Atkins said it took a couple of days to a week to respond. She suggested that the forum be used by CARE members only.

VI. CARE Recommendations:

1. **2008 CARE to CARE status**:
    a. **2008CC-01**: Move CARE meetings to odd years beginning 2009-approved and completed.
    b. **2008CC-02**: Add disclaimer & citation info to CARE website- There is a draft of a disclaimer but nothing is on the website. The CARE members voted in 2008 to add a disclaimer and a citation which would be updated on the website. Short said he would look into it. The draft is in the 2008 minutes.
    c. **2008CC-03**: A trial CARE forum was created. CARE members need to login to the website to see if this is a good idea. Goetz suggested CARE members check the forum daily.
    d. **2008CC-04**: The approval of CARE minutes via email was a success. A copy of the CARE minutes is on the website.
2. **New for CARE 2011**: Munk suggested a link for the officers and the charter so when you look at the chair on the website it is linked to the charter which outlines specific duties. Also, somewhere on the site there should be recognition of working groups.

Break

VII. Ageing Labs Overview and Update by Agency:

1. ADFG: Summary provided by Kris Munk. The ADFG has 4 age reading sites: 3 regional offices, 2 which are in Homer and 1 in Kodiak and the statewide office in Juneau. One of the Homer sites is Sport Fish division which ages sport caught groundfish. The remaining age sites are commercial Fish Division and these age samples are caught in commercial or research fisheries. Statewide in 2008 over 11,000 ages were produced. These ages came from over 15 different species of groundfish. Sablefish dominate the ageing for all offices. These ages comprised 71% of the data produced. In addition and related to these age data, over 20,000 age

structures were measured. These measurements are used for age related studies. Other studies that ADFG are conducting include age structure comparisons with lingcod (Dunne) and bomb radiocarbon age validations. Recent radiocarbon work has revealed a new maximum age for *Sebastes melanops* (black rockfish) to 56 years old. Ongoing radiocarbon studies now include data for 15 species of groundfish. Another ongoing study is investigating regional differences in radiocarbon around Alaska. Also they are in the process of extending the radiocarbon curves for *Sebastes ruberrimus* (yelloweye) and *Sebastes maliger* (quillback).

2. WDFW: Lance Campbell summarized the agency's activities since the last CARE meeting. WDFW has 2 groundfish age readers. They age a range of species including many different species of rockfish (~3000 samples), pacific sardine (~2000 samples), lingcod (7500 samples), petrale sole (~2800 samples) and spiny dogfish (~350 samples). Campbell's position includes the ageing of salmon scales. He's interested to find out during the workshop how other agencies store their structures for the long-term. MacLellan agrees that this topic is important and it will be covered in the workshop during VIII (topics for discussion). It is also mentioned that WDFW will be starting to age a large sample of Pacific Ocean Perch otoliths which contains samples dating back to the late 1970's.

3. AFSC: Betty Goetz outlines her agency's update. AFSC has 12 employees including a program leader, 2 team leaders, a website/data manager, 2 researchers and 6 age readers. She reiterates that Dr. Dan Kimura retired in January 2009 and the new Program Leader will be Dr. Tom Helser (May 2009). Production ageing for her agency in 2008 includes approximately 30,500 ages. There are 12 species that AFSC is currently evaluating for production ageing and/or non-commercial ageing. Greenland turbot and Shortraker rockfish are species that are being checked for criteria. Another project includes the development of an Age and Growth Manual which should have an initial draft date of 5/5/2009. The editing of this manual is being done by Beth Matta. Craig Kastelle (AFSC) does the radiocarbon bomb validation work for the agency. In other business, AFSC will be moving to glycerine/thymol, instead of ethanol as an otolith preservation medium for all survey and fishery samples for the 2009 field season.

4. ODFW: This update was presented by Josie Thompson. She reported that the agency has 2 agers (one works ½ time) and they produced ages for ~4000 structures. The group has been ageing Kelp Greenling and Cabezon. A method for breaking and baking the greenling otolith has been used with good results. A reference collection of images from greenling otolith has been assembled. Cabezon sport samples will be thin sectioned for upcoming ageing. Thin sectioning will be contracted out. Other projects ongoing include an Aurora rockfish chronology and maturity study and a black rockfish growth comparison with un-aged California otolith. Thomspon also stated that her lab has storage issues with their archived samples. New business includes the purchase of a new polarizing light source for the microscope and the examination of using hagfish teeth as a potential ageing structure.

5. NWFSC: Patrick McDonald provided this agency's update. In 2008, the lab lost one ager and replaced her with Louise Taylor. The unit has 4 full time ageing technicians along with McDonald's position which is ½ time ager and part time supervisor. Since the last CARE workshop last spring the agency has moved their storage unit out of the tsunami zone. This storage unit houses otoliths from the NWFSC surveys, hake bycatch samples and some California and Washington commercial samples. The lab production aged the following species: Pacific Hake, petrale sole, POP and darkblotched rockfish. New species included splitnose rockfish and greenstriped rockfish. In order to age these new species, the lab developed criteria and gathered measurement data on the juvenile years to assist in the ageing efforts. Other notes of interest were that NWFSC personnel participated in the 2008 Western Groundfish Conference in Santa Cruz, CA and the lab did exchanges with both the SWFSC for splitnose and with CDFO for Pacific Hake.

6. California- No presentation.

7. IPHC: Joan Forsberg and Wischniowski shared the update for their agency. The IPHC ages only halibut otoliths. Forsberg spoke first saying that 98% of the ageing done by their 4 age readers' is production ageing. The halibut aged were broken down into 5 groups: Commercial samples account for about 15,000 otoliths a year, setline survey samples also account for about 15,000 a year, NMFS trawl survey comprises 2,000-5,000 otoliths, approximately 4,000 otoliths come from ADFG sport samples, and finally, about 500 otoliths per year are collected from recovered tagged fish. She stated that her agency uses tray biens for storing their otoliths which have been cleared in a glycerin/thymol solution. Forsberg says that 90% of the halibut ages are released before they have 2nd ages completed. Wischniowski then reported on the research the agency has been working on. First, there is a juvenile study involving small halibut <30mm to determine the first, second and third years of winter growth zones to determine the rate of change of otoliths growth in degrees of latitude. In addition, checks on these otoliths are being measured to determine if localized conditions can be used as a geographical marker to ID these halibut to location of origin. Next, he spoke of a juvenile laser ablation project to determine if there is chemical difference between true annuli and checks. Initial studies have indicated that increased levels of SR88 in a hyaline zone maybe indicative of a true annulus. The third ongoing project involves an edge type deposition study that will determine what time of year in relation to increasing latitude does annulus deposition occur as well as where on the otolith's annulus deposition first occurs which will help to define edge code. Upcoming projects include a Bering Sea Bomb Radiocarbon Curve Project (to aid in validation studies of fish species in this body of water) as well as a Daily Growth MIA Project (which will investigate the amount of time larval halibut spend in the water column before settlement). In the future the IPHC would like to do more bomb carbon projects on halibut.

8. MLML: did not send a representative to CARE workshop.

9. CDFO: MacLellan summarized her agency's update. Staffing has remained unchanged since 2008 which includes 10 staff, 9 of which are agers. Events hosted since the last CARE workshop included a Centennial 5 day Open House in April 2008 and the ICES Redfish Ageing workshop in September 2008. Ongoing projects on geoduck include using C14 in geoduck to compare to cross-dating, establishing cross-dating as a tool that improved accuracy and precision of age data and initiated "dead shell" study to extend chronologies back in time and to add to historical age data set/set stock assessment. Another project is to assess cross-dating as a tool for production ageing rockfish using yelloweye otoliths.

VIII. Topics for Discussion/New Business

1. Symposiums/Conferences since CARE 2008 and upcoming:

a. **ICES Workshop for Age Determination of Redfish** by MacLellan which was held Sept 2-5, 2008 and was hosted by Canada. The International Council for Exploration of the Sea included seven labs that exchanged images of thin-sectioned samples. During the workshop these images were projected onto a screen and this was an excellent way for the group to discuss the images.

b. **CARE presentation at IOS 2009 Monterey, CA**. The International Otolith Symposium has asked for a representative from CARE to attend the conference. It could be either an oral presentation or a poster or both. MacLellan asked for ideas for topics and which method would be best suited for conveying the message of CARE. Omar Rodriguez (NWFSC) suggests that the content of the material should include what CARE is about, which species are aged, how CARE has evolved and how we contribute to the ageing community. MacLellan notes that the abstract for the conference was due in March but the organizers extended the deadline for our submission. MacLellan suggested that this should be discussed by a working group during this workshop. Josie Thompson (ODFW) agrees to lead the working group with Rodriguez (NWFSC), Robert Tobin (IPHC) and Gillespie (CDFO).

c. **Other conferences** upcoming are the radiocarbon conference from May31-June 5, 2009 in Hawaii. Munk will have a poster at the radiocarbon conference.

2. Topics for Discussion:

a. CARE Website: MacLellan started the discussion on how to better define working groups, roles, purpose and activities in the Charter. These ideas are buried in the Charter and need to be easier to get to. Also, CARE working groups are not addressed in the Charter. Overall, the website Charter could be more informative and easier to use. Short said that we already have a clear structure of the Charter; he agrees to return on Thursday with revisions. Sonya El Mejjati (ADFG) agrees to join the website committee with Short and Atkins and to help work on addressing these issues. Darlene Gillespie (CDFO) thinks that the website should outline the members of the workgroups.
b. Steve Wischniowski (IPHC) led the discussion on how to establish a CARE protocol for dealing with old samples. He goes on to say that IPHC have found non-halibut samples from the 1960's. Since his agency doesn't age non-halibut species, he is unsure how to handle requests for these samples. He is looking for feedback from the CARE members and maybe start a working group to develop guidelines for archived samples. MacLellan starts the discussion by asking what the samples would be used for. Would the otoliths be used for carbon dating (which would destroy the otoliths) or would they be used for ageing (which would leave the otoliths intact)? CDFO uses common sense protocols which they have developed for ageing requests. Munk adds that ADFG determines whether the request is from an outside group, (which they would use more strict and formal guidelines) or a request from users inside their agency (which would be treated as a top priority). Kastelle agrees with Munk's protocol. He states that IPHC ages only one species where NMFS ages multi species. Wischniowski suggests photographing the samples before releasing them to an outside group. MacLellan sets up parameters for the working group. She would like them to set up guidelines specifically for IPHC's situation with the 1960's collection as well as accumulate ideas for different agencies protocols. The working group consists of Munk, McDonald, Wischniowski and Kastelle.
c. Wischniowski led the discussion on the use of digitized otolith reference sets. IPHC is interested in digitizing a reference set but feels they need a standardized method for the photos. He is curious if any other agency had a reference set of photos. Anderl states that she has a random collection of structures by species and she uses the photos for training purposes. One problem that Anderl has with the digitized photos is the lighting of the structure. Manipulation of the light is necessary to different areas of the otolith to see all of the otolith from different angles. Multiple images may be required and then stitched together to get the best overall image of the otolith. She states that Short came up with this new method. Atkins suggests using a black and white photo that makes the image cleaner. Rodriguez comments that CS3 does the image stitching for you. Short says that he uses CS3. Munk states that the person taking the image must outline the parameters that were used to manipulate the image. Kastelle comments that journals require you to state which filters you used so that the image can be reproduced. MacLellan suggests that a presentation from a professional company in 2011 may be a good idea. It is suggested that someone contact the Bartells and Stout representative to do a presentation on photo imaging and how to get the best photo image for photo archiving. Anderl volunteers to be in charge of setting this up for the 2011 CARE workshop.
d. McDonald leads the discussion on the need for standard age reader ID that could be used in the state/federal/provincial databases. Munk states that her agency uses unique reader ID's: initial, initial, last name. Goetz comments that their agency has no unique reader codes, they use a one letter code. Thompson suggests that ODFW, WDFW and NWFSC standardize their reader ID's since we use the same database (BDS). Munk agrees. Short comments that he recycles the letter and matches it up with a person. Munk uses a drop down box method. Thompson asks if this is a PACFIN issue. MacLellan states that this is a CARE issue but it could be handled outside of CARE. MacLellan reiterates that this issue can be addressed outside of CARE.

Break for lunch

IX. Scientific Presentations

1. **Known-age Sablefish research** was presented by Delsa Anderl from the AFSC. Since the 1980's, the AFSC has aged about 48,000 sablefish. The agency usually has 2 agers that are experienced at ageing

sablefish. The reader protocol for their lab is that the reader ages 100% of the sample while a tester ages 20% of the sample. Discrepancies are resolved between reader and tester. The Known-age Sablefish Study consists of two study groups. The Known-age I group study was conducted using 2 readers ageing a sample of 140 sablefish otoliths. This sample contained 49 known- age otoliths. The fish had been at liberty for 1-8 years and the sample had an age range of 2-38 years. The Known-age II group was conducted using 3 age readers ageing 334 samples. 171 of these samples were recaptured known-age otoliths. They had been at liberty for 0-20 years and had an age range of 1-47 years. One reader was involved in both studies. Results were presented for known-age I and reader agreements, known-age II and reader agreements, and reader I drift after 10 years in table and graph formats. Anderl concluded that sablefish are difficult to age because of broad, checky early years, edge type problems, the lumping vs. splitting dilemma and other morphological considerations. She then showed slides of different sablefish otoliths, the good, the bad and the ugly to illustrate these problems.

2. **Ad Hoc Sablefish group results** were presented by Munk. The Sablefish Age Readers Ad hoc working group was a reworking of the previous attempt at a Sablefish age readers workshop that was to happen in 2007; it never did. The goals which this working group outlined in the agenda developed April 2008 were:
   1. Document and report current age-reading standards with a comprehensive age structure exchange
   2. Calibrate interpretation of sablefish patterns
   3. Document and report size differences for up to age-1y (1+June) sablefish stocks from north to south

   Group results are incomplete at this time. Beginning with goal #3, 4 agencies (ADFG, CDFO, AFSC and NWFSC) submitted known-age sablefish to ADFG for measuring of these structures. Comparisons of these data are in progress. We are doing this exercise to look at the differences in size between areas; key in this is the presumed known-age size. For goal #1, this past winter we undertook a comprehensive age structure exchange. Each agency submitted 20-24 specimens, round robin, to other agencies. At least 5 specimens in each sample were heavily imaged with each agency marking the annuli on the image referencing the specimen. Each agency then collated annotations which will be discussed at the 2009 CARE workshop. Work that is still needed before this goal is achieved is the assessment of precision results. Goal #2 specifies calibration work which will be accomplished at the 2009 CARE workshop.

Past working group lead (2005-2008) Munk was replaced by MacLellan effective January 2009.

3. **Lingcod fin/otolith comparison** by Willy Dunne (ADFG). Dunne's study is a comparison of fin rays and otoliths for age estimation of lingcod. He states that the lingcod fin ray has historically been the standard structure used for age determination. He outlines 2 examples of why fin rays are problematic. First, it is very time consuming thus expensive to prepare lingcod fins for ageing. There is also "resorption" of the early annuli that result in poor age estimations. Otoliths on the other hand require significantly less preparation time and don't have "resorption" of the annuli during the early years of life. Dunne also states that ling cod fin rays have been validated but otoliths have not. The study's results include the age comparison of fin rays vs. otoliths from 380 samples from 2008, the results of a 2008 lingcod fin ray precision test using 109 samples and a 2008 ling cod otoliths precision test using 198 otolith samples. Also included was a length at age graph (otoliths vs. fin ray) and a 2008 lingcod fin ray vs. otolith age frequency distribution graph. Dunne outlines the future work that will be done which includes expanding the collection with samples from the 2009 season, measuring otoliths of 0, 1 and 2 year old ling cod and examining differences in patterns based on geographic location. He would like to have an exchange between different labs and have biometric support and analysis.

4. **Overview of recent research at AFSC** by Craig Kastelle –Rex Sole- Growth vs. area study-regional growth differences between rex sole from the eastern and western sides of the Gulf of Alaska are being investigated. Bomb Radiocarbon of Dover sole was outlined and found to exhibit a bit of a phase shift compared to the halibut reference curve. This is thought to be based on the sampling methods. Also discussed findings of shortraker rockfish bomb radiocarbon results.

5. **Automating image cataloging &photo-merging using Excel macros and Photoshop** presented by Short. This presentation started with Short explaining the different types of metadata. Examples of external sources are photo organizing databases or sidecar files. Internal sources are EXIF, TIFF, Windows, Dublin core, XMP and IPTC. AFSC has taken ~20,000 pictures, 160 GB of images using JPG, TIF and PSD. Labeling of the metadata for these samples includes biological data, otolith characteristics and growth patterns. AFSC noticed that they had similar data, serially named images and data that already exist in the database which results in the perfect conditions for automation of an image catalogue. Goals for the agency are to make entering the metadata easy, batch processing large groups of photos, being able to search images by biological and catch data, embedding metadata into images and being able to merge photos. In order to attain these goals, Short says they used Excel 2003, Visual Basic 6.5 (what comes with Excel), Photoshop CS3 (not Elements) and ExtendScript Toolkit 2 (comes with Photoshop). In the future, Short would like to automate metadata into photo organizer using Extensis Portfolio and to use Microsoft Access instead of Excel.

Break

X. Working Groups- groups meet, discuss and formulate written recommendations throughout the rest of the workshop. Prepare electronically for Thursday mornings workshop.

XI. Hands-on Workshop

Wednesday, April 22

XII. Hands-on Workshop

a. Sablefish focus group mini-workshop (mini-agenda Appendix 2)
b. All other species –Traynor Room

XIII. Demonstration: Isomet 5000 saw with Short during Wednesday afternoon.

Thursday, April 23

XIV. Concluding CARE Business

A. Recommendations CARE to CARE 2009

1. Members will check CARE forum on a regular basis to continue trial assessing the usefulness of the forum. Post general CARE announcements and emails to the forum for the membership's information. Also, will look into a method of letting members know when an email or new updates have occurred.
2. Proposed focus for the 2011 CARE meeting: Digital imaging is a useful tool for documenting methodologies as well as for cataloging and sharing images for the purpose of structure exchanges. Review and discuss optimal use of digital imaging technology for age readers. Topics of interest include equipment, software, and image acquisition/storage, processing, and cataloging. Industry reps would be a benefit to present equipment and software.
3. Submit CARE poster abstract to the International Otolith Symposium to be held later in 2009. Gillespie reads the abstract that the working group has drafted during the workshop. All members agree to the abstract and Gillespie agrees to follow up on the abstract as well as the poster presentation.
4. This includes Charter additions or changes to the website. Activity should include the addition of the latest Charter updates, revision of the Charter introduction on the web page to clarify contents and to add links to sections, and to add in a working group section to highlight the purpose and current activities with a link to a past achievements "archive".

5. Work towards posting all CASE invoices from current and historical structure exchanges as PDF's on website by linking each to respective line on the Exchange Table.
6. We recommend that CARE review the current CARE manual and that any changes or updates be submitted to the CARE Manual Committee lead (Kamikawa) by April 2010. Specifically, we wish to complete or initiate sections on hake, lingcod otoliths, skates, halibut, quality assurance and age validation techniques and increase resolution to the existing rockfish ageing section. The Manual Committee will submit all changes and updates to CARE for consideration at the 2011 CARE workshop. In addition, we recommend that the CARE Manual Committee review and update the CARE manual at least once every 3rd workshop. Kamikawa announces that Munk is leaving her position with the Manual Committee and a replacement is needed. Louise Taylor (NWFSC) volunteers to replace Munk.
7. Aimed at the Sablefish ad hoc working group: Activities include conducting an exchange of AFSC known-age samples to test the lessons learned from the 2009 CARE workshop. Since the members were able to complete only half the agenda at the workshop, explore the possibility of meeting again in 2010 to complete the CARE 2009 mini-workshop agenda.

B. Other activities were finalized.
C. Administration nominations for 2011 CARE workshop. There are none needed since the meeting of the CARE workshops is in odd years. The officers' positions remain the same.
D. Schedule and location of 2011 meeting will be at the NMFS Sand Point Facility in Seattle, WA.
E. Closing comments include thanking Anderl and the other AFSC employees for their hospitality and use of their facility.

XV. Continue Hands-on Microscope Work

Table 1: Attendees

Atendee	Agency	City, State/Provence
Kris Munk	ADFG	Juneau, Alaska
Jodi Neil	ADFG	Juneau, Alaska
Sonya El Mejjati	ADFG	Kodiak, Alaska
Willy Dunne	ADFG	Homer, Alaska
Elisa Russ	ADFG	Homer, Alaska
Delsa Anderl	AFSC	Seattle, Washington
Betty Goetz	AFSC	Seattle, Washington
Craig Kastelle	AFSC	Seattle, Washington
Jon Short	AFSC	Seattle, Washington
Irina Benson	AFSC	Seattle, Washington
Charles Hutchinson	AFSC	Seattle, Washington
Chris Gburski	AFSC	Seattle, Washington
Charlie Piston	AFSC	Seattle, Washington
Chris Johnston	AFSC	Seattle, Washington
John Brogan	AFSC	Seattle, Washington
Beth Matta	AFSC	Seattle, Washington
Barb Campbell	CDFO	Nanaimo, British Columbia
Karen Charles	CDFO	Nanaimo, British Columbia
Darlene Gillespie	CDFO	Nanaimo, British Columbia
Shayne MacLellan	CDFO	Nanaimo, British Columbia
Cal Blood	Ret.	Seattle, Washington
Steve Wischniowski	IPHC	Seattle, Washington
Joan Forsberg	IPHC	Seattle, Washington
Linda Gibbs	IPHC	Seattle, Washington
Robert Tobin	IPHC	Seattle, Washington
Nikki Atkins	NWFSC	Newport, Oregon
Betty Kamikawa	NWFSC	Newport, Oregon
Patrick McDonald	NWFSC	Newport, Oregon
Omar Rodriguez	NWFSC	Newport, Oregon
Louise (Lou) Taylor	NWFSC	Newport, Oregon
Jenny McDaniel	SWFSC	La Jolla, California
Sandy Rosenfield	WDFW	Olympia, Washington
Jennifer Topping	WDFW	Olympia, Washington
Lance Campbell	WDFW	Olympia, Washington
Lucinda Morrow	WDFW	Olympia, Washington
Josie Thompson	ODFW	Newport, Oregon

Appendix 1

C.A.R.E. Agenda

(Committee of Age Reading Experts)

Canada-US Groundfish Committee

April 21-23, 2009

Sand Point, Seattle, WA, USA

Traynor Room

Tuesday, 21 April

I. Call to Order [8:30 am] – Shayne MacLellan (Chair)

II. Host Statement

1. Welcome statements (Dan Ito)
2. Host info: safety/security orientation, social, t-shirts etc (Delsa Anderl)

III. Introductions

1. Round-table intros (name, agency, location)
2. Attendance, address, phone, email sheet – electronic on dedicated laptop

IV. Approval of 2009 Agenda

V. Working Group Reports [9 -9:30 am] Activity since CARE 2008 & initiate discussion for future activities (5 min each). Can discuss further through out meeting & resolve Thursday am.

1. TSC Meeting/2008 CARE report (Kris Munk)
2. CARE Manual (Betty Kamikawa)
3. Age Structure Exchanges (Vice Chair: Sandy Rosenfield)
4. Charter Committee (Kris)
5. Website (Jon Short)
6. Forum (Nikki Atkins)

VI. **CARE recommendations**: [9:30 – 10 am]

1. 2008 CARE to CARE status
a. 2008CC-01: Move CARE meetings to odd years beginning 2009.
b. 2008CC-02: Add disclaimer & citation info to CARE website.
c. 2008CC-03: Create trial CARE forum.
d. 2008CC-04: Approval of CARE meeting minutes via email.
2. New for CARE 2011? Can craft through out meeting.

---Break --- 10– 10:15 am ---

VII. Agency reports [10:15-10:45 am] ~3 min each – no PPT please (bring electronic version for secretary). Brief update (staffing, organizational, new species/projects)

1. ADFG – (Kris summarize all sites)
2. WDFW – (Lance Campbell)
3. AFSC – (Betty Goetz)
4. ODFW – (Josie Thompson)
5. NWFSC-PSMFC (Patrick McDonald)
6. California – (?)
7. IPHC (Joan Forsberg)
8. MLML (?)
9. CDFO (Shayne)

VIII. Topics for Discussion/New Business [10:45 am – noon]

1. Symposia/Conferences since CARE 2008 & upcoming:
    a. ICES Workshop for Age Determination of Redfish (Shayne) 5 min
    b. CARE presentation at IOS 2009 Monterey (Shayne) 15 min
    c. Other conferences
2. Topics:
    a. Defining working groups, roles, purpose & activities. Right now some are buried in Charter & others nowhere – post more obviously on website to see accomplishments? (Shayne) 10 min
    b. IPHC non-halibut 1960's samples (Steve Wischniowski) 10 min
    c. Use of digitized otolith reference sets (Steve) & agency protocols for outside use of archival samples 10 min
    d. Need for standard age reader ID that could be used in the state/federal/provincial(?) databases (Patrick McDonald) 10 min
    e. Non-agenda items

--- Lunch --- noon -1 p.m. ---

IX. Scientific Presentations 10 min each [1 -2 pm]

1. Known-age sablefish research (Delsa)
2. Ad Hoc Sablefish group results (Kris)
3. Lingcod fin/otolith comparison (Willy Dunne)
4. Overview of recent research at AFSC (Craig Kastelle)

5. Automating image cataloguing & photo-merging using Excel macros & Photoshop (Jon)

---Break --- 2:00 - 2:15pm ---

X. Working groups [2:15 - 2:45] – Meet, discuss & formulate written recommendations through out rest workshop. Prepare electronically for Thursday morning.

XI. Hands-On Workshop [3:00 – 5:00] Depending on time we finish business we can get a head start on scope work.

Wednesday, 22 April

XII. Hands-On Workshop [9 am – 5 pm]

A. Hands on scope work
a. Sablefish focus group mini-workshop (mini-agenda attached)
b. All other species – Traynor Room

XIII. Demonstration: Isomet 5000 saw (Jon) - during Wed. afternoon sometime.

Thursday, 23 April

XIV. Concluding CARE business [9 – 10:30 am]

A. Recommendations 2009
B. Other activities finalization
C. Administration nominations
D. Schedule and location of 2011 Meeting
E. Closing -adjourn

XV. Continue hands-on [rest of day as needed]

Appendix 2

DRAFT Objectives and Mini-agenda for Sablefish Focus Group

Objectives:

1. Identify & record difficult/easy to interpret sablefish otolith patterns
2. Establish standard criteria – measurements, patterns
3. Document criteria – CARE manual update, publish

Agenda:

1. Review results of measured and exchanged otoliths
   a) Measurement results (presented during general meeting)
      i. Discuss/decide if a practical application
   b) Exchange (results presented during general meeting)
      i. Kris highlight key differences/agreements for discussion
      ii. Scope time to review & key into patterns of concern
      iii. Group image session to illustrate specific examples
   c) Identify/document easy & common difficult patterns
2. Known-age samples
   a) Delsa to chose some demonstrative examples to illustrate interpretation of key difficult and easy patterns
   b) Confirm/establish common easy/difficult patterns & standard way to interpret
   c) Test participants with small number of known-age to measure lessons learned
3. Document standard criteria
   a) Cobble an outline & assign work to group
      i. Written
      ii. Photographic
   b) Publication?