**TESA workshop “Best practices in age determination” - Schedule**

**Day 1 - Tuesday January 31 2023 - Basics of age determination**

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| Time |  |
| 9:00 | Roundtable: participants introduction |
| 9:15 | Motivation for workshop and presentation on ageing basics (Peter Comeau and Daniel Ricard) |
| 10:00 | Opening remarks by external expert (Julie Davies) |
| 10:30 | Break |
| 10:45 | Obtaining otoliths, preparation methods, storage and inventory of ageing structures (Daniel Ricard and others) |
| 11:15 | **Plenary talk by DFO expert (30-45 mins)** Tracey Loewen (Ontario and Prairie Region) - Otolith microchemistry, difficult-to-age marine species, element marking in otoliths |
| 12:00 | Do head count for Wednesday dinner, then lunch break |
| 13:00 | **Plenary talk by DFO expert (15-20 mins)** Stephen Wischniowski (Pacific Region) - Getting the Biggest Otolith Bang For Your Buck |
| 13:45 | Age validation, age verification and ager calibration (Daniel Ricard and others) |
| 14:45 | Break |
| 15:00 | Age determination in a production ageing environment, reconciling dreams, expectations and reality (Peter Comeau and others) |
|  | **Short talk (10-15 mins)** Kim Emond and Hélène Dionne (IML) - Age determination of Atlantic Herring in the Québec region (10-15 mins) |
|  | **Short talk (10-15 mins)** Sylvie Robichaud and Karen Robertson (GFC) - Age determination of Atlantic Herring in the Gulf region (10-15 mins) |
|  | **Short talk (10-15 mins)** Tania Davignon-Burton (BIO) - Reconciling dreams, expectations and reality in a production ageing environment (10-15 mins) |
| 16:00 | Stepping stones towards establishing a sclerochronology community within DFO |
| 16:20 | Overview of the day and plan for tomorrow |
| 17:00 | 5 à 7 (optional) |

**Day 2 - Wednesday February 01 - Digital imaging of otoliths**

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| Time |  |
| 8:00 | Practical demo 1: thin sectioning of White Hake otoliths with a low-speed isometric saw, otolith section imaging |
| 8:20 | Practical demo 2: mounting of Atlantic Cod otoliths in epoxy resin, and sectioning with surface grinder |
| 8:40 | Practical demo 3: mounting of Atlantic Herring otoliths in epoxy resin, and otolith imaging |
| 9:00 | Practical demo 4: age determination by visual examination of whole otoliths, example with American Plaice |
| 9:30 | Quick recap of Tuesday |
| 9:45 | **Plenary by external expert** Julie Davies (DTU-Aqua) - An introduction to SmartDots, a tool for annotations of otolith images, supporting otolith exchanges between labs, and quality-control of ages (Julie Davies) |
| 10:30 | Break |
| 10:45 | **Short talk** Karen Robertson, Isabelle Forest and Sylvie Robichaud (GFC) - Taking good pictures of otoliths, and annotating them in SmartDots (10-15 mins) |
| 11:00 | Archiving of digital images and integration into SmartDots (Daniel Ricard and David Fishman) |
|  | **Short talk** David Fishman (GFC) - Moving forward with DFODots, a SmartDots Web API for DFO, and integration with a digital image archival and retrieval app (10-15 mins) |
| 12:00 | Lunch |
| 13:15 | SmartDots reporting features - example for American Plaice reference collection (Daniel Ricard and Julie Davies) |
| 14:45 | Break |
| 15:00 | Growth increment measurements from annotated otolith images (Daniel Ricard) |
| 15:30 | Open discussion about digital images and SmartDots |
| 16:00 | Overview of the day and plan for tomorrow |
| 17:00 | 5 à 7 (optional) |
| 18:30 | Group dinner at Gusto (optional) |

**Day 3 - Thursday February 02 - Analyses: growth models and catch-at-age matrices**

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| Time |  |
| 9:00 | Quick recap of Wednesday |
| 9:15 | **Plenary talk by external expert** Lisa Ailloud (NOAA NMFS SEFSC) Analyses of ageing data / A general theory of age-length keys (20-30 mins) |
| 9:45 | **Plenary talk by DFO expert** Andrea Perreault (NAFC) - Impacts of ignoring length-stratified sampling design (20-30 mins) |
| 10:30 | Break |
| 10:45 | Fitting growth models to ageing data (Daniel Ricard) |
| 11:15 | Computing catch-at-age matrices using length samples and age-length keys |
|  | **Short talk** Daniel Ricard for Jordan Ouellette-Plante (IML) - CatchR: Methods developed to compute age-length keys for the northern Gulf of St. Lawrence Atlantic Cod, and prospects for other age-based assessments (10-15 mins) |
|  | **Short talk** Kim Emond and Hélène Dionne (IML) - Catch-at-age of commercial herring landings and numbers-at-age from acoustics surveys (10-15 mins) |
| 12:00 | Lunch |
| 13:00 | Past, present and future of age determination |
|  | **Short talk** Ellie Weise and/or Chris Corriveau (Dalhousie University) - Title TBD (10-15 mins) |
| 13:30 | Disorganised discussion: remaining questions, help and guidance needed, clarification points, ... |
| 14:00 | Group discussion to draft recommendations for "best practices in ageing" |
| 14:45 | Break |
| 15:00 | Group discussion to draft proceedings document |
| 16:20 | Wrap up (Ricard and Comeau) |