

TESA workshop - Best practices in age determination

Chairs: Daniel Ricard (GFC) and Peter Comeau (BIO)

2023-01-31 to 2023-02-02

What is TESA?

TESA webpage on GCpedia

Motivations and steps leading to this workshop

- ▶ initial idea proposed to TESA committee back in 2021
- ▶ age-based assessments are commonly used in providing science advice
- ▶ many new DFO scientists might not be familiar with best practices in fish age determination
- ▶ catch-at-age information is an important component of age-based population models
- ▶ there is no community of DFO scientists with age determination tasks beyond regional groups

Land acknowledgment

Mi'kmaq territory

Elsipogtog Mi'kmaq cultural centre

Site d'interprétation Micmac de Gespeg

Workshop participants

- ▶ potential participants initially identified regionally through TESA
- ▶ participants that received and accepted the Outlook meeting request
- ▶ snowball effect of having a virtual event, and the fact that we didn't turn anyone down
- ▶ please make sure that your presence is correctly noted in [GitHub README page](#)
- ▶ **please make sure that your presence is correctly documented in the draft workshop proceedings**

Region	Number
C&A	9
GLF	15
MAR	13
NL	11

External experts



Julie Coad Davies

Technical University of Denmark
Denmark



Lisa E. Ailloud

PhD · Statistician at National Oceanic and Atmospheric Administration
United States

Stock Assessment Scientist

External expert that says hello

Hi Dan and Peter,
As you can see from
these photos, I am
having a miserable
time here, so the least
you can do is to toast
me in my time of
despair...

All the best,
Steve



Training vs. workshop

- ▶ Share your ideas and experiences
- ▶ Ask questions that may have an answer within the participants' collective knowledge
- ▶ Formulating best practices can also mean identifying bad practices
- ▶ Our shared goal is to obtain age estimates that are unbiased and precise
- ▶ Collective experience of workshop participants is vast

Virtual meeting

- ▶ In person participants
 - ▶ Rotating rapporteur role
 - ▶ Use your microphone when talking
- ▶ Guidelines for MS Teams
 - ▶ Raise hand to make an intervention
 - ▶ Turn on your camera when speaking (unless you have bandwidth issues)
 - ▶ Unmute yourself to talk
- ▶ We will pause and repeat if there are connection issues with the external experts

Day 1 - Tuesday January 31 2023

- ▶ Basics of age determination by Peter Comeau
- ▶ Obtaining and cataloguing otoliths, preparation, storage and inventory
- ▶ Plenary talk by Tracey Loewen (DFO Central and Arctic)
- ▶ Plenary talk by Stephen Wischniowski (DFO Pacific)
- ▶ Validation, verification and calibration
- ▶ Age determination in a production ageing environment
 - ▶ Kim Emond and Hélène Dionne (IML) - Age determination of Atlantic Herring in the Québec region
 - ▶ Sylvie Robichaud and Karen Robertson (GFC) - Age determination of Atlantic Herring in the Gulf region
 - ▶ Tania Davignon-Burton (BIO) - Reconciling dreams, expectations and reality in a production ageing environment
- ▶ Towards establishing a sclerochronology community within DFO

Roundtable of introductions for in person participants

- ▶ Name, position and region, mandated tasks that are making you attend this workshop

Community building ideas

- ▶ Community of Age Reading Experts ([CARE](#)) as a test case
- ▶ Identify the great value of otolith exchanges between labs
- ▶ Develop a shared understanding of what physical and digital samples we have, and what they were/are/will be used for
- ▶ Shared References related to age determination
- ▶ ...

Day 2 - Wednesday February 01 2023

- ▶ Practical sessions / tour of the GFC ageing lab
- ▶ SmartDots: a tool for annotations of otolith images, supporting otolith exchanges between labs, and quality-control of ages (Julie Davies)
- ▶ Taking good images of otoliths (Karen Robertson and others)
- ▶ Archiving of digital images and integration with SmartDots (David Fishman and Daniel Ricard)
- ▶ SmartDots reporting features - example for American Plaice reference collection (Daniel Ricard and Julie Davies)
- ▶ Growth increment measurements from annotated otolith images (Daniel Ricard)

Day 3 - Thursday February 02 2023

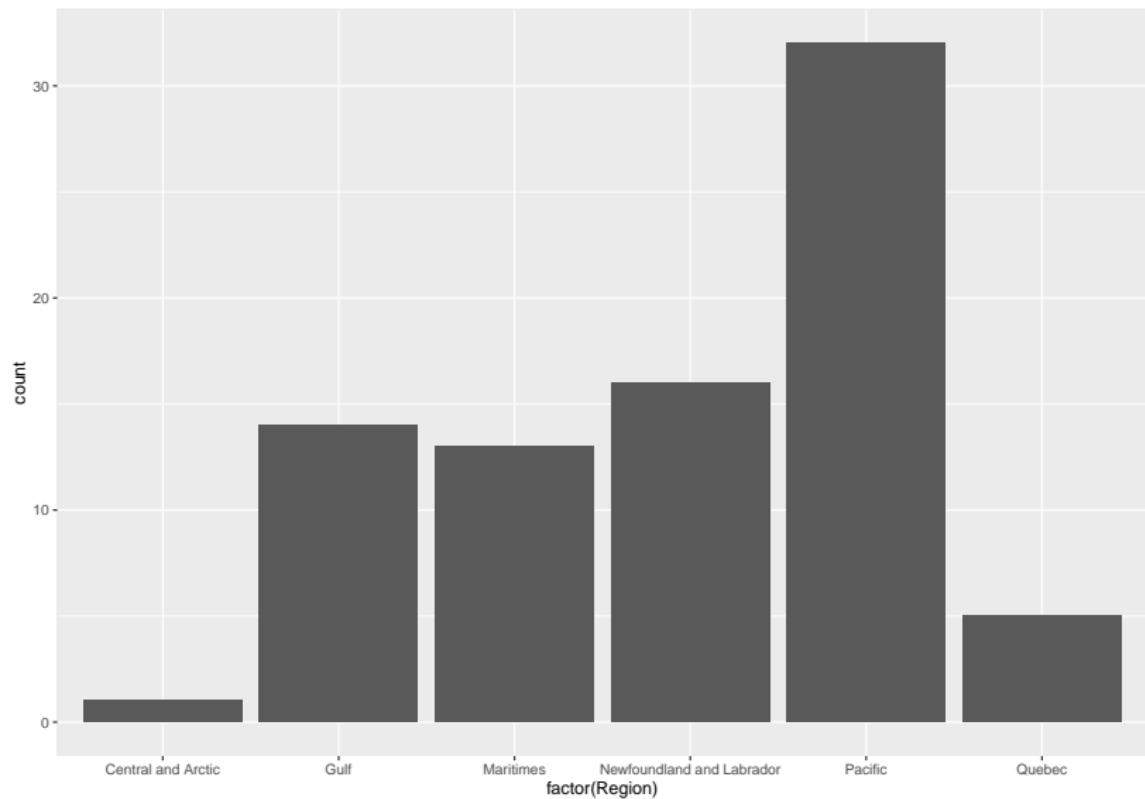
- ▶ Plenary talk by Lisa Ailloud (NOAA NMFS SEFSC)
- ▶ Plenary talk by Andrea Perreault (NAFC)
- ▶ Growth models
- ▶ Age-length keys and catch-at-age matrices
- ▶ CatchR: Methods developed to compute age-length keys for the northern Gulf of St. Lawrence Atlantic Cod, and prospects for other age-based assessments
- ▶ Kim Emond and Hélène Dionne (IML) - Catch-at-age of commercial herring landings and numbers-at-age from acoustics surveys
- ▶ Past, present and future of age determination

Recommendations

Proceedings draft document

- ▶ draft DFO Technical Report

Homework results - by region



Homework results - by ageing structure

