2004 Biennial Meeting

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CARE MEETING MINUTES APRIL 20-22, 2004Â OPENING REMARKS:Â Delsa Anderl, chair of CARE 2002-2004, opened the meeting at 8:30 am, April 20, 2004 at the NOAA-Fisheries Sandpoint facility, Seattle, Washington.Â She welcomed everyone to the workshop, passed out copies of the agenda and last meetingâ€™s minutes, and proceeded to the introductions.Â INTRODUCTIONS:Â Participants introduced themselves and stated the agency represented:Â Philip CowanÂ ADFG-HomerJeremy BotzÂ Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
ConstantineÂ ADFG-JuneauKristen MunkÂ Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
BrodieÂ ADFG-KodiakBarbara CampbellÂ Â Â Â Â Â Â Â Â Â Â Â Â
CDFOCal BloodÂ IPHCJoan ForsbergÂ Â Â Â Â Â Â Â Â Â Â Â Â
IPHCRobert TobinÂ IPHCStephen WischniowskiÂ IPHCDelsa AnderlÂ
Fisheries-AFSCIrina BensonÂ NOAA-Fisheries-AFSCJohn BroganÂ
Fisheries-AFSCDan FoyÂ NOAA-Fisheries-AFSCChristo
Fisheries-AFSCBetty GoetzÂ NOAA-Fisheries-AFSCCharles Hutchi
Fisheries-AFSCChris JohnstonÂ NOAA-Fisheries-AFSCCraig KastelleÂ Â
Fisheries-AFSCLisa KautziÂ NOAA-Fisheries-AFSCDan KimuraÂ
Fisheries-AFSCCharlie PistonÂ NOAA-Fisheries-AFSCWesley ShockleyÂ
Fisheries-AFSCJon ShortÂ NOAA-Fisheries-AFSCSusan C
Fisheries-NWFSCLisa LysakÂ NOAA-Fisheries-NWFSCPatrick
Fisheries-NWFSCJennifer MenkelÂ NOAA-Fisheries-NWFSCOmar RodriguezÂ
Fisheries-NWFSCMichael SchirripaÂ NOAA-Fisheries-NWFSCBob MikusÂ Â Â Â
ODFWSandra RosenfieldÂ WDFWJohn SnevaÂ Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
ToppingÂ WDFWÂ MEETINGS:Â Anderl updated everyone on upcoming meetings
Committee (TSC) â€“ May 4,5 â€“ Whidbey IslandDover sole workshop â€“ May 16Third International Symposium on Fish Otolith
Research and Application â€“ July 11-16 â€“ Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â AustraliaSablefish workshop â€“ 2005 â€“ Schirripa (lead)Â
AGENDA:Â All participants approved the 2004 agenda proposed by the chair (Appendix 1).Â Some changes were noted for the presentations.Â APPROVAL OF 2002 MEETING MINUTES:Â All participants approved the 2002 meeting minutes.Â UPDATES:Â The CARE address/e-mail list was passed around for any revisions.Â Summary of age reading methods:Â The labs provided updates prior to the meeting.Â Discussion ensued regarding what production numbers to put in the table.Â It was decided that we should use the number of fish aged over the 2 year period.Â This would be updated on the website.Â The â€œstockâ€• column will be changed to â€œareaâ€•.Â It would also be advantageous to add a new colum
â€œnumber of people/speciesâ€•.Â We discussed whether or not to eliminate the â€œcapabilityâ€• column or to define the term
in the column.Â Further discussion and any decision on this was tabled until Thursday.Â Â Standards:Â It was decided that the new software standard is OFFICE 2000:Â Word, Excel, and Access.Â Â WORKING GROUP REPORTS:Â Manual/Glossary:Â MacLellan presented the new cover produced by Wischniowski.Â It was suggested that the title be lighter, more contrast for the text, delete â€œ2004â€•, and correct one formula.Â Wischniowski said he would attemp
to have the cover revisions by Thursday.Â The addition of hake to the manual is in process, and a draft of lingcod ageing via dorsal fin ray cross sections is complete.Â Both should be finalized in a few months.Â Munk stated that â€œbiannualâ€• sho
be â€œbiennialâ€• in the text.Â Â Charter:Â Anderl thanked Goetz, Mikus, and Munk for their good work on finalizing the Charte
Anderl initiated discussion regarding a paper where the main author didnâ€™t allow review by the co-authors of the ageing protocols used.Â It was suggested that we add language to the Charter, under Membership Responsibilities, that states that authors should extend the courtesy of reviewing ageing methodologies to those whose age estimates are used.Â Goetz said she would propose specific language for further discussion on Thursday.Â Â Â Web site:Â Anderl expressed concern with the structure exchange table.Â The TSC response regarding the addition of statistics was not definitive.Â Structure exchanges:Â McDonald reported the following exchanges and participants:Â Â Â Â Â Â Â Â Â Â Â Hake â
ODFWÂ Â Â Â Â Â Â Â Â Â Â Sablefish â€“ ODFW & NOAA-Fisheries AFSCÂ Â Â Â Â Â Â Â Â Â Â Walleye Pollock â€“ ADFG
AFSCÂ Â Â Â Â Â Â Â Â Â Â Â Darkblotched rockfish â€“ ODFW & NOAA-Fisheries AFSCAny additional exchanges would be rep
Thursday.Â MorningÂ BreakÂ 10 a.m. to 10:20 a.m.Â AGE & GROWTH LAB OVERVIEW AND UPDATE BY AGENCYÂ ADFG:Â Munk reported for their three lab locations at Juneau (central), Homer, and Kodiak. The Juneau lab has statewide responsibilities.Â The Homer and Kodiak labs have part-time agers. They have added one new ager and one new technician.Â Munk mentioned the funding constraints they are under, noting that groundfish ageing funding was up a little and that they had received rockfish ageing funds from NOAA through 2008.Â New ageing priorities have resulted in ageing fewer flatfish.Â Specific projects of note were looking at lingcod growth differences between regions, and partial validation in an age range via bomb radiocarbon dating for shortspine thornyhead.Â CDFO:Â MacLellan reported that their lab (Nanaimo) produces about 13,000 groundfish age estimates annually, and also ages for 30,000 herring, 5,000 shellfish, and 98,000 salmon (B.C. and Yukon).Â There are nine people on staff, with 6.5 FTEâ€™s doing production ageing.Â They have developed a new database that potentially was developed for all species that is user friendly, accessible to users, and can be used as a tracking system.Â Phase 1 of the database system initially included just salmon; Phase 2 is better and captures all ways of age notation.Â All information from the age data sheets are recorded in the database.Â MacLellan noted that previously there was a lack of prioritization, no standard sample sizes, and their desire to do more quality control and research.Â Managers have proposed the lab age 160,000 fish per year, while she stated that they can only age about 125,000 per year.Â They re-read 10%-20% for precision estimates.Â CDFG:Â

Erwin was not able to attend this year.Â IPHC:Â Forsberg reported that they age about 28,000 sport and commercial halibut annually, with 5 agers.Â In 2003 they began utilizing the break and bake technique using a toaster oven which works better for younger fish.Â This technique was adopted after a 2002 study that compared surface and break and bake age estimates.Â The lab is now using Tray biens for storing their otoliths.Â Their database now includes an age estimate, and alternate age estimate, an age range, plus 8 edge-type codes.Â They have been investigating bomb radiocarbon dating for otoliths that have been stored in glycerin and elemental analysis of otoliths.Â They have found out that the break and bake technique works better on otoliths that have been stored in glycerin.Â Â NOAA-Fisheries-AFSC:Â Goetz reported that their lab has 11 primary agers.Â The lab has been experimenting with the break and bake technique, noting that it is species-specific and doesnâ€™t work well for rockfish.Â They have added sculpins and greenlings to their list of fish to age, and will work on capelin and short-spine thornyheads in the future.Â The labâ€™s priorities are set by their working group.Â Current research projects are radiometric and bomb radiocarbon age validation (Kastelle) and shortraker rockfish ageing (Hutchinson).Â New research projects planned are crab and whale ageing.Â The lab is under contract to provide age estimates for turbot and skate (vertebrae).Â NOAA-Fisheries-NWFSC:Â McDonald reported they have 6 agers, with another to be added shortly.Â He noted that PSMFC is in charge, with the priorities being set by the NWFSC.Â Current research projects are bomb radiocarbon age validation and annulus measurements for hake.Â The lab has become more research oriented.Â ODFW:Â Mikus reported that he is the primary ager with regional biologists ageing sport fish part-time.Â He assists in ageing Dover sole and near shore species, as well as ageing otoliths from marine mammal scats.Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â WDFW:Â Sneva reported that they have two full-time gr recently added sardines and spiny dogfish to their list of species they age.Â SIMILARITIES AND DIFFERENCES BETWEEN AGENCIES/LABSÂ Participants discussed differences in databases, precision statistics, and age reading sheets.Â All labs use the standard January 1 birthday, with the exception of sardines (June 1) and English sole (CDFO).Â Anderl led a discussion on edge-type data, noting that it works good for Atka mackerel, but poor for sablefish.Â Goetz said that Pollock show different edge-types on good growth years than on normal growth years. Â Munkâ€™s lab uses no edge-type code.Â She thought edge interpretation was most difficult for June-August sampled fish.Â Regarding establishing a protocol for resolving differences between labs in ageing criteria for the same species, Blood suggested that we should just acknowledge the differences and that the use of exchanges would reveal if there were problems.Â MacClellan MacLellan said that the basic criteria must be the same, even though there are pattern differences between stocks.Â Schirripa noted to be aware of true criteria differences between stocks.Â We tabled further discussion until after lunch or Thursday.Â Lunch break Noon to 1 p.m.Â ERGONOMICSÂ Discussion revolved around which labs had ergonomic scopes and workstations.Â Goetz said that ergonomic scopes/work stations usually arenâ€™t purchased until medical problems arise.Â Goetz said that the key to avoiding medical problems is educating oneself on proper posture and exercises, as well as having an adjustable chair, a properly positioned scope on a table at the right height.Â The major scope manufacturers have new ergonomic scopes incorporating low positioned focusing knobs and adjustable binocular tube angle and height.Â A Leica ergonomic head with bellows costs about $4,000.Â Some of the women members discussed the hardships of doing scope work while they were pregnant. Â RECOMMENDATIONS2003 TSC TO CARE RECOMMENDATIONSÂ TSC recommended that we incorporate 2 to 4 hours of presentations in our meeting.Â Eight presentations were scheduled for the 2004 meeting.Â TSC suggested we note limitations and caveats to exchange table statistics.Â We discussed adding a percent agreement column, but questioned what to do when you have 3 or more readers.Â Participants noted that the reasons for exchanges are many.Â We discussed a possible recommendation to TSC:Â what does TSC want in the exchange table?Â TSC recommended that there should be a standard number of structures per exchange.Â Participants felt that this number should be reasonable and determined after consulting with the stock assessment biologist involved with that species.Â 2002 CARE TO CARE RECOMMENDATIONSÂ These were the recommendations and actions taken:Â A draft of the charter should be presented to the membership by May 31, 2002.Â Completed.Â Update cover of Aging Manual with CARE logo.Â Completed with edits.Â Produce a table defining capability terms and updates for each agency-species by May 31, 2002.Â This item was tabled.Â Include new technologies and/or aging related discussion to New Business for future Care workshops.Â We discussed the use of vertebrae for aging.Â Schirripa said utilizing new structures should be need based.Â Troublesome species are candidates for looking at new structures.Add age data, both blank and examples to the web page.Â This will be done.Â Add the following new sections to the CARE manual:Â Â Â Â Â Â Â Â Â Â Â Thin sectioning â€“ We are not quite ready to do this yet.Â Â Â Â Â Â Â Â draft of thin-sectioning/aging this species is complete.Â Â Â Â Â Â Â Â Â Â Â Pacific Whiting â€“ McDonaldâ€™s report with DF be used.NWFSC & DFO to collaborate.Â Â Â Â Â Â Â Â Â Â Â Â Data sheets - Blank and example versions will be included.Â A pictures to the website.Â Anderl is working on this.Â Add a breakdown of numbers/species aged per year by agency to the website.Â This will be done.Â Discuss ergonomic issues as part of New Business with a possible demonstration.Â Completed at this yearâ€™s workshop.Â ELECTION OF 2004-2006 OFFICERSÂ Chair:Â Patrick McDonaldVice Chair:Â Kriste MunkSecretary:Â Joan BrodieÂ All officers were elected unanimously.Â PRESENTATIONSÂ Proposed new CARE website â€“ Jon ShortÂ Â Â Â Â Â Â Â Â Â Â Short presented the pages to be included, noting that the first page needs a new look.Â Blood it needs to be updated periodically.Â Rodriguez suggested that other workshops and exchanges might be included.Â Kastelle suggested that abstracts and new publications be included.Â Short mentioned that currently he doesnâ€™t have web access to make changes.Â Otometrics â€“ Kristen MunkThe collection of dimensional and physical attributes of otoliths is part of the â€œbasic dataâ€• and can be used to support age data.Â Munk discussed the measurements of â€œotolith indexâ€• and calcium investment indexâ€•.Â Research projects at CDFO â€“ Shayne MacClellanMacLellanMost of the research has been with Pacific cod and sablefish.Â For Pacific cod, their goals were to determine the best structure for aging and to verify annuli on young fish.Â They looked at bake and break otoliths, otolith thin sections, and dorsal fin ray cross sections, concluding that the fin sections produced consistently clearer annuli and that annulus measurement criteria worked better for the fin rays.Â They will look at older fish next.Â For sablefish, they used young, â€œknown ageâ€• fish and looked at break and burn

otoliths and thin sections (only two sections needed).Â Annuli clarity was better for the break and burn method.Â They will be looking at age 2 to 5 tagged fish next.Â Afternoon BreakÂ 3:00 p.m. to 3:20 p.m.Â Ageing skate species using vertebrae â€“ Chris GburskiChris showed examples of whole and thin-sectioned vertebrae, with age estimates up to 19.Â He described the preparation methods and said he would be looking at staining methods and trying caudal spines in the future.Â Challenges of determining ageing criteria for the Greenland turbot â€“ Jake GreggOtoliths of this species are very convoluted and fragile.Â Surface age estimates have revealed poor precision in past studies, with better precision for break and burn otoliths.Â His study examined half section (stained) and surface age estimates from one particular area of the otolith.Â Two readers aged the samples three times.Â Older fish stained section estimates were more precise than the surface estimates.Â There was no precision difference with the younger fish.Â He noted that a 76 cm male with a surface age of 14 had a sectioned age of 35.Â This species needs age validation.Â Age validation of canary rockfish using bomb radio carbon dating â€“ Jennifer MenkelJennifer described the basics of this methodology, noting that it is usually accurate within one to three years.Â The sample is taken from the first year core and she utilized reference curves from halibut and Atlantic haddock.Â Two sampling designs were employed.Â Conclusions were that parallelism was not rejected, there is a consistent ageing error bias of 2-3 years, and the assumptions of this validation method can be quantitatively tested.Â Walleye pollock radiometric age validation â€“ Craig KastelleCraig described this methodology, which utilized the lead/radium ratio.Â The pollock fishery is the largest in the North Pacific, hence the need for age validation.Â His study was to validate the age reading criteria of the ADFG lab and the AFSC lab.Â He used age 3-8 otoliths, with 40 sampled from each age group.Â The results so far indicate that the AFSC lab criteria were most correct.Â There was a bias of about 2 years, mainly due to core problems and a biased radiometric standard.Â Sample size to measure bias between two age determinations â€“ Michael SchirripaMichael used simulations on data sets of Pacific Ocean perch (long-lived) and hake (short-lived).Â He noted that what we are looking for is the Type II error.Â The simulations revealed that a sample size of 100-200 was adequate for hake and that 200-300 were adequate for POP.Â He reiterated that this is an absolute number, not a percentage.Â Â Â Â Â Â Â Â Â Â Â Â Â Â Adjourn for the day, 5:00 p.m.Wednesday, April 21, 2004Â Scope work from â€“ 5:00 p.m. at scheduled work stations.Â We had three working group reviews prior to the morning break:Â Sablefish ageing â In preparation for the upcoming TSC initiated international sablefish workshop.Â Â Â Â Â Â Â Â Â Â Â Â Â Â Pacific cod ageing â€“ S on the determination of the first three annuli.Â Walleye Pollock ageing â€“ Specifically to document differences in ageing criteria.Â Morning Break 10:00 a.m. to 10:20 a.m.Â We had two working group reviews prior to lunch:Â Â Â Â Â Â Â Â Â Â Â Â Â Â P ageingÂ Shortspine thornyhead ageing â€“ Specifically to collaborate on developing ageing criteria.Â Lunch 12:00 p.m. to 1:15 p.m.Â Hutchinson demonstrated his thin section preparations using Pacific cod and sablefish otoliths throughout the afternoon.Â Afternoon Break 3:00 p.m. to 3:20 p.m.Â We continued with collaborative scope work and discussions.Â Adjourn for the day, 5:00 p.m.Â Thursday, April 22, 2004Â Wrap-up Group SessionÂ Anderl expressed her thanks to the members for their contributions to this workshop.Â We looked at the possible changes to the logo for the manual.Â We tabled the decision until later this morning.Â The exchange table was passed out to the members for discussion of possible changes.Â Â We discussed adding more rows to accommodate individual readers and reader statistics?Â We discussed a possible recommendation to TSC, asking them if they want more detail or leave it as is.Â One suggestion was to include a disclaimer statement (with notes on who to contact) at the end of the table.Â This would be reviewed by the Vice Chair.Â Anderl noted that AFSC members have historically been in charge of the shirt and mugs sales and that this is no small endeavor.Â We decided that this duty will now be on a rotating agency basis.Â We discussed possibly adding a â€œcapabilityâ€• column to the Summary of Age Reading Methods table.Â Anderl said she would check on possible definitions.Â Goetz moved to add the following bullet item under Member Responsibilities in the CARE Charter:â€œA member agency that drafts written materials which characterize the methodologies and/or protocols of other agencies with intent for distribution and/or publication, are encouraged to allow the agencies involved to review and comment on the final draft prior to distribution.â€•The motion was seconded and passed unanimously.Â MacClellan MacLellan emphasized that freedom of interaction is important in CARE.Â It was moved, seconded, and passed unanimously to accept the CARE Charter as amended.Â We decided, at least for now, to leave the number of structures for exchanges as is.Â 2004 RECOMMENDATIONS FROM CARE TO CARE:Â 1.Â Â CARE members are encouraged to hold workshops/calibration sessions as needed to address specific age reading issues.Draft a chapter on statistics to include in the CARE manual.Â 2004 RECOMMENDATIONS FROM CARE TO TSC:Â Â Â Â Â CARE recommends that TSC and its participating agencies support additionalÃ Â Â Â Â Â Â hands-on only workshops to address species specific age reading issues.CARE recommends to TSC that Appendix B (CARE Charter) be included in theÂ 2004 CARE to TSC report.Â Logo cover changes to the manual were adoptedÂ Morning Break 10:00 a.m. to 10:20 a.m.Â We continued with microscope collaborative work and discussions.Â Lunch Break 12:00 p.m. to 1:15 p.m.Â Continuation of microscope collaborative work and discussions.Adjourn for the day 3:30 p.m.Â End of 2004 CARE workshop