2025 Baltic Plaice (ple.27.21-32) age reading exchange (Event ID: 2954) SmartDots Report

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Table of Contents

1 Summary

The 2025 Baltic plaice age reading exchange (ID 2954) took place between September and November 2025 via the SmartDots platform https://www.ices.dk/data/tools/Pages/smartdots.aspx. A total number of 396 images were uploaded to the SmartDots platform for reader annotation. 10 readers from Sweden, Denmark, Poland and Germany took part (5 advanced and 5 basic) (Table 3.1). All institutes who provide age data for the assessment of the Baltic plaice stock ple.27.21-32 participated and provided samples. For each fish included in the event an image of a whole otolith (a pair when available) photographed in water under reflected light and a corresponding image of a sectioned otolith photographed under reflected light was digitised, both with correctly calibrated scale bars. The aim was to apply standard settings with respect to light conditions and magnification, as much as possible. Institutes provided sample data using the SmartDots Sample Upload template to DTU Aqua who coordinated the exchange. Following WGBIOP guidelines the aim was to provide a set of otoliths spatially and temporarily representative of the age data used in the stock assessment. ICES Sub Divisions (SD's) 21-26 were covered and, where possible, samples within the range of ages 1-7+ were provided for each quarter (Table 3.2). Instructions were provided to all readers who were requested to provide one approved annotation per image. For each image a series of dots, placed at the end of each translucent zone (TZ) counted to estimate the age of the fish, plus a readability score based on the ICES standard https://vocab.ices.dk/?codetypeguid=e08ec685-61f6-4ccb-9e93-594047b05797, constituted an annotation.

The ICES Workshop for the Age Reading of Baltic Plaice (WKARBP) took place over three days from December 9-11, 2025 at DTU Lyngby, Denmark. Initially planned as a five-day physical meeting. The workshop was postponed facilitating the participation of as many age readers of this stock as possible. Readers from Sweden, Denmark and Poland attended in person, while from Germany the experienced age readers attended online and the national co-ordinator and trainee age reader joined in person. The results from this exchange were presented and discussed, along with the results from the 2023 SD22 Plaice age reading exchange (ID698).

Functionalities within the SmartDots reporting module allow for separate analyses based on reader expertise, otolith preparation method and area (among other strata). Various report outputs were examined where readers overall level of expertise was considered as either advanced (provides data for stock assessment) or basic (does not provide data for stock assessment) and consideration was also taken as to which ICES SD's and age reading method are routinely analysed. The aim being to reflect routine age reading procedures and readers level of experience as much as possible.

The overall statistics, percentage agreement (PA), co-efficient of variation (CV) and average percentage error (APE) did not vary much depending on the stratification of samples included in each analysis. Based on the different combinations of samples, the overall CV, PA and APE fell between 24-26%, 60-65% and 14-17%, respectively, with no obvious improvement in results depending on readers level of expertise. For this reason, the group decided that the best approach for this report was to include all readers and all samples from all ICES SD's together and to analyse the whole (Section 4.1.2 and 4.1.5) and the sectioned (Section 4.1.1 and 4.1.4) otoliths separately. Readers expertise was considered solely based on whether or not they provide age data for stock assessment. It is not possible to also include expertise based on age reading preparation method. The ages estimated by the readers reach up to 22 years. The high CV and APE and low PA scores at older ages mean that the overall results shown in this report are poorer than if the actual plus group used in the stock assessment (7+) was applied to the results (this feature is not available in SmartDots). The overall positive relative bias seen for each analysis indicates that when readers are not in agreement with modal age, they will overestimate the age.

The main issues to highlight are:

- Uncertainty in correctly identifying the first translucent zone (TZ) to be included in the count of age. The variation in distance from the core to the start of the first opaque zone was discussed in depth.
- Variations in the timing of the opaque zones (OZ) and the translucent zones (TZ) in samples collected across the stock distribution (ICES SD's 21-26)

Young-of-year plaice settle during an extended period of time and inhabit shallow coastal waters where variation in environmental parameters such as temperature, food availability, predation and salinity can result in variable growth patterns. Germany has carried out a preliminary validation experiment based on tetracycline marked juvenile plaice from a coastal lake with regular exchange with the Baltic Sea. Image examples were discussed in plenary and questions arose on timing of growth zones, unfortunately no concrete conclusions could be reached. Numerous samples from different areas across the stocks distribution were examined in plenary and, surprisingly, agreement could be reached in many cases. This report outlines the readers performance in the SmartDots exchange prior to the workshop. A major part of the discussions of these results during the workshop focussed on the youngest age groups. Time was spent allowing the readers to discuss their annotations, in many examples readers who were not originally in agreement with the modal age could understand why, in some cases it was due to incorrectly counting an extra TZ at the otolith edge in the later part of the year or counting a ring close to the centre which was not the true first TZ. The SmartDots annotations are now available to all for comparative purposes. Image examples will be included in the full report. WKARBP has collected protocols and manuals from all involved countries and will provide an agreed age reading manual to be followed and tested in the future.

2 Methods

For this report the otolith preparation method was defined as the strata, all readers were included (based on their level of expertise) and no readings with AQ3_QA were included in the analyses

Modal age: a multistage approach to define the modal age by sampled fish,

In this event, the multistage approach to calculate the modal age has been used. When summarizing the output and reporting the results of the exchange events developed within the SmartDots framework, the modal age (the most common age decided by the age readers for every fish sample) is the most relevant measurement. It is a key statistic by itself, but it is also fundamental for the estimation of some other relevant statistics to assess the performance of the techniques assessed in the exchange event, like the Percentage Agreement (PA), or input for stock assessments like the Age Error Matrix (AEM) (see below). However, the standard approach of calculating the mode (each reader has the same weight=1) the mode is taken as the lowest age of the multiple modal ages. This way renders multiple cases (fish samples) with multiple modal ages (i.e. different ages got the same highest number of readers). Accordingly, this implies a wrong perception of the age by fish individual and introduction of bias in the calculation of the PA and AEM. As a solution, in this report a multistage approach to select the modal age is used. This multistage approach is based in the different weight given to the age readers according to their experience. Two different weight scores scales were assigned, a weight score decreasing linearly with the experience and another decreasing with a negative exponential shape. The modal age by fish individual is decided following the next approach:

1.-If there is a single mode estimated with the standard approach (equal weight for all readers) this value is used as the modal age, if not

2.-Adding up, for each age category, the score assigned with the linear weighting for all the readers that decided that age for that fish. Next, the modal age is selected as the age category that obtains the highest score sum. If, despite this approach, there were still multiple ages with the same score (and hence multiple modes), the next step is applied:

3.-Adding up, for each age category, the score assigned with the negative exponential weighting for all the readers that decided that age for that fish. Select as the modal age the age with the highest score sum.

Percentage Agreement (PA)

The percentage agreement per reader per modal age tells how large is the part of readings that are equal to the modal age. The percentage agreement is estimated by modal age and reader as the proportion (as percentage) of times that the lectures of that reader agreed with the resulting modal age. This percentage is estimated as the number of times that a reader agreed with the modal age divided by the total number of otoliths read by a reader for each modal age.

$$PA = \frac{number\ of\ readings\ that\ agree\ with\ modal\ age}{total\ number\ of\ readings\ by\ modal\ age} \cdot 100\%$$

Coefficient of Variation (CV)

The table presents the Coefficient of Variation (CV) per modal age and reader. The CV's are calculated as the ratio between the standard deviation (σ) and mean value (μ) per reader and modal age:

$$CV = \frac{\sigma}{\mu} \cdot 100\%$$

To the table is also added the CV of all readers combined per modal age and a weighted mean of the CV per reader.

Relative bias

The relative bias is calculated as the difference between the mean and the modal age. This statistic is presented in first place by modal age and reader, but it is also calculated as an average value by modal age for all readers together (or only advanced readers).

Average Percentage Error (APE)

The Average Percentage Error (APE) was calculated based on the method outlined by Beamish & Fournier (1981). This method is dependent of fish age and thus provides a better estimate of precision than percentage agreement. As the calculations of both CV and APE pose problems if the mean age is close to 0, all observations for which modal age was 0 were omitted from the CV and APE calculations.

The average percentage error is calculated per image as:

$$APE = \frac{100\%}{n} \sum_{i=1}^{n} \left| \frac{a_i - \bar{a}}{\bar{a}} \right|$$

where a_i is the age reading of reader i and $\bar{a}$ is the mean of all readings from 1 to n.

Age error matrix (AEM)

Age error matrices (AEM) were produced following procedures outlined by WKSABCAL (2014) where the matrix shows the proportion of each modal age mis-aged as other ages. The sum of each row is 1, which equals 100%. The age data was analysed twice, the first time all readers were included and the second time only the "advanced" readers were included. If a reader is "advanced" then they are considered well trained and they provide ages for stock assessment or similar purposes. When the AEM is compiled for assessment purposes it uses only those readers who provide age data for the stock assessment in that specific area.

3 Overview of samples and readers

Table 3.1: Reader overview for the 2025 Baltic plaice exchange (ID 2954)

Reader code	Expertise	Rank	method
R02 DK	Advanced	2	Whole
R03 DE	Advanced	3	Whole & Sectioned
R04 DK	Basic	4	Whole
R05 SE	Advanced	5	Whole
R06 SE	Advanced	6	Whole
R07 DK	Basic	7	Whole
R08 PL	Advanced	8	Sectioned and Stained
R09 DK	Basic	9	Whole
R10 DK	Basic	10	Whole
R11 DE	Basic	11	Whole & Sectioned

Table 3.2: Overview of samples (n=394) used for the 2025 Baltic plaice exchange (ID 2954)

ICES area	Quarter	Number of samples	Modal age range	Length range
27.3.a.21	1	11	1 to 18	80 - 340 mm
27.3.a.21	2	10	3 to 13	110-390 mm
27.3.a.21	3	10	1 to 18	120 - 350 mm
27.3.a.21	4	12	0-15	130-380 mm
27.3.c.22	1	10	1 to 12	110-460 mm
27.3.c.22	2	10	1 to 14	120-430 mm
27.3.c.22	3	10	3 to 10	270-500 mm
27.3.c.22	4	11	1 to 10	110-420 mm
27.3.b.23	1	7	1 to 9	130-380 mm
27.3.b.23	2	4	1 to 12	200-290 mm
27.3.b.23	3	10	2 to 15	200-420 mm
27.3.b.23	4	11	0 to 6	80-350 mm
27.3.d.24	1	10	1 to 12	100-360 mm
27.3.d.24	2	11	2 to 9	130-390 mm
27.3.d.24	3	9	2 to 8	180-390 mm
27.3.d.24	4	11	0 to 10	80-400 mm
27.3.d.25	1	9	2 to 10	130-370 mm
27.3.d.25	4	10	1 to 8	160-350 mm
27.3.d.26	1	10	1 to 8	100-320 mm
27.3.d.26	4	10	1 to 8	120-300 mm

Table 3.3: Results overview: Stock, total number of samples (NSample), coefficient of variance (CV), percentage of agreement (PA), average percentage error (APE) for all ages and readers and the number of readers (basic [N_basic] and advanced [N_advanced]) in the event.

Stock	NSample	CV	PA	APE	N_basic	N_adv
ple.27.24-32	394	25 %	60 %	17 %	5	5

4 Results

4.1.1 All readers reading sectioned otoliths (Strata_SE)

Summary statistics

Table 4.1: Strata_SE .Summary of statistics; Total number of samples (NSample), coefficient of variance (CV), percentage of agreement (PA) and average percentage error (APE) for all ages and readers

NSample	CV	PA	APE
198	26 %	60 %	16 %

In this exchange 198 sectioned otolith images were aged. When all the samples are considered (both single and multimodal cases) the weighted average percentage agreement based on modal ages for all readers is 60 %, with the weighted average CV of 26 % and APE of 16%. Individual readers values are highly variable and should be examined to identify readers with most uncertainty and age groups where most aging errors occur.

Coefficient of Variation (CV)

Table 4.2: Strata_SE .Coefficient of Variation (CV) table presents the CV per modal age and reader, the CV of all readers combined per modal age and a weighted mean of the CV per reader

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
0	-	-	-	-	-	-	-	-	-	-	**-**
1	24 %	82 %	24 %	30 %	83 %	43 %	77 %	66 %	64 %	37 %	**62 %**
2	18 %	38 %	29 %	27 %	28 %	20 %	38 %	24 %	33 %	64 %	**36 %**
3	30 %	28 %	21 %	22 %	23 %	16 %	18 %	8 %	14 %	35 %	**23 %**
4	17 %	20 %	15 %	29 %	24 %	20 %	22 %	26 %	30 %	21 %	**28 %**
5	18 %	17 %	13 %	29 %	8 %	12 %	23 %	11 %	25 %	15 %	**22 %**
6	10 %	10 %	8 %	13 %	11 %	16 %	15 %	12 %	22 %	22 %	**16 %**
7	11 %	18 %	5 %	15 %	17 %	25 %	10 %	12 %	17 %	18 %	**17 %**
8	8 %	10 %	15 %	33 %	14 %	22 %	10 %	14 %	20 %	21 %	**21 %**
9	8 %	8 %	15 %	4 %	9 %	13 %	13 %	11 %	15 %	0 %	**12 %**
10	9 %	12 %	8 %	16 %	9 %	19 %	16 %	8 %	12 %	8 %	**15 %**
11	11 %	5 %	7 %	18 %	7 %	19 %	10 %	15 %	17 %	6 %	**17 %**
12	0 %	0 %	-	11 %	14 %	29 %	15 %	5 %	8 %	-	**19 %**
13	-	-	-	-	-	-	-	-	-	-	**19 %**
14	4 %	4 %	5 %	8 %	11 %	17 %	11 %	9 %	4 %	13 %	**11 %**
15	-	-	-	-	-	-	-	-	-	-	**27 %**
16	5 %	8 %	-	20 %	-	15 %	19 %	-	8 %	-	**15 %**
17	20 %	-	-	8 %	0 %	26 %	4 %	-	0 %	-	**13 %**
18	-	-	-	-	-	-	-	-	-	-	**-**
19	-	-	-	-	-	-	-	-	-	-	**11 %**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	-	-	-	-	-	-	-	**27 %**
22	-	-	-	-	-	-	-	-	-	-	**7 %**
Weighted Mean	**16 %**	**25 %**	**17 %**	**23 %**	**23 %**	**21 %**	**25 %**	**20 %**	**25 %**	**24 %**	**26 %**

Percentage of Agreement (PA)

Table 4.3: Strata_SE .Percentage agreement (PA) table represents the PA per modal age and reader, the PA of all readers combined per modal age and a weighted mean of the PA per reader.

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	total
0	100 %	100 %	100 %	83 %	100 %	83 %	100 %	100 %	100 %	100 %	**96 %**
1	94 %	56 %	93 %	88 %	59 %	76 %	69 %	77 %	50 %	80 %	**74 %**
2	88 %	64 %	65 %	78 %	68 %	81 %	65 %	73 %	54 %	12 %	**68 %**
3	75 %	50 %	82 %	75 %	76 %	76 %	76 %	93 %	71 %	33 %	**73 %**
4	71 %	53 %	67 %	38 %	64 %	52 %	45 %	42 %	30 %	38 %	**51 %**
5	76 %	47 %	79 %	74 %	81 %	80 %	55 %	75 %	40 %	17 %	**66 %**
6	62 %	62 %	77 %	42 %	85 %	57 %	54 %	75 %	62 %	14 %	**61 %**
7	73 %	30 %	88 %	44 %	55 %	45 %	40 %	50 %	64 %	50 %	**54 %**
8	75 %	38 %	46 %	31 %	71 %	24 %	50 %	56 %	35 %	30 %	**46 %**
9	57 %	57 %	50 %	83 %	75 %	38 %	75 %	33 %	62 %	100 %	**64 %**
10	62 %	64 %	58 %	30 %	46 %	23 %	50 %	38 %	36 %	56 %	**46 %**
11	43 %	40 %	40 %	29 %	78 %	22 %	62 %	33 %	56 %	50 %	**46 %**
12	100 %	0 %	-	0 %	50 %	0 %	75 %	67 %	25 %	100 %	**41 %**
13	0 %	100 %	-	0 %	100 %	0 %	100 %	0 %	0 %	0 %	**33 %**
14	67 %	33 %	50 %	0 %	0 %	33 %	33 %	50 %	67 %	0 %	**33 %**
15	0 %	100 %	0 %	100 %	0 %	0 %	0 %	-	0 %	0 %	**22 %**
16	50 %	50 %	-	0 %	0 %	50 %	50 %	0 %	0 %	-	**29 %**
17	0 %	0 %	100 %	50 %	100 %	0 %	50 %	100 %	0 %	-	**40 %**
18	-	-	-	-	-	-	-	-	-	-	**-**
19	100 %	0 %	-	0 %	0 %	0 %	100 %	-	0 %	-	**29 %**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	100 %	0 %	0 %	0 %	-	0 %	-	**20 %**
22	100 %	0 %	-	0 %	0 %	0 %	100 %	100 %	0 %	-	**38 %**
Weighted Mean	**73 %**	**52 %**	**71 %**	**56 %**	**67 %**	**54 %**	**59 %**	**65 %**	**48 %**	**40 %**	**60 %**

Average Percentage Error (APE)

Table 4.4: Strata_SE .Average Percentage Error (APE) table represents the APE per modal age and reader, the APE of all advanced readers combined per modal age and a weighted mean of the APE per reader.

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
0	-	-	-	-	-	-	-	-	-	-	**-**
1	11 %	50 %	12 %	19 %	71 %	28 %	58 %	49 %	52 %	27 %	**38 %**
2	12 %	25 %	22 %	17 %	26 %	13 %	28 %	16 %	28 %	42 %	**22 %**
3	12 %	24 %	11 %	12 %	14 %	13 %	14 %	4 %	13 %	30 %	**11 %**
4	9 %	18 %	9 %	18 %	15 %	16 %	17 %	20 %	23 %	15 %	**19 %**
5	9 %	14 %	6 %	15 %	6 %	8 %	16 %	9 %	20 %	12 %	**13 %**
6	8 %	8 %	5 %	11 %	5 %	12 %	12 %	9 %	19 %	18 %	**11 %**
7	7 %	15 %	3 %	13 %	14 %	19 %	8 %	10 %	13 %	12 %	**12 %**
8	6 %	9 %	10 %	20 %	7 %	17 %	8 %	11 %	12 %	16 %	**13 %**
9	6 %	5 %	11 %	3 %	7 %	9 %	7 %	7 %	11 %	0 %	**6 %**
10	6 %	7 %	7 %	13 %	7 %	17 %	10 %	6 %	10 %	7 %	**10 %**
11	7 %	4 %	5 %	12 %	4 %	14 %	7 %	12 %	15 %	4 %	**11 %**
12	0 %	0 %	-	8 %	10 %	21 %	12 %	4 %	6 %	0 %	**12 %**
13	0 %	0 %	-	0 %	0 %	0 %	0 %	0 %	0 %	0 %	**14 %**
14	3 %	3 %	4 %	7 %	8 %	11 %	8 %	7 %	3 %	9 %	**8 %**
15	0 %	0 %	0 %	0 %	0 %	0 %	0 %	-	0 %	0 %	**22 %**
16	3 %	6 %	-	14 %	0 %	10 %	14 %	0 %	6 %	-	**11 %**

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
17	14 %	0 %	0 %	6 %	0 %	19 %	3 %	0 %	0 %	-	**8 %**
18	-	-	-	-	-	-	-	-	-	-	**-**
19	0 %	0 %	-	0 %	0 %	0 %	0 %	-	0 %	-	**8 %**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	0 %	0 %	0 %	0 %	-	0 %	-	**23 %**
22	0 %	0 %	-	0 %	0 %	0 %	0 %	0 %	0 %	-	**6 %**
Weighted Mean	**9 %**	**18 %**	**10 %**	**14 %**	**17 %**	**15 %**	**18 %**	14 %	**20 %**	**17 %**	**16 %**

Relative bias

Table 4.5: Strata_SE . The relative bias (as the difference between the mean and modal age) per modal age and reader is presented, as well as the weighted mean relative bias per reader and the relative bias per modal age for all readers combined.

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
0	0.00	0.00	0.00	0.17	0.00	0.17	0.00	0.00	0.00	0.00	**0.03**
1	0.06	0.00	0.07	0.12	-0.29	0.12	0.50	0.46	0.38	0.20	**0.16**
2	-0.12	-0.14	0.23	0.17	-0.32	0.12	0.35	0.13	0.54	1.00	**0.20**
3	0.00	-0.44	-0.12	0.06	-0.18	-0.24	0.29	0.07	0.29	0.83	**0.06**
4	-0.05	-0.58	0.05	0.90	-0.14	-0.35	0.32	0.50	1.35	1.00	**0.30**
5	-0.10	-0.26	-0.05	0.58	-0.19	-0.25	0.70	0.31	1.35	0.50	**0.26**
6	-0.23	-0.23	0.08	0.92	-0.08	-0.29	0.31	0.38	1.08	0.29	**0.22**
7	-0.18	0.40	0.12	1.22	-0.55	-0.91	0.80	0.38	0.82	1.00	**0.31**
8	-0.19	-0.54	0.00	2.23	-0.06	-1.00	0.50	0.56	1.24	0.30	**0.30**
9	-0.14	0.14	0.50	0.17	-0.38	-1.00	0.25	0.00	0.88	0.00	**0.04**
10	-0.23	-0.09	0.67	1.90	0.15	-1.38	0.67	0.88	1.00	-0.56	**0.30**
11	-0.86	0.60	0.80	2.14	-0.11	-1.78	0.38	1.83	1.56	0.50	**0.51**
12	0.00	-1.00	-	3.50	0.50	-3.25	1.00	-0.33	-0.25	0.00	**-**
13	-1.00	0.00	-	4.00	0.00	-4.00	0.00	2.00	2.00	-3.00	**-**
14	-0.33	0.67	-0.50	-0.33	-0.67	-2.00	0.33	1.00	0.33	-3.00	**-0.45**
15	-5.00	0.00	-4.00	0.00	-4.00	-9.00	-2.00	-	-1.00	-7.00	**-**
16	-0.50	1.00	-	5.00	2.00	-1.50	2.50	2.00	2.00	-	**-**
17	-3.00	-2.00	0.00	1.00	0.00	-3.50	-0.50	0.00	-1.00	-	**-**
18	-	-	-	-	-	-	-	-	-	-	**-**
19	0.00	1.00	-	3.00	-2.00	-3.00	0.00	-	-1.00	-	**-**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	0.00	-8.00	-9.00	1.00	-	-1.00	-	**-**
22	0.00	-3.00	-	1.00	-1.00	-3.00	0.00	0.00	1.00	-	**-**
Weighted Mean	**-0.20**	**-0.18**	**0.10**	**0.90**	**-0.24**	**-0.72**	**0.44**	**0.43**	**0.84**	**0.16**	**0.22**

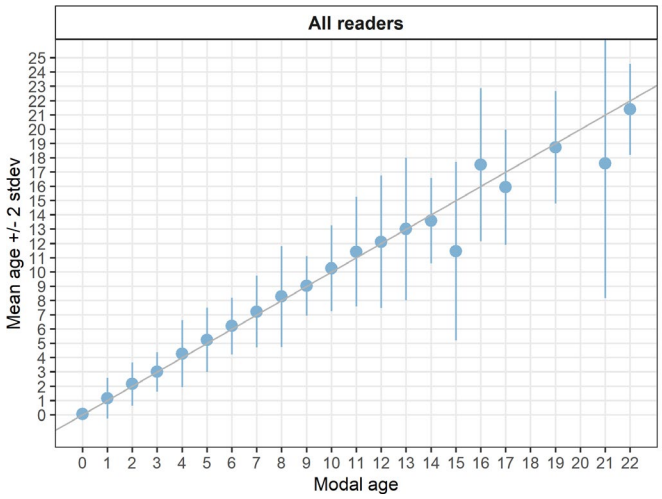

Figure 1: Strata_SE .Age bias plot for all readers. Mean age recorded +/- 2 stdev of each reader and all readers combined are plotted against modal age. The estimated mean age corresponds to modal age, if the estimated mean age is on the 1:1 equilibrium line (solid line). Relative bias is the age difference between estimated mean age and modal age.

Inter-reader bias test

Table 4.6: Strata_SE .Inter reader bias test. The Inter-reader bias test gives probability of bias between readers and with modal age. - = no sign of bias (p>0.05), * = possibility of bias (0.01<p<0.05), * * = certainty of bias (p<0.01)

Comparison	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE
R02 DK	X	**	-	**	*	**	**	**	**	-
R03 DE	**	X	**	**	**	**	**	**	**	**
R04 DK	-	**	X	*	-	-	*	**	*	**
R05 SE	**	**	*	X	**	**	**	*	**	**
R06 SE	*	**	-	**	X	*	**	-	**	-
R07 DK	**	**	-	**	*	X	**	-	**	-
R08 PL	**	**	*	**	**	**	X	**	*	**
R09 DK	**	**	**	*	-	-	**	X	**	**
R10 DK	**	**	*	**	**	**	*	**	X	**
R11 DE	-	**	**	**	-	-	**	**	**	X
Modal age	-	-	**	**	**	-	**	-	**	-

4.1.2 All readers reading whole otoliths (Strata_AL)

Summary statistics

Table 4.7: Strata_AL .Summary of statistics; Total number of samples (NSample), coefficient of variance (CV), percentage of agreement (PA) and average percentage error (APE) for all ages and readers

NSample	CV	PA	APE
196	24 %	60 %	17 %

In this exchange 198 whole otolith images were aged. When all the samples are considered (both single and multimodal cases) the weighted average percentage agreement based on modal ages for all readers is 60 %, with the

weighted average CV of 24 % and APE of 17 %. Individual readers values are highly variable and should be examined to identify readers with most uncertainty and age groups where most aging errors occur.

Coefficient of Variation (CV)

Table 4.8: Strata_AL .Coefficient of Variation (CV) table presents the CV per modal age and reader, the CV of all readers combined per modal age and a weighted mean of the CV per reader

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
0	-	-	-	-	-	-	-	-	-	-	**-**
1	60 %	81 %	29 %	29 %	46 %	71 %	57 %	45 %	62 %	35 %	**63 %**
2	15 %	36 %	28 %	39 %	26 %	24 %	44 %	36 %	39 %	32 %	**39 %**
3	12 %	22 %	17 %	19 %	18 %	20 %	27 %	20 %	17 %	29 %	**22 %**
4	15 %	19 %	10 %	21 %	22 %	19 %	24 %	22 %	18 %	14 %	**21 %**
5	12 %	23 %	12 %	16 %	16 %	9 %	14 %	14 %	19 %	20 %	**18 %**
6	16 %	19 %	12 %	17 %	12 %	15 %	10 %	14 %	17 %	9 %	**16 %**
7	6 %	11 %	4 %	8 %	14 %	15 %	14 %	7 %	9 %	23 %	**13 %**
8	8 %	10 %	10 %	15 %	11 %	13 %	11 %	13 %	8 %	12 %	**13 %**
9	11 %	8 %	9 %	8 %	7 %	5 %	10 %	10 %	9 %	9 %	**9 %**
10	7 %	9 %	9 %	12 %	11 %	9 %	7 %	8 %	7 %	15 %	**11 %**
11	11 %	19 %	9 %	15 %	13 %	12 %	18 %	8 %	15 %	13 %	**15 %**
12	24 %	29 %	5 %	13 %	22 %	29 %	0 %	0 %	16 %	-	**20 %**
13	13 %	10 %	15 %	13 %	4 %	24 %	12 %	0 %	23 %	-	**18 %**
14	-	-	-	-	-	-	-	-	-	-	**13 %**
15	-	-	0 %	18 %	-	43 %	22 %	-	21 %	-	**23 %**
16	-	-	-	-	-	-	-	-	-	-	**-**
17	-	-	-	-	-	-	-	-	-	-	**-**
18	-	-	-	0 %	-	33 %	0 %	-	-	-	**41 %**
19	-	-	-	-	-	-	-	-	-	-	**-**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	-	-	-	-	-	-	-	**-**
22	-	-	-	-	-	-	-	-	-	-	**-**
Weighted Mean	**17 %**	**25 %**	**15 %**	**20 %**	**19 %**	**21 %**	**23 %**	20 %	**22 %**	**21 %**	**24 %**

Percentage of Agreement (PA)

Table 4.9: Strata_AL .Percentage agreement (PA) table represents the PA per modal age and reader, the PA of all readers combined per modal age and a weighted mean of the PA per reader.

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	total
0	100 %	83 %	100 %	100 %	100 %	83 %	60 %	100 %	83 %	0 %	**89 %**
1	78 %	60 %	89 %	89 %	83 %	59 %	50 %	78 %	53 %	17 %	**69 %**
2	92 %	52 %	70 %	54 %	75 %	75 %	45 %	61 %	43 %	10 %	**61 %**
3	88 %	57 %	84 %	72 %	72 %	76 %	42 %	82 %	60 %	44 %	**69 %**
4	65 %	50 %	81 %	55 %	55 %	57 %	55 %	71 %	68 %	42 %	**60 %**
5	71 %	27 %	79 %	57 %	68 %	80 %	67 %	55 %	56 %	25 %	**61 %**
6	71 %	38 %	69 %	50 %	50 %	50 %	54 %	56 %	54 %	67 %	**55 %**
7	80 %	11 %	90 %	20 %	40 %	60 %	30 %	56 %	60 %	38 %	**49 %**
8	67 %	33 %	60 %	33 %	73 %	67 %	47 %	50 %	60 %	25 %	**54 %**
9	50 %	25 %	75 %	62 %	62 %	75 %	62 %	38 %	75 %	50 %	**58 %**
10	36 %	36 %	55 %	45 %	64 %	50 %	36 %	78 %	55 %	29 %	**49 %**
11	50 %	50 %	50 %	33 %	67 %	67 %	50 %	20 %	67 %	33 %	**50 %**

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	total
12	0 %	0 %	67 %	67 %	67 %	0 %	100 %	100 %	67 %	0 %	**46 %**
13	33 %	0 %	33 %	0 %	33 %	33 %	67 %	100 %	67 %	-	**38 %**
14	0 %	-	100 %	100 %	100 %	0 %	0 %	0 %	0 %	0 %	**33 %**
15	0 %	-	100 %	0 %	0 %	50 %	0 %	-	0 %	-	**25 %**
16	-	-	-	-	-	-	-	-	-	-	**-**
17	-	-	-	-	-	-	-	-	-	-	**-**
18	-	-	-	100 %	-	0 %	0 %	-	-	-	**33 %**
19	-	-	-	-	-	-	-	-	-	-	**-**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	-	-	-	-	-	-	-	**-**
22	-	-	-	-	-	-	-	-	-	-	**-**
Weighted Mean	**71 %**	**42 %**	**76 %**	**57 %**	**67 %**	**64 %**	**49 %**	**65 %**	**58 %**	**32 %**	**60 %**

Average Percentage Error (APE)

Table 4.10: Strata_AL .Average Percentage Error (APE) table represents the APE per modal age and reader, the APE of all advanced readers combined per modal age and a weighted mean of the APE per reader.

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
0	-	-	-	-	-	-	-	-	-	-	**-**
1	39 %	54 %	18 %	18 %	33 %	55 %	47 %	34 %	50 %	26 %	**47 %**
2	4 %	33 %	21 %	30 %	16 %	15 %	33 %	27 %	30 %	23 %	**28 %**
3	5 %	19 %	9 %	15 %	14 %	10 %	22 %	11 %	15 %	24 %	**14 %**
4	10 %	17 %	7 %	15 %	14 %	15 %	16 %	14 %	14 %	12 %	**14 %**
5	10 %	16 %	6 %	12 %	13 %	7 %	11 %	9 %	14 %	16 %	**10 %**
6	10 %	15 %	7 %	12 %	9 %	10 %	8 %	11 %	10 %	7 %	**10 %**
7	5 %	8 %	3 %	5 %	10 %	9 %	10 %	7 %	8 %	16 %	**10 %**
8	7 %	8 %	6 %	12 %	8 %	9 %	8 %	9 %	7 %	10 %	**9 %**
9	7 %	5 %	7 %	7 %	5 %	4 %	7 %	8 %	5 %	6 %	**6 %**
10	6 %	7 %	5 %	10 %	7 %	8 %	6 %	4 %	6 %	12 %	**7 %**
11	8 %	14 %	7 %	11 %	11 %	9 %	12 %	6 %	13 %	10 %	**9 %**
12	18 %	21 %	4 %	10 %	17 %	22 %	0 %	0 %	12 %	0 %	**15 %**
13	10 %	8 %	10 %	10 %	3 %	17 %	10 %	0 %	18 %	-	**12 %**
14	0 %	-	0 %	0 %	0 %	0 %	0 %	0 %	0 %	0 %	**11 %**
15	0 %	-	0 %	13 %	0 %	30 %	16 %	-	15 %	-	**16 %**
16	-	-	-	-	-	-	-	-	-	-	**-**
17	-	-	-	-	-	-	-	-	-	-	**-**
18	-	-	-	0 %	-	23 %	0 %	-	-	-	**33 %**
19	-	-	-	-	-	-	-	-	-	-	**-**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	-	-	-	-	-	-	-	**-**
22	-	-	-	-	-	-	-	-	-	-	**-**
Weighted Mean	**11 %**	**20 %**	**9 %**	**15 %**	**14 %**	**15 %**	**18 %**	**14 %**	**17 %**	**15 %**	**17 %**

Relative bias

Table 4.11: Strata_AL . The relative bias (as the difference between the mean and modal age) per modal age and reader is presented, as well as the weighted mean relative bias per reader and the relative bias per modal age for all readers combined.

Modal age	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	all
0	0.00	0.17	0.00	0.00	0.00	0.17	0.60	0.00	0.17	1.00	**0.21**
1	0.22	0.13	0.11	0.11	-0.17	0.59	0.89	0.28	0.88	1.17	**0.42**
2	0.00	-0.38	0.25	0.33	-0.08	0.08	0.86	0.28	0.78	1.10	**0.32**
3	-0.04	-0.35	0.12	0.36	-0.20	0.04	0.62	-0.14	0.44	0.56	**0.14**
4	-0.05	-0.45	0.19	0.40	0.00	-0.22	0.68	-0.14	0.36	0.67	**0.14**
5	-0.33	-1.05	-0.08	0.61	-0.44	-0.20	0.46	0.05	0.48	0.38	**-0.01**
6	-0.29	-0.69	0.08	0.79	0.07	-0.14	0.31	0.33	0.00	0.33	**0.08**
7	-0.20	-0.67	0.10	1.00	0.10	0.00	0.70	0.44	0.50	0.12	**0.21**
8	-0.40	-0.87	0.07	1.20	-0.40	-0.40	0.80	0.33	0.47	-0.25	**0.05**
9	-0.12	-0.88	-0.38	0.50	-0.12	-0.25	0.25	0.50	0.12	-0.17	**-0.05**
10	-0.45	-0.91	0.00	0.82	-0.09	-0.70	0.82	0.11	0.55	0.29	**0.04**
11	-0.83	-1.25	0.33	1.50	-0.83	-0.67	0.83	0.40	1.17	0.33	**0.10**
12	-2.33	-3.33	-0.33	1.00	-1.33	-3.00	0.00	0.00	-1.00	-3.00	**-1.33**
13	-1.33	-1.67	0.00	2.67	0.67	-2.33	1.00	0.00	2.00	-	**-**
14	-4.00	-	0.00	0.00	0.00	-1.00	-4.00	-1.00	-3.00	-1.00	**-**
15	1.00	-	0.00	4.50	-1.00	-3.50	4.00	-	1.50	-	**-**
16	-	-	-	-	-	-	-	-	-	-	**-**
17	-	-	-	-	-	-	-	-	-	-	**-**
18	-	-	-	0.00	-	-11.50	-4.00	-	-	-	**-**
19	-	-	-	-	-	-	-	-	-	-	**-**
20	-	-	-	-	-	-	-	-	-	-	**-**
21	-	-	-	-	-	-	-	-	-	-	**-**
22	-	-	-	-	-	-	-	-	-	-	**-**
Weighted Mean	**-0.23**	**-0.64**	**0.07**	**0.64**	**-0.18**	**-0.33**	**0.62**	**0.15**	**0.49**	**0.43**	**0.13**

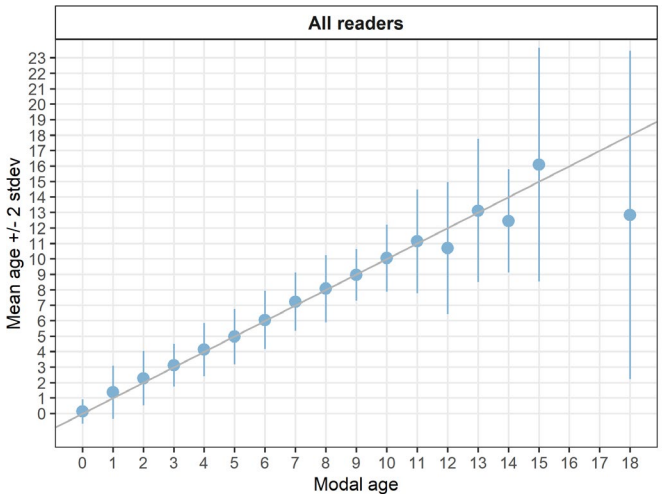

Figure 2: Strata_AL .Age bias plot for all readers. Mean age recorded +/- 2 stdev of each reader and all readers combined are plotted against modal age. The estimated mean age corresponds to modal age, if the estimated mean age is on the 1:1 equilibrium line (solid line). Relative bias is the age difference between estimated mean age and modal age.

Inter-reader bias test

Table 4.12: Strata_AL .Inter reader bias test. The Inter-reader bias test gives probability of bias between readers and with modal age. - = no sign of bias (p>0.05), * = possibility of bias (0.01<p<0.05), * * = certainty of bias (p<0.01)

Comparison	R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE
R02 DK	X	**	-	**	*	**	**	**	**	-
R03 DE	**	X	**	**	**	**	**	**	**	**
R04 DK	-	**	X	*	-	-	*	**	*	**
R05 SE	**	**	*	X	**	**	**	*	**	**
R06 SE	*	**	-	**	X	*	**	-	**	-
R07 DK	**	**	-	**	*	X	**	-	**	-
R08 PL	**	**	*	**	**	**	X	**	*	**
R09 DK	**	**	**	*	-	-	**	X	**	**
R10 DK	**	**	*	**	**	**	*	**	X	**
R11 DE	-	**	**	**	-	-	**	**	**	X
Modal age	-	-	**	**	**	-	**	-	**	-

4.1.3 Overall comparison of results by strata based on all readers

This section compares the overall results from the whole and the sectioned otoliths. It is important to note that all readers are included here and readers experience with a method is not considered. Modal age range based on whole otoliths is 0-18 but no estimations at modal ages 16 and 17, in comparison to a modal age range of 0-22 for sectioned otoliths. This highlights that in general age estimations based on sectioned otoliths are higher in comparison to whole otoliths. The overall relative bias values for both methods are positive, at the younger ages there is a positive trend but at older ages it is opposite with readers estimating ages below the modal age. Overall PA is 60% for both methods, with a value of 96% at modal age 0 for sectioned compared to 89% for whole otoliths. No consistent patterns are observed which help to identify if one method is producing better results in comparison to the other.

Table 4.13: Overview of number of age readings, CV, PA, APE and Relative bias for whole and sectioned otoliths separately based on all readers

Modal age	Whole No. of age readings	Whole CV	Whole PA	Whole APE	Whole Rel. Bias	Sectioned No. of age readings	Sectioned CV	Sectioned PA	Sectioned APE	Sectioned Whole Rel. Bias
0	54	-	89 %	-	0.13	51	-	96 %	-	0.04
1	163	63 %	69 %	47 %	0.37	148	62 %	74 %	38 %	0.15
2	210	39 %	61 %	28 %	0.28	219	36 %	68 %	22 %	0.14
3	227	22 %	69 %	14 %	0.12	154	23 %	73 %	11 %	0.01
4	191	21 %	60 %	14 %	0.13	192	28 %	51 %	19 %	0.26
5	220	18 %	61 %	10 %	-0.04	181	22 %	66 %	13 %	0.24
6	120	16 %	55 %	10 %	0.05	119	16 %	61 %	11 %	0.20
7	96	13 %	49 %	10 %	0.22	91	17 %	54 %	12 %	0.22
8	136	13 %	54 %	9 %	0.07	141	21 %	46 %	13 %	0.27
9	78	9 %	58 %	6 %	-0.05	67	12 %	64 %	6 %	0.03
10	103	11 %	49 %	7 %	0.04	112	15 %	46 %	10 %	0.25
11	54	15 %	50 %	9 %	0.13	67	17 %	46 %	11 %	0.42
12	26	20 %	46 %	15 %	-1.31	29	19 %	41 %	12 %	0.10
13	26	18 %	38 %	12 %	0.12	9	19 %	33 %	14 %	0.00
14	9	13 %	33 %	11 %	-1.56	27	11 %	33 %	8 %	-0.41
15	12	23 %	25 %	16 %	1.08	9	27 %	22 %	22 %	-3.56
16	0	-	-	-	-	14	15 %	29 %	11 %	1.50
17	0	-	-	-	-	15	13 %	40 %	8 %	-1.07

Modal age	Whole No. of age readings	Whole CV	Whole PA	Whole APE	Whole Rel. Bias		Sectioned No. of age readings	Sectioned CV	Sectioned PA	Sectioned APE	Sectioned Whole Rel. Bias
18	6	41 %	33 %	33 %	-5.17		0	-	-	-	-
19	0	-	-	-	-		7	11 %	29 %	8 %	-0.29
20	0	-	-	-	-		0	-	-	-	-
21	0	-	-	-	-		5	27 %	20 %	23 %	-3.40
22	0	-	-	-	-		8	7 %	38 %	6 %	-0.62
Total	**1731**	**24 %**	**60 %**	**17 %**	**0.09**		**1665**	**26 %**	**60 %**	**16 %**	**0.14**

4.1.4 Advanced readers reading sectioned otoliths (Strata_SE)

Summary statistics

Table 4.14: Strata_SE .Summary of statistics; Total number of samples (NSample), coefficient of variance (CV), percentage of agreement (PA) and average percentage error (APE) for all ages and readers

NSample	CV	PA	APE
197	25 %	64 %	15 %

In this exchange 198 sectioned otolith images were aged. When all the samples are considered (both single and multimodal cases) the weighted average percentage agreement based on modal ages for advanced readers is 64 %, with the weighted average CV of 25 % and APE of 15 %. Individual readers values are highly variable and should be examined to identify readers with most uncertainty and age groups where most aging errors occur.

Coefficient of Variation (CV)

Table 4.15: Strata_SE .Coefficient of Variation (CV) table presents the CV per modal age and reader, the CV of all readers combined per modal age and a weighted mean of the CV per reader

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
0	-	-	-	-	-	**-**
1	0 %	71 %	33 %	70 %	74 %	**65 %**
2	22 %	40 %	27 %	36 %	39 %	**35 %**
3	13 %	22 %	35 %	24 %	24 %	**26 %**
4	17 %	18 %	29 %	21 %	15 %	**24 %**
5	6 %	17 %	7 %	12 %	23 %	**15 %**
6	10 %	10 %	12 %	17 %	16 %	**15 %**
7	10 %	17 %	13 %	18 %	11 %	**17 %**
8	11 %	11 %	20 %	20 %	12 %	**18 %**
9	11 %	8 %	6 %	8 %	11 %	**9 %**
10	7 %	5 %	22 %	7 %	12 %	**16 %**
11	7 %	5 %	10 %	3 %	6 %	**8 %**
12	0 %	-	4 %	20 %	17 %	**18 %**
13	6 %	10 %	9 %	0 %	5 %	**11 %**
14	-	-	-	-	-	**11 %**
15	20 %	8 %	8 %	19 %	8 %	**14 %**
16	5 %	5 %	4 %	-	0 %	**6 %**
17	-	-	-	-	-	**18 %**
18	-	-	-	-	-	**16 %**
19	-	-	-	-	-	**9 %**
20	-	-	-	-	-	**61 %**
21	-	-	-	-	-	**26 %**

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
22	-	-	-	-	-	**7 %**
Weighted Mean	**11 %**	**24 %**	**21 %**	**24 %**	**24 %**	**25 %**

Percentage of Agreement (PA)

Table 4.16: Strata_SE .Percentage agreement (PA) table represents the PA per modal age and reader, the PA of all readers combined per modal age and a weighted mean of the PA per reader.

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	total
0	100 %	100 %	83 %	100 %	100 %	**96 %**
1	100 %	53 %	83 %	67 %	65 %	**74 %**
2	92 %	58 %	72 %	67 %	63 %	**71 %**
3	86 %	60 %	73 %	73 %	80 %	**74 %**
4	74 %	59 %	44 %	70 %	55 %	**61 %**
5	90 %	47 %	84 %	75 %	55 %	**70 %**
6	69 %	64 %	38 %	75 %	44 %	**59 %**
7	88 %	38 %	29 %	62 %	43 %	**53 %**
8	79 %	40 %	33 %	58 %	58 %	**55 %**
9	50 %	57 %	57 %	78 %	89 %	**68 %**
10	64 %	78 %	33 %	55 %	55 %	**57 %**
11	50 %	50 %	33 %	88 %	57 %	**58 %**
12	100 %	0 %	0 %	50 %	67 %	**50 %**
13	50 %	50 %	0 %	100 %	50 %	**50 %**
14	100 %	100 %	0 %	0 %	0 %	**40 %**
15	0 %	67 %	67 %	33 %	33 %	**40 %**
16	50 %	50 %	0 %	0 %	100 %	**44 %**
17	0 %	-	0 %	100 %	100 %	**50 %**
18	0 %	100 %	0 %	100 %	0 %	**40 %**
19	100 %	0 %	0 %	0 %	100 %	**40 %**
20	-	-	100 %	0 %	-	**50 %**
21	-	-	100 %	0 %	0 %	**33 %**
22	100 %	0 %	0 %	0 %	100 %	**40 %**
Weighted Mean	**79 %**	**56 %**	**56 %**	**68 %**	**61 %**	**64 %**

Average Percentage Error (APE)

Table 4.17: Strata_SE .Average Percentage Error (APE) table represents the APE per modal age and reader, the APE of all advanced readers combined per modal age and a weighted mean of the APE per reader.

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
0	-	-	-	-	-	**-**
1	0 %	47 %	24 %	56 %	60 %	**37 %**
2	7 %	27 %	20 %	27 %	30 %	**20 %**
3	5 %	18 %	23 %	16 %	16 %	**13 %**
4	12 %	16 %	17 %	11 %	13 %	**15 %**
5	4 %	14 %	5 %	10 %	16 %	**8 %**
6	6 %	8 %	10 %	11 %	13 %	**10 %**
7	6 %	13 %	10 %	12 %	9 %	**13 %**
8	5 %	9 %	17 %	12 %	10 %	**12 %**
9	8 %	5 %	5 %	6 %	6 %	**5 %**
10	6 %	4 %	16 %	5 %	8 %	**10 %**
11	5 %	4 %	8 %	2 %	4 %	**6 %**
12	0 %	0 %	3 %	12 %	13 %	**16 %**
13	4 %	7 %	6 %	0 %	4 %	**8 %**
14	0 %	0 %	0 %	0 %	0 %	**8 %**
15	16 %	6 %	6 %	14 %	7 %	**12 %**

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
16	3 %	3 %	3 %	0 %	0 %	**5 %**
17	0 %	-	0 %	0 %	0 %	**13 %**
18	0 %	0 %	0 %	0 %	0 %	**13 %**
19	0 %	0 %	0 %	0 %	0 %	**7 %**
20	-	-	0 %	0 %	-	**43 %**
21	-	-	0 %	0 %	0 %	**20 %**
22	0 %	0 %	0 %	0 %	0 %	**5 %**
Weighted Mean	**6 %**	**17 %**	**14 %**	**17 %**	**18 %**	**15 %**

Relative bias

Table 4.18: Strata_SE . The relative bias (as the difference between the mean and modal age) per modal age and advanced reader is presented, as well as the weighted mean relative bias per reader and the relative bias per modal age for all advanced readers combined.

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
0	0.00	0.00	0.17	0.00	0.00	**0.03**
1	0.00	0.00	0.17	-0.22	0.59	**0.11**
2	0.04	-0.12	0.24	-0.22	0.41	**0.07**
3	0.00	-0.27	0.40	-0.20	0.33	**0.05**
4	-0.21	-0.47	0.94	0.10	0.40	**0.15**
5	-0.10	-0.26	0.16	-0.30	0.25	**-0.05**
6	-0.06	-0.21	0.85	-0.31	0.38	**0.13**
7	-0.25	0.75	1.57	-0.38	0.86	**0.51**
8	-0.05	-0.60	1.73	-0.05	0.58	**0.32**
9	-0.38	0.14	0.43	-0.33	0.33	**0.04**
10	-0.45	-0.22	2.33	0.09	0.82	**0.51**
11	-0.17	0.50	1.33	0.12	0.14	**0.39**
12	0.00	-1.00	4.33	0.00	1.33	**0.93**
13	-0.50	1.00	3.00	0.00	0.50	**0.80**
14	0.00	0.00	-1.00	-2.00	2.00	**-0.20**
15	-3.67	-0.67	-0.67	-2.67	-1.33	**-1.80**
16	-0.50	-0.50	1.50	1.00	0.00	**0.30**
17	-5.00	-	2.00	0.00	0.00	**-**
18	-2.00	0.00	6.00	0.00	3.00	**1.40**
19	0.00	1.00	3.00	-2.00	0.00	**0.40**
20	-	-	0.00	-12.00	-	**-**
21	-	-	0.00	-8.00	1.00	**-**
22	0.00	-3.00	1.00	-1.00	0.00	**-0.60**
Weighted Mean	**-0.21**	**-0.17**	**0.84**	**-0.30**	**0.43**	**0.15**

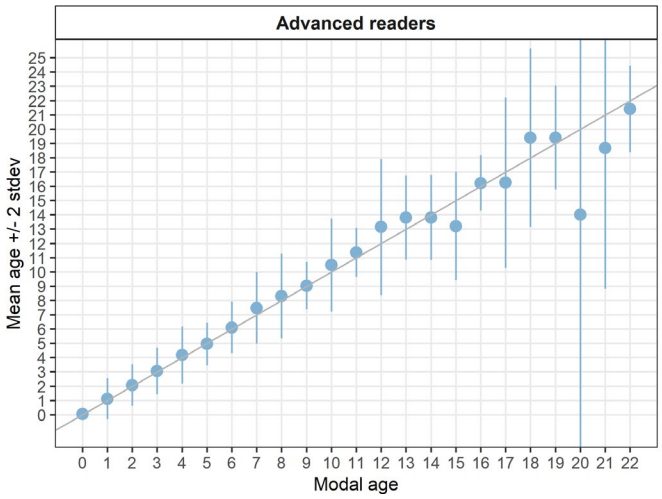

Figure 3: Strata_SE .Age bias plot for advance readers. Mean age recorded +/- 2 stdev of each reader and all readers combined are plotted against modal age. The estimated mean age corresponds to modal age, if the estimated mean age is on the 1:1 equilibrium line (solid line). Relative bias is the age difference between estimated mean age and modal age.

Inter-reader bias test

Table 4.19: Strata_SE .Inter reader bias test. The Inter-reader bias test gives probability of bias between readers and with modal age. - = no sign of bias (p>0.05), * = possibility of bias (0.01<p<0.05), * * = certainty of bias (p<0.01)

Comparison	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL
R02 DK	X	**	**	*	**
R03 DE	**	X	**	**	**
R05 SE	**	**	X	**	**
R06 SE	*	**	**	X	**
R08 PL	**	**	**	**	X
Modal age	*	-	**	**	**

4.1.5 Advanced readers reading whole otoliths (Strata_AL)

Summary statistics

Table 4.20: Strata_AL .Summary of statistics; Total number of samples (NSample), coefficient of variance (CV), percentage of agreement (PA) and average percentage error (APE) for all ages and readers

NSample	CV	PA	APE
196	25 %	61 %	17 %

In this exchange 198 whole otolith images were aged. When all the samples are considered (both single and multimodal cases) the weighted average percentage agreement based on modal ages for advanced readers is 61 %, with the weighted average CV of 25 % and APE of 17 %. Individual readers values are highly variable and should be examined to identify readers with most uncertainty and age groups where most aging errors occur.

Coefficient of Variation (CV)

Table 4.21: Strata_AL .Coefficient of Variation (CV) table presents the CV per modal age and reader, the CV of all readers combined per modal age and a weighted mean of the CV per reader

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
0	-	-	-	-	-	-
1	52 %	79 %	29 %	36 %	54 %	**60 %**
2	15 %	35 %	34 %	24 %	43 %	**38 %**
3	9 %	22 %	26 %	32 %	25 %	**28 %**
4	11 %	20 %	18 %	13 %	24 %	**22 %**
5	9 %	13 %	18 %	10 %	16 %	**17 %**
6	7 %	18 %	17 %	8 %	11 %	**15 %**
7	0 %	11 %	13 %	13 %	18 %	**15 %**
8	9 %	11 %	14 %	7 %	11 %	**15 %**
9	5 %	5 %	4 %	6 %	13 %	**9 %**
10	5 %	9 %	15 %	17 %	10 %	**15 %**
11	4 %	10 %	16 %	15 %	17 %	**16 %**
12	26 %	33 %	13 %	24 %	5 %	**21 %**
13	-	-	-	-	-	**16 %**
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	**4 %**
18	-	-	0 %	-	0 %	**14 %**
19	-	-	-	-	-	-
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	-	-	-	-	-	**22 %**
Weighted Mean	**14 %**	**24 %**	**21 %**	**19 %**	**24 %**	**25 %**

Percentage of Agreement (PA)

Table 4.22: Strata_AL .Percentage agreement (PA) table represents the PA per modal age and reader, the PA of all readers combined per modal age and a weighted mean of the PA per reader.

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	total
0	100 %	83 %	86 %	100 %	50 %	**85 %**
1	83 %	62 %	89 %	89 %	50 %	**75 %**
2	89 %	58 %	48 %	78 %	48 %	**65 %**
3	92 %	61 %	54 %	70 %	40 %	**64 %**
4	78 %	47 %	47 %	75 %	52 %	**60 %**
5	78 %	38 %	50 %	88 %	61 %	**64 %**
6	83 %	58 %	42 %	75 %	55 %	**63 %**
7	100 %	29 %	12 %	62 %	25 %	**46 %**
8	68 %	37 %	32 %	74 %	47 %	**52 %**
9	83 %	17 %	83 %	67 %	50 %	**60 %**
10	55 %	50 %	45 %	55 %	55 %	**52 %**
11	75 %	33 %	50 %	50 %	57 %	**54 %**
12	33 %	33 %	67 %	33 %	67 %	**47 %**
13	100 %	0 %	0 %	0 %	0 %	**20 %**
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	-	-	-	-
17	-	-	100 %	-	0 %	**50 %**
18	-	-	100 %	-	0 %	**50 %**

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	total
19	-	-	-	-	-	**-**
20	-	-	-	-	-	**-**
21	-	-	-	-	-	**-**
22	0 %	-	100 %	0 %	100 %	**50 %**
Weighted Mean	**81 %**	**49 %**	**53 %**	**74 %**	**49 %**	**61 %**

Average Percentage Error (APE)

Table 4.23: Strata_AL .Average Percentage Error (APE) table represents the APE per modal age and reader, the APE of all advanced readers combined per modal age and a weighted mean of the APE per reader.

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
0	-	-	-	-	-	**-**
1	36 %	51 %	18 %	22 %	45 %	**41 %**
2	9 %	29 %	28 %	11 %	35 %	**26 %**
3	5 %	17 %	22 %	16 %	20 %	**20 %**
4	7 %	18 %	15 %	7 %	16 %	**15 %**
5	6 %	12 %	15 %	6 %	13 %	**10 %**
6	3 %	13 %	12 %	5 %	9 %	**10 %**
7	0 %	8 %	9 %	9 %	15 %	**11 %**
8	8 %	9 %	12 %	4 %	9 %	**10 %**
9	3 %	3 %	3 %	5 %	11 %	**5 %**
10	5 %	8 %	13 %	13 %	8 %	**11 %**
11	3 %	8 %	13 %	13 %	11 %	**9 %**
12	20 %	25 %	10 %	18 %	4 %	**15 %**
13	0 %	0 %	0 %	0 %	0 %	**13 %**
14	-	-	-	-	-	**-**
15	-	-	-	-	-	**-**
16	-	-	-	-	-	**-**
17	-	-	0 %	-	0 %	**3 %**
18	-	-	0 %	-	0 %	**12 %**
19	-	-	-	-	-	**-**
20	-	-	-	-	-	**-**
21	-	-	-	-	-	**-**
22	0 %	-	0 %	0 %	0 %	**19 %**
Weighted Mean	**9 %**	**18 %**	**16 %**	**11 %**	**19 %**	**17 %**

Relative bias

Table 4.24: Strata_AL . The relative bias (as the difference between the mean and modal age) per modal age and advanced reader is presented, as well as the weighted mean relative bias per reader and the relative bias per modal age for all advanced readers combined.

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
0	0.00	0.17	0.14	0.00	1.17	**0.30**
1	0.28	0.12	0.11	-0.11	0.83	**0.25**
2	0.11	-0.25	0.48	0.00	0.88	**0.24**
3	0.08	-0.22	0.62	0.07	1.00	**0.31**
4	0.11	-0.63	0.74	0.05	0.71	**0.20**
5	-0.13	-0.67	0.68	-0.17	0.61	**0.07**
6	0.00	-0.42	1.00	0.08	0.55	**0.24**
7	0.00	-0.86	0.88	-0.25	0.62	**0.08**
8	-0.42	-0.84	1.26	-0.05	0.84	**0.16**
9	-0.17	-0.83	0.17	0.33	0.50	**0.00**
10	-0.45	-0.70	1.64	0.82	0.82	**0.42**
11	-0.25	-1.17	1.50	-0.88	0.71	**-0.02**

Modal age	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	all
12	-2.00	-2.33	1.00	-1.00	0.33	**-0.80**
13	0.00	-1.00	5.00	1.00	3.00	**1.60**
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	-	-	-	-
17	-	-	0.00	-	-1.00	-
18	-	-	0.00	-	-4.00	-
19	-	-	-	-	-	-
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	-6.00	-	0.00	-8.00	0.00	-
Weighted Mean	**-0.10**	**-0.51**	**0.75**	**-0.06**	**0.73**	**0.19**

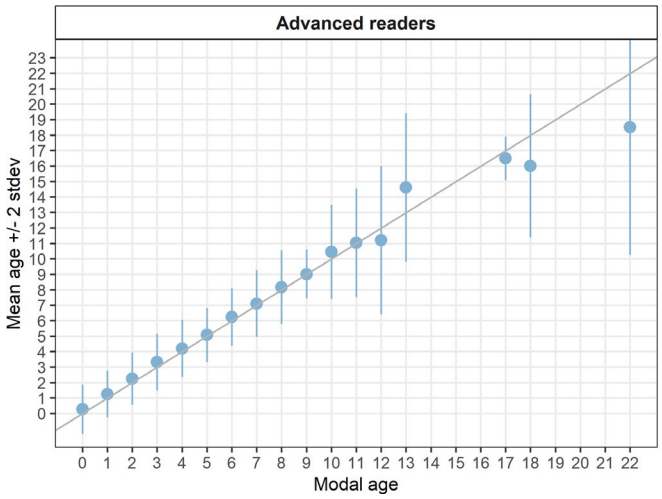

Figure 4: Strata_AL .Age bias plot for advance readers. Mean age recorded +/- 2 stdev of each reader and all readers combined are plotted against modal age. The estimated mean age corresponds to modal age, if the estimated mean age is on the 1:1 equilibrium line (solid line). Relative bias is the age difference between estimated mean age and modal age.

Inter-reader bias test

Table 4.25: Strata_AL .Inter reader bias test. The Inter-reader bias test gives probability of bias between readers and with modal age. - = no sign of bias (p>0.05), * = possibility of bias (0.01<p<0.05), * * = certainty of bias (p<0.01)

Comparison	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL
R02 DK	X	**	**	*	**
R03 DE	**	X	**	**	**
R05 SE	**	**	X	**	**
R06 SE	*	**	**	X	**
R08 PL	**	**	**	**	X
Modal age	*	-	**	**	**

4.1.6 Overall comparison of results by strata based on advanced readers

This section compares the overall results from the whole and the sectioned otoliths. It is important to note that only advanced readers are included but individual readers experience with each method is not considered. No obvious improvement in the results can be seen when compared to the results based on all age readers.

Table 4.26: Overview of number of age readings, CV, PA, APE and Relative bias for whole and sectioned otoliths separately based on advanced readers

Modal age	Whole No. of age readings	Whole CV	Whole PA	Whole APE	Whole Rel. Bias	Sectioned No. of age readings	Sectioned CV	Sectioned PA	Sectioned APE	Sectioned Rel. Bias
0	33	-	85 %	-	0.27	28	-	96 %	-	0.04
1	88	60 %	75 %	41 %	0.25	87	65 %	74 %	37 %	0.10
2	130	38 %	65 %	26 %	0.25	129	35 %	71 %	20 %	0.07
3	127	28 %	64 %	20 %	0.31	74	26 %	74 %	13 %	0.05
4	97	22 %	60 %	15 %	0.21	94	24 %	61 %	15 %	0.16
5	113	17 %	64 %	10 %	0.07	98	15 %	70 %	8 %	-0.05
6	59	15 %	63 %	10 %	0.24	75	15 %	59 %	10 %	0.11
7	39	15 %	46 %	11 %	0.10	38	17 %	53 %	13 %	0.47
8	95	15 %	52 %	10 %	0.16	87	18 %	55 %	12 %	0.30
9	30	9 %	60 %	5 %	0.00	40	9 %	68 %	5 %	0.03
10	54	15 %	52 %	11 %	0.44	51	16 %	57 %	10 %	0.47
11	37	16 %	54 %	9 %	0.03	33	8 %	58 %	6 %	0.36
12	15	21 %	47 %	15 %	-0.80	14	18 %	50 %	16 %	1.14
13	5	16 %	20 %	13 %	1.60	10	11 %	50 %	8 %	0.80
14	0	-	-	-	-	5	11 %	40 %	8 %	-0.20
15	0	-	-	-	-	15	14 %	40 %	12 %	-1.80
16	0	-	-	-	-	9	6 %	44 %	5 %	0.22
17	2	4 %	50 %	3 %	-0.50	4	18 %	50 %	13 %	-0.75
18	4	14 %	50 %	12 %	-2.00	5	16 %	40 %	13 %	1.40
19	0	-	-	-	-	5	9 %	40 %	7 %	0.40
20	0	-	-	-	-	2	61 %	50 %	43 %	-6.00
21	0	-	-	-	-	3	26 %	33 %	20 %	-2.33
22	4	22 %	50 %	19 %	-3.50	5	7 %	40 %	5 %	-0.60
Total	**932**	**25 %**	**61 %**	**17 %**	**0.17**	**911**	**25 %**	**64 %**	**15 %**	**0.11**

5 Conclusion

The overall results are poor with overall CV, PA and APE values between 24-26%, 60-65% and 14-17%, respectively. Annex 1 and 2 give the full data overview for this exchange and should be consulted for reader specific results. No marked improvement was observed when only the advanced readers age estimations were included in the analysis. Examination of the images and comparison of readers annotations in SmartDots was a large part of the work carried out at the ICES Workshop on Age Estimation of Baltic Plaice (WKARBP) in December 2025. This allowed the readers to discuss their interpretation differences and reach common understanding and agreement on some samples (Figure 5 as example). Irregular growth patterns do exist in the samples which are considered representative of the samples read for the Baltic Plaice stock assessment. The full report from the workshop should be consulted for a more in-depth explanation of the results and image examples.

As no set of agreed age reading criteria exists for Baltic plaice, one of the aims of WKARBP is to gather documentation on age reading procedures applied at the age reading laboratories where Baltic plaice otoliths are routinely read. An outcome of the workshop being a standardised age reading protocol for both whole and sectioned otoliths. Image quality will be addressed as readers felt there is room for improved image quality and standardisation. These protocols will then be applied to another age reading event, to take place after WGBFAS 2026, with results available before the summer of 2026. The results may indicate whether or not it can be an advantage to section otoliths from larger plaice and from what fish length this may be useful.

The current plus group applied in the stock assessment is 7+ but this could be increased in the future to, for example to 10+. A discussion with the stock assessor about the application of a 10+ age group when carrying out routine age reading for stock assessment purposes, and age data quality of fish above 10 years old, revolved around the best use of available time and resources, and whether spending limited resources on providing an age estimate above 10, with a greater level of uncertainty and which is not directly used in the assessment of this stock, makes sense. This will be taken up again when the second meeting of WKARBP takes place later in 2026.

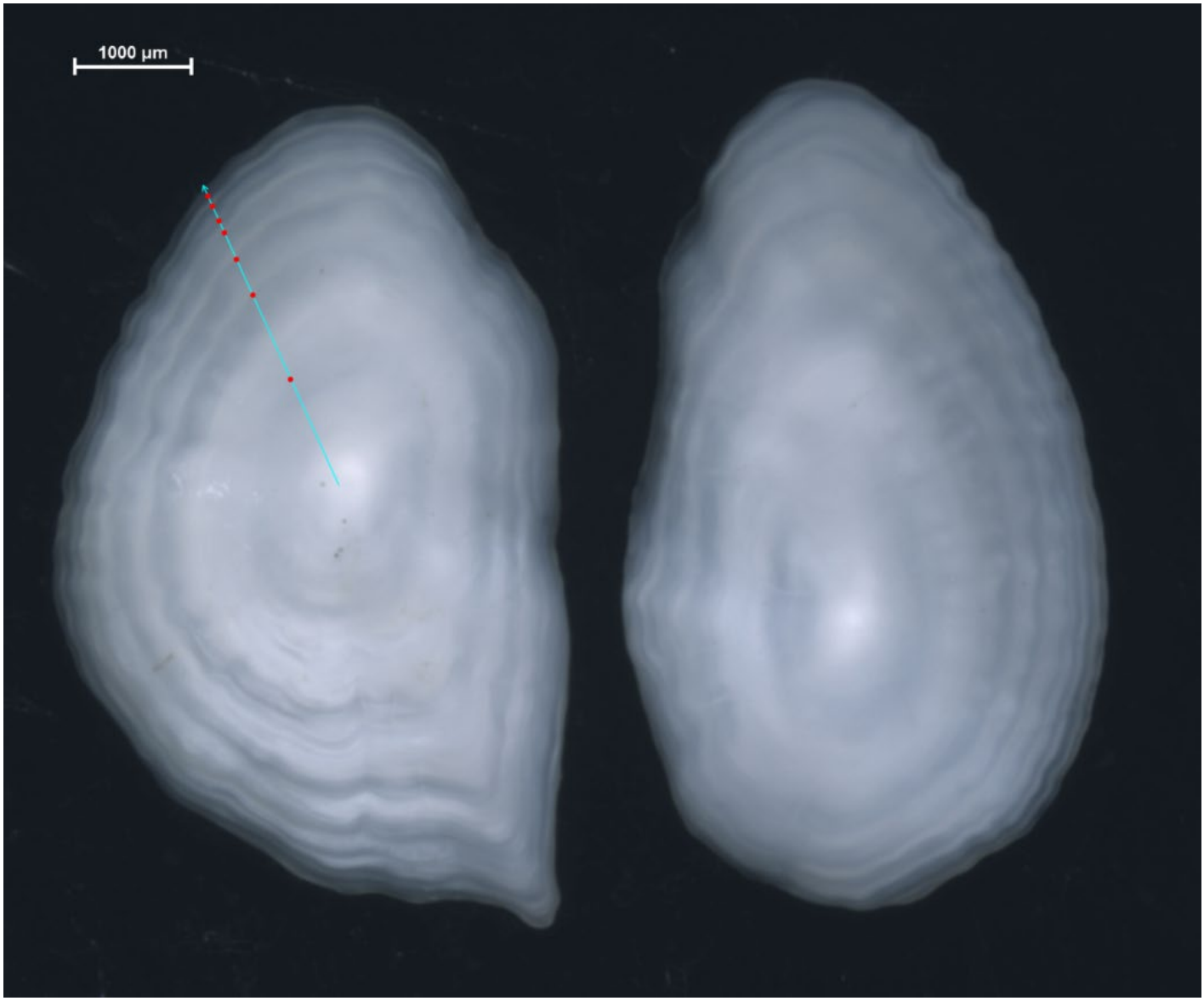

Figure 5. Example of otolith (PLE_2024_Q3_sd21_018_R_ALW) where an agreed age was determined after discussion during the workshop. Age in SmartDots event was between 5 and 7 years. Capture date: 22/08/2024. Length: 35 cm. Agreed age 7 years.

6 References

Beamish R. J. and Fournier D. A. (1981) A method for comparing the precision of a set of age determination. Canadian Journal of Fisheries and Aquatic Sciences, 38, 982–983

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Eltink, A.T.G.W. (2000) Age reading comparisons. (MS Excel workbook version 1.0 October 2000) Internet: http://www.efan.no

ICES (2014) Report of the Workshop on Statistical Analysis of Biological Calibration Studies (WKSABCAL). ICES CM 2014/ACOM: 35

Annex 1. Additional results all readers

Table 1.1.1: Data overview including modal age and statistics per sample.

Fish ID	length	sex	Catch date	ICES area		R02 DK	R03 DE	R04 DK	R05 SE	R06 SE	R07 DK	R08 PL	R09 DK	R10 DK	R11 DE	Modal age	PA %	CV %	APE %
8749796_ALW_RLX_DX	340	F	22-10-2023	27.3.d.24		6	7	7	8	8	9	8	7	7	7	7	50	11	9
8749796_SEX_RLX_UN	340	F	22-10-2023	27.3.d.24		7	7	7	9	7	7	9	7	9	9	7	60	13	12
8749973_ALW_RLX_DB	260	M	22-10-2023	27.3.d.24		3	3	4	4	3	5	4	2	3	3	3	50	25	20
8749973_SEX_RLX_UN	260	M	22-10-2023	27.3.d.24		6	NA	3	NA	3	3	5	3	4	5	3	50	30	25
8749976_ALW_RLX_XB	310	F	22-10-2023	27.3.d.24		7	6	7	9	8	7	8	8	7	5	7	40	16	12
8749976_SEX_RLX_UN	310	F	22-10-2023	27.3.d.24		8	8	9	NA	8	7	8	NA	9	7	8	50	9	6
8749977_ALW_RLX_DX	400	F	22-10-2023	27.3.d.24		7	7	7	8	8	8	8	8	8	7	8	60	7	6
8749977_SEX_RLX_UN	400	F	22-10-2023	27.3.d.24		8	6	8	10	8	8	9	7	9	11	8	40	17	13
8815035_ALW_RLX_DD	430	F	02-02-2024	27.3.c.22		10	10	11	12	11	11	11	12	11	13	11	50	8	6
8815035_SEX_RLX_UN	430	F	02-02-2024	27.3.c.22		14	15	14	13	15	14	13	NA	15	10	14	33	12	8
8815036_ALW_RLX_DD	460	F	02-02-2024	27.3.c.22		11	9	12	15	12	10	NA	NA	9	NA	12	29	19	14
8815036_SEX_RLX_UN	460	F	02-02-2024	27.3.c.22		9	9	12	NA	9	9	9	10	10	9	9	67	11	8
8815037_ALW_RLX_DD	460	F	02-02-2024	27.3.c.22		9	10	10	10	10	10	10	10	11	12	10	70	8	5
8815037_SEX_RLX_UN	460	F	02-02-2024	27.3.c.22		10	12	11	13	11	9	11	11	12	12	11	40	10	7
8824598_ALW_RLX_X0	380	F	20-02-2024	27.3.b.23		6	6	8	10	7	8	NA	NA	7	NA	6	29	19	14
8824598_SEX_RLX_UN	380	F	20-02-2024	27.3.b.23		NA	NA	NA	NA	11	9	NA	NA	16	NA	11	33	30	22
8824844_ALW_RLX_DD	340	F	20-02-2024	27.3.b.23		9	8	9	9	9	9	8	9	8	NA	9	67	6	5
8824844_SEX_RLX_UN	340	F	20-02-2024	27.3.b.23		9	10	10	13	10	8	11	NA	13	NA	10	38	17	13
8825242_ALW_RLX_BD	130	M	21-02-2024	27.3.b.23		1	1	2	1	1	4	1	1	2	NA	1	67	65	48
8825242_SEX_RLX_UN	130	M	21-02-2024	27.3.b.23		NA	2	1	3	1	2	3	3	4	NA	3	38	45	37
8825243_ALW_RLX_DB	140	M	21-02-2024	27.3.b.23		2	1	1	1	2	2	2	2	2	NA	2	67	30	27
8825243_SEX_RLX_UN	140	M	21-02-2024	27.3.b.23		2	1	2	2	1	2	2	2	2	NA	2	78	25	19
8825244_ALW_RLX_DD	150	F	21-02-2024	27.3.b.23		3	3	4	2	2	4	4	2	4	NA	4	44	30	25
8825244_SEX_RLX_UN	150	F	21-02-2024	27.3.b.23		2	1	3	3	2	2	2	2	3	NA	2	56	30	23
8825256_ALW_RLX_DX	270	F	21-02-2024	27.3.b.23		3	3	5	5	3	4	5	3	4	NA	3	44	24	20
8825256_SEX_RLX_UN	270	F	21-02-2024	27.3.b.23		3	4	4	6	4	5	5	5	5	NA	5	44	19	16
8825257_ALW_RLX_DD	280	F	21-02-2024	27.3.b.23		6	6	6	6	6	6	6	7	6	NA	6	89	5	3
8825257_SEX_RLX_UN	280	F	21-02-2024	27.3.b.23		5	4	5	5	5	5	5	6	6	NA	5	67	12	8
8825545_ALW_RLX_DX	100	M	21-02-2024	27.3.d.24		1	1	2	1	1	2	2	2	2	1	1	50	35	33
8825545_SEX_RLX_UN	100	M	21-02-2024	27.3.d.24		1	1	1	1	1	1	1	1	1	1	1	100	0	0
8825546_ALW_RLX_DD	110	F	21-02-2024	27.3.d.24		1	1	2	1	1	2	2	2	2	2	2	60	32	30
8825546_SEX_RLX_UN	110	F	21-02-2024	27.3.d.24		1	1	1	1	1	1	1	1	1	1	1	100	0	0
8825561_ALW_RLX_DD	260	M	21-02-2024	27.3.d.24		3	4	4	3	3	3	3	3	4	3	3	70	15	13
8825561_SEX_RLX_UN	260	M	21-02-2024	27.3.d.24		7	6	6	NA	6	6	7	NA	10	7	6	50	20	13
8825562_ALW_RLX_XX	280	F	21-02-2024	27.3.d.24		4	4	5	5	5	5	5	4	5	4	5	60	11	10

8825562_SEX_RLX_UN	280	F	21-02-2024	27.3.d.24		5	4	5	5	5	5	5	5	5	6	5	80	9	4
8825564_ALW_RLX_DX	300	F	21-02-2024	27.3.d.24		6	6	7	7	6	7	8	8	7	5	7	40	14	11
8825564_SEX_RLX_UN	300	F	21-02-2024	27.3.d.24		8	7	8	NA	8	5	8	NA	8	6	8	62	16	13
8825732_ALW_RLX_DD	270	F	22-02-2024	27.3.d.24		5	5	5	5	5	5	5	6	5	5	5	90	6	4
8825732_SEX_RLX_UN	270	F	22-02-2024	27.3.d.24		6	5	5	6	6	5	6	6	6	7	6	60	11	8
8826206_ALW_RLX_DD	340	F	22-02-2024	27.3.d.24		11	11	12	12	12	11	12	12	12	9	12	60	8	6
8826206_SEX_RLX_UN	340	F	22-02-2024	27.3.d.24		11	11	13	12	12	10	11	13	14	11	11	40	10	8
8826207_ALW_RLX_DD	330	F	22-02-2024	27.3.d.24		9	8	9	9	9	9	9	9	9	8	9	80	5	4
8826207_SEX_RLX_UN	330	F	22-02-2024	27.3.d.24		8	8	9	9	9	6	8	8	9	9	9	50	11	8
8826410_ALW_RLX_DX	350	F	22-02-2024	27.3.d.24		7	6	7	8	7	7	7	7	7	7	7	80	7	3
8826410_SEX_RLX_UN	350	F	22-02-2024	27.3.d.24		8	8	7	8	8	5	9	8	10	10	8	50	18	12
8826411_ALW_RLX_DX	360	F	22-02-2024	27.3.d.24		9	8	9	9	9	9	9	10	9	8	9	70	6	4
8826411_SEX_RLX_UN	360	F	22-02-2024	27.3.d.24		7	8	8	8	8	8	8	8	9	9	8	70	7	4
8828253_ALW_RLX_DX	110	F	24-02-2024	27.3.c.22		1	1	1	1	1	4	1	1	NA	2	1	78	70	48
8828253_SEX_RLX_UN	110	F	24-02-2024	27.3.c.22		1	2	1	1	1	2	2	4	1	NA	1	56	60	44
8828254_ALW_RLX_DX	120	M	24-02-2024	27.3.c.22		2	1	2	2	2	2	2	2	2	1	2	80	23	18
8828254_SEX_RLX_UN	120	M	24-02-2024	27.3.c.22		1	2	2	2	1	2	3	3	2	1	2	50	39	28
8828263_ALW_RLX_DX	210	M	24-02-2024	27.3.c.22		NA	NA	3	3	3	3	NA	NA	4	4	3	67	15	13
8828263_SEX_RLX_UN	210	M	24-02-2024	27.3.c.22		2	2	3	3	3	2	3	NA	3	5	3	56	32	21
8828264_ALW_RLX_DD	220	F	24-02-2024	27.3.c.22		3	2	3	5	3	5	5	5	5	4	5	50	29	25
8828264_SEX_RLX_UN	220	F	24-02-2024	27.3.c.22		5	3	3	5	5	4	7	NA	6	4	5	33	28	22
8829000_ALW_RLX_DD	320	F	25-02-2024	27.3.c.22		6	5	6	7	6	6	7	7	7	6	6	50	11	9
8829000_SEX_RLX_UN	320	F	25-02-2024	27.3.c.22		8	7	8	8	8	7	7	8	8	8	8	70	6	5
8829005_ALW_RLX_BB	260	M	25-02-2024	27.3.c.22		5	5	5	5	5	5	5	5	5	6	5	90	6	4
8829005_SEX_RLX_UN	260	M	25-02-2024	27.3.c.22		5	5	5	6	5	5	5	5	6	5	5	80	8	6
8829217_ALW_RLX_DD	320	M	25-02-2024	27.3.c.22		7	NA	7	8	7	5	6	8	7	7	7	56	13	9
8829217_SEX_RLX_UN	320	M	25-02-2024	27.3.c.22		NA	NA	10	NA	9	9	12	NA	13	NA	9	40	17	14
8837693_ALW_RLX_XX	130	M	07-03-2024	27.3.d.25		2	1	2	2	2	2	2	2	2	NA	2	89	18	10
8837693_SEX_RLX_UN	130	M	07-03-2024	27.3.d.25		2	1	2	2	2	2	2	2	2	NA	2	89	18	10
8837700_ALW_RLX_XD	230	M	07-03-2024	27.3.d.25		3	2	3	3	3	3	4	3	4	NA	3	67	19	13
8837700_SEX_RLX_UN	230	M	07-03-2024	27.3.d.25		3	2	3	3	3	3	3	3	3	NA	3	89	12	7
8837701_ALW_RLX_XX	240	M	07-03-2024	27.3.d.25		5	4	5	8	5	5	8	6	9	NA	5	44	29	24
8837701_SEX_RLX_UN	240	M	07-03-2024	27.3.d.25		5	5	5	NA	5	5	NA	7	9	NA	5	71	27	21
8837702_ALW_RLX_XX	250	M	07-03-2024	27.3.d.25		4	3	4	4	4	4	4	4	4	NA	4	89	9	5
8837702_SEX_RLX_UN	250	M	07-03-2024	27.3.d.25		8	NA	5	NA	5	7	8	9	9	NA	8	29	23	19
8837703_ALW_RLX_XX	260	M	07-03-2024	27.3.d.25		5	4	NA	7	4	4	9	2	6	NA	4	38	42	32
8837703_SEX_RLX_UN	260	M	07-03-2024	27.3.d.25		NA	NA	2	NA	NA	3	4	NA	NA	NA	2	33	33	22
8837921_ALW_RLX_DD	210	M	07-03-2024	27.3.d.25		3	2	3	3	2	2	2	NA	3	NA	3	50	21	20
8837921_SEX_RLX_UN	210	M	07-03-2024	27.3.d.25		NA	2	2	NA	2	2	3	NA	4	NA	2	67	33	27
8839097_ALW_RLX_DX	370	F	11-03-2024	27.3.d.25		9	9	11	10	10	8	10	10	11	NA	10	44	10	8
8839097_SEX_RLX_UN	370	F	11-03-2024	27.3.d.25		10	13	NA	15	11	11	15	12	12	NA	10	12	15	12
8839792_ALW_RLX_XX	370	F	13-03-2024	27.3.d.25		8	8	8	10	8	8	10	8	9	NA	8	67	10	9

8839792_SEX_RLX_UN	370	F	13-03-2024	27.3.d.25		7	8	NA	NA	6	7	9	7	11	NA	7	43	21	16
8841018_ALW_RLX_DD	300	F	16-03-2024	27.3.d.25		8	7	8	8	8	7	8	7	8	NA	8	67	7	6
8841018_SEX_RLX_UN	300	F	16-03-2024	27.3.d.25		7	6	7	NA	6	6	7	7	9	NA	7	50	14	10
8846969_ALW_RLX_XX	350	F	09-04-2024	27.3.c.22		6	6	6	7	6	6	7	8	7	7	6	50	11	9
8846969_SEX_RLX_UN	350	F	09-04-2024	27.3.c.22		5	6	7	8	6	5	6	6	9	4	6	40	24	17
8846970_ALW_RLX_DX	350	F	09-04-2024	27.3.c.22		8	7	11	11	8	8	11	12	11	10	11	40	18	16
8846970_SEX_RLX_UN	350	F	09-04-2024	27.3.c.22		10	15	11	15	11	6	13	NA	14	8	15	22	27	22
8846980_ALW_RLX_DD	370	F	09-04-2024	27.3.c.22		9	9	9	10	10	9	10	11	11	9	9	50	8	7
8846980_SEX_RLX_UN	370	F	09-04-2024	27.3.c.22		8	10	10	12	9	8	10	11	13	9	10	30	16	12
8846986_ALW_RLX_DD	390	F	09-04-2024	27.3.c.22		10	NA	14	14	14	13	10	13	11	13	14	33	13	11
8846986_SEX_RLX_UN	390	F	09-04-2024	27.3.c.22		12	13	NA	17	13	9	13	15	15	10	13	33	19	14
8846987_ALW_RLX_DX	430	F	09-04-2024	27.3.c.22		11	NA	12	13	9	11	10	12	15	11	11	33	15	11
8846987_SEX_RLX_UN	430	F	09-04-2024	27.3.c.22		15	16	NA	18	NA	13	16	18	17	NA	16	29	11	8
8849669_ALW_RLX_D0	390	F	22-04-2024	27.3.a.21		12	12	13	15	13	13	13	13	19	NA	13	56	16	11
8849669_SEX_RLX_UN	390	F	22-04-2024	27.3.a.21		12	11	NA	16	12	10	16	12	11	NA	12	38	18	14
8849670_ALW_RLX_DD	390	F	22-04-2024	27.3.a.21		13	12	15	18	14	11	16	NA	13	NA	13	25	16	12
8849670_SEX_RLX_UN	390	F	22-04-2024	27.3.a.21		NA	NA	NA	21	13	12	22	NA	20	NA	21	20	27	23
8849985_ALW_RLX_XB	290	F	15-04-2024	27.3.a.21		8	8	8	9	7	8	9	7	9	NA	8	44	10	7
8849985_SEX_RLX_UN	290	F	15-04-2024	27.3.a.21		7	8	7	10	7	8	7	8	7	NA	7	56	13	10
8851526_ALW_RLX_DB	210	F	11-04-2024	27.3.c.22		4	4	4	5	5	5	5	4	5	4	4	50	12	11
8851526_SEX_RLX_UN	210	F	11-04-2024	27.3.c.22		4	4	4	4	4	5	4	4	5	5	4	70	11	10
8851527_ALW_RLX_DD	200	F	11-04-2024	27.3.c.22		4	3	4	4	4	4	4	4	4	5	4	80	12	5
8851527_SEX_RLX_UN	200	F	11-04-2024	27.3.c.22		4	4	4	5	4	5	5	5	5	4	4	50	12	11
8851541_ALW_RLX_XD	130	F	11-04-2024	27.3.c.22		2	2	2	2	2	2	3	2	3	3	2	70	21	18
8851541_SEX_RLX_UN	130	F	11-04-2024	27.3.c.22		2	2	2	2	1	2	2	2	2	1	2	80	23	18
8851542_ALW_RLX_BX	130	F	11-04-2024	27.3.c.22		3	3	3	3	3	3	3	3	3	3	3	100	0	0
8851542_SEX_RLX_UN	130	F	11-04-2024	27.3.c.22		3	3	3	3	2	3	3	3	3	2	3	80	15	11
8851543_ALW_RLX_DX	120	M	11-04-2024	27.3.c.22		1	3	1	1	1	3	3	1	4	3	1	50	57	52
8851543_SEX_RLX_UN	120	M	11-04-2024	27.3.c.22		1	2	1	1	1	2	4	2	2	2	2	50	51	36
8854947_ALW_RLX_XX	120	M	17-04-2024	27.3.a.21		3	3	3	3	3	3	3	3	4	NA	3	89	11	6
8854947_SEX_RLX_UN	120	M	17-04-2024	27.3.a.21		2	4	2	NA	2	3	5	NA	4	NA	2	43	39	32
8854948_ALW_RLX_DX	110		17-04-2024	27.3.a.21		3	3	3	3	3	3	3	3	4	NA	3	89	11	6
8854948_SEX_RLX_UN	110		17-04-2024	27.3.a.21		3	3	3	3	2	3	3	4	3	NA	3	78	17	7
8855097_ALW_RLX_DB	240	F	07-05-2024	27.3.a.21		3	3	3	3	3	3	4	3	4	NA	3	78	14	11
8855097_SEX_RLX_UN	240	F	07-05-2024	27.3.a.21		2	2	3	3	3	2	4	3	3	NA	3	56	24	19
8855098_ALW_RLX_XX	230	F	07-05-2024	27.3.a.21		5	4	5	5	5	5	5	5	6	NA	5	78	10	4
8855098_SEX_RLX_UN	230	F	07-05-2024	27.3.a.21		5	4	5	5	5	5	5	5	5	NA	5	89	7	4
8855099_ALW_RLX_DB	220	F	07-05-2024	27.3.a.21		4	4	NA	5	5	3	5	4	6	NA	4	38	21	17
8855099_SEX_RLX_UN	220	F	07-05-2024	27.3.a.21		5	6	5	5	5	5	6	5	5	NA	5	78	8	7
8860430_ALW_RLX_XX	270	M	08-05-2024	27.3.a.21		6	8	9	12	7	6	8	NA	8	NA	8	38	24	16
8860430_SEX_RLX_UN	270	M	08-05-2024	27.3.a.21		10	NA	NA	18	11	11	14	16	16	NA	11	29	23	19
8860431_ALW_RLX_DX	250	F	08-05-2024	27.3.a.21		5	6	5	6	6	5	6	5	6	NA	6	56	9	9

8860431_SEX_RLX_UN	250	F	08-05-2024	27.3.a.21		5	7	6	8	6	6	8	7	6	NA	6	44	15	13
8862585_ALW_RLX_XX	230	M	27-05-2024	27.3.b.23		3	2	3	3	2	3	2	2	3	NA	3	56	21	19
8862585_SEX_RLX_UN	230	M	27-05-2024	27.3.b.23		3	4	3	3	3	3	3	3	3	NA	3	89	11	6
8862960_ALW_RLX_XD	200	F	27-05-2024	27.3.b.23		3	2	3	3	2	2	3	3	3	NA	3	67	19	17
8862960_SEX_RLX_UN	200	F	27-05-2024	27.3.b.23		2	2	3	2	2	2	2	3	4	NA	2	67	30	24
8862963_ALW_RLX_DX	260	F	27-05-2024	27.3.b.23		3	3	3	3	3	4	5	3	4	NA	3	67	21	17
8862963_SEX_RLX_UN	260	F	27-05-2024	27.3.b.23		3	3	3	3	3	3	4	3	4	NA	3	78	14	11
8862964_ALW_RLX_X0	290	F	27-05-2024	27.3.b.23		4	3	5	5	4	5	5	5	5	NA	5	67	16	13
8862964_SEX_RLX_UN	290	F	27-05-2024	27.3.b.23		4	3	4	4	4	4	5	5	5	NA	4	56	16	12
8880345_ALW_RLX_XX	200	M	31-07-2024	27.3.b.23		2	NA	2	2	2	1	1	1	1	NA	2	50	36	33
8880345_SEX_RLX_UN	200	M	31-07-2024	27.3.b.23		2	NA	2	2	1	2	1	1	1	NA	2	50	36	33
8880346_ALW_RLX_XX	230	M	31-07-2024	27.3.b.23		2	2	3	3	2	2	3	2	3	NA	2	56	22	20
8880346_SEX_RLX_UN	230	M	31-07-2024	27.3.b.23		2	NA	3	3	2	3	2	2	2	NA	2	62	22	20
8880347_ALW_RLX_DX	240	F	31-07-2024	27.3.b.23		4	2	5	5	4	5	5	4	5	NA	5	56	23	17
8880347_SEX_RLX_UN	240	F	31-07-2024	27.3.b.23		3	3	4	4	4	4	4	3	3	NA	4	56	15	14
8896602_ALW_RLX_XD	340	F	02-09-2024	27.3.b.23		5	3	5	6	5	4	5	4	4	NA	5	44	19	16
8896602_SEX_RLX_UN	340	F	02-09-2024	27.3.b.23		4	4	4	5	4	3	4	3	6	NA	4	56	23	15
8896603_ALW_RLX_DD	370	F	02-09-2024	27.3.b.23		10	9	10	11	8	8	11	NA	10	NA	10	38	12	10
8896603_SEX_RLX_UN	370	F	02-09-2024	27.3.b.23		NA	NA	NA	NA	11	7	12	NA	11	NA	11	50	22	16
8896604_ALW_RLX_XM	380	F	02-09-2024	27.3.b.23		7	5	NA	6	7	6	6	NA	4	NA	6	43	18	13
8896604_SEX_RLX_UN	380	F	02-09-2024	27.3.b.23		5	10	8	9	7	7	7	7	7	NA	7	56	19	14
8896605_ALW_RLX_XX	420	F	02-09-2024	27.3.b.23		NA	NA	15	17	NA	8	16	NA	14	NA	15	20	25	17
8896605_SEX_RLX_UN	420	F	02-09-2024	27.3.b.23		16	18	NA	24	18	16	21	NA	19	NA	16	29	15	11
8896607_ALW_RLX_XX	360	F	02-09-2024	27.3.b.23		6	3	5	6	5	5	6	NA	4	NA	6	38	21	15
8896607_SEX_RLX_UN	360	F	02-09-2024	27.3.b.23		4	NA	4	NA	5	4	NA	NA	7	NA	4	60	27	20
8896609_ALW_RLX_0D	410	F	02-09-2024	27.3.b.23		9	10	12	13	10	NA	12	NA	10	NA	10	43	13	12
8896609_SEX_RLX_UN	410	F	02-09-2024	27.3.b.23		19	20	NA	22	17	16	19	NA	18	NA	19	29	11	8
8896610_ALW_RLX_XM	360	F	02-09-2024	27.3.b.23		7	6	7	8	7	7	8	7	8	NA	7	56	9	7
8896610_SEX_RLX_UN	360	F	02-09-2024	27.3.b.23		8	7	8	11	8	9	10	NA	10	NA	8	38	15	13
8897044_ALW_RLX_DX	280	F	03-09-2024	27.3.c.22		4	5	4	5	4	4	5	4	4	5	4	60	12	11
8897044_SEX_RLX_UN	280	F	03-09-2024	27.3.c.22		3	3	3	5	4	3	4	NA	4	NA	3	50	21	17
8897045_ALW_RLX_DX	280	F	03-09-2024	27.3.c.22		5	5	5	6	5	5	6	5	6	7	5	60	13	11
8897045_SEX_RLX_UN	280	F	03-09-2024	27.3.c.22		6	6	6	8	6	6	8	8	9	8	6	50	17	15
8897046_ALW_RLX_XX	290	F	03-09-2024	27.3.c.22		3	3	3	3	3	3	3	3	3	5	3	90	20	11
8897046_SEX_RLX_UN	290	F	03-09-2024	27.3.c.22		3	2	3	4	4	3	4	4	4	NA	4	56	21	18
8897047_ALW_RLX_DX	290	F	03-09-2024	27.3.c.22		5	4	5	6	5	5	6	5	5	6	5	60	12	9
8897047_SEX_RLX_UN	290	F	03-09-2024	27.3.c.22		5	5	5	5	5	4	6	5	6	6	5	60	12	9
8897051_ALW_RLX_DX	310	F	03-09-2024	27.3.c.22		9	8	10	9	10	10	11	9	10	10	10	50	9	7
8897051_SEX_RLX_UN	310	F	03-09-2024	27.3.c.22		10	10	11	11	11	11	10	10	10	9	10	50	7	5
8897052_ALW_RLX_XX	320	F	03-09-2024	27.3.c.22		7	8	7	8	9	7	8	7	8	10	7	40	13	9
8897052_SEX_RLX_UN	320	F	03-09-2024	27.3.c.22		6	5	6	7	7	6	6	6	6	7	6	60	10	8
8897053_ALW_RLX_DX	320	F	03-09-2024	27.3.c.22		8	8	7	9	9	8	9	8	9	9	9	50	8	7

8897053_SEX_RLX_UN	320	F	03-09-2024	27.3.c.22		8	9	10	10	8	9	9	8	9	8	8	40	9	7
8909036_ALW_RLX_XX	500	F	17-09-2024	27.3.c.22		10	8	10	10	12	9	11	10	10	12	10	50	12	9
8909036_SEX_RLX_UN	500	F	17-09-2024	27.3.c.22		12	NA	NA	17	15	10	12	11	13	12	12	38	18	13
8909043_ALW_RLX_XX	370	F	17-09-2024	27.3.c.22		10	9	10	12	10	10	12	10	11	11	10	50	9	8
8909043_SEX_RLX_UN	370	F	17-09-2024	27.3.c.22		10	10	12	15	11	10	12	11	9	10	10	40	15	11
8913061_ALW_RLX_XX	270	F	16-09-2024	27.3.c.22		3	2	3	4	3	3	4	3	3	3	3	70	18	12
8913061_SEX_RLX_UN	270	F	16-09-2024	27.3.c.22		3	3	3	4	3	3	3	3	3	3	3	90	10	6
8922583_ALW_RLX_XD	320	F	03-10-2024	27.3.b.23		3	NA	6	6	7	5	5	NA	6	NA	6	43	23	17
8922583_SEX_RLX_UN	320	F	03-10-2024	27.3.b.23		NA	NA	NA	NA	NA	6	NA	NA	NA	NA	6	100	NA	0
8922584_ALW_RLX_XX	350	F	03-10-2024	27.3.b.23		6	5	6	8	7	7	6	6	NA	NA	6	50	14	11
8922584_SEX_RLX_UN	350	F	03-10-2024	27.3.b.23		9	10	12	12	10	10	11	12	10	NA	10	44	10	9
8929688_ALW_RLX_DX	350	F	20-10-2024	27.3.b.23		4	4	5	6	5	5	5	NA	6	NA	5	50	15	10
8929688_SEX_RLX_UN	350	F	20-10-2024	27.3.b.23		5	NA	NA	NA	5	5	7	NA	8	NA	5	60	24	20
8930400_ALW_RLX_XX	100	F	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930400_SEX_RLX_UN	100	F	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930401_ALW_RLX_XB	110	M	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930401_SEX_RLX_UN	110	M	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930402_ALW_RLX_XB	90	M	20-10-2024	27.3.b.23		0	0	0	0	0	0	1	0	0	NA	0	89	NA	NA
8930402_SEX_RLX_UN	90	M	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930403_ALW_RLX_DX	190	M	20-10-2024	27.3.b.23		2	1	2	3	2	2	4	2	3	NA	2	56	37	29
8930403_SEX_RLX_UN	190	M	20-10-2024	27.3.b.23		2	2	2	2	2	2	2	2	2	NA	2	100	0	0
8930404_ALW_RLX_XD	220	F	20-10-2024	27.3.b.23		1	0	1	2	1	1	1	1	1	NA	1	78	50	22
8930404_SEX_RLX_UN	220	F	20-10-2024	27.3.b.23		1	1	1	1	1	1	1	2	1	NA	1	89	30	18
8930405_ALW_RLX_XX	240	M	20-10-2024	27.3.b.23		3	3	3	4	3	3	4	4	4	NA	3	56	15	14
8930405_SEX_RLX_UN	240	M	20-10-2024	27.3.b.23		5	4	4	5	4	4	5	6	5	NA	4	44	15	13
8930406_ALW_RLX_XD	290	F	20-10-2024	27.3.b.23		5	4	5	6	5	5	6	6	5	NA	5	56	13	10
8930406_SEX_RLX_UN	290	F	20-10-2024	27.3.b.23		5	5	5	5	5	5	5	5	5	NA	5	100	0	0
8930408_ALW_RLX_XX	80	M	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930408_SEX_RLX_UN	80	M	20-10-2024	27.3.b.23		0	0	0	0	0	0	0	0	0	NA	0	100	NA	NA
8930720_ALW_RLX_BB	80	F	21-10-2024	27.3.d.24		0	0	0	0	0	0	NA	0	0	1	0	89	NA	NA
8930720_SEX_RLX_UN	80	F	21-10-2024	27.3.d.24		0	0	0	0	0	0	0	0	0	0	0	100	NA	NA
8930725_ALW_RLX_XX	210	F	21-10-2024	27.3.d.24		2	3	2	3	2	2	5	4	5	4	2	40	38	32
8930725_SEX_RLX_UN	210	F	21-10-2024	27.3.d.24		2	NA	2	2	2	2	3	3	2	7	2	67	59	37
8930726_ALW_RLX_X0	130	M	21-10-2024	27.3.d.24		1	1	1	1	1	1	2	1	1	2	1	80	35	27
8930726_SEX_RLX_UN	130	M	21-10-2024	27.3.d.24		1	0	1	1	0	1	1	1	1	2	1	70	63	40
8930727_ALW_RLX_X0	310	F	21-10-2024	27.3.d.24		5	4	6	7	5	5	7	6	6	6	6	40	17	13
8930727_SEX_RLX_UN	310	F	21-10-2024	27.3.d.24		5	4	5	5	5	5	5	5	5	6	5	80	9	4
8930728_ALW_RLX_DD	260	F	21-10-2024	27.3.d.24		2	2	2	4	2	2	2	2	3	4	2	70	34	28
8930728_SEX_RLX_UN	260	F	21-10-2024	27.3.d.24		3	2	2	2	3	3	3	3	3	5	3	60	30	19
8931409_ALW_RLX_X0	320	F	22-10-2024	27.3.d.24		9	10	9	10	8	9	10	10	11	8	10	40	10	9
8931409_SEX_RLX_UN	320	F	22-10-2024	27.3.d.24		12	NA	10	NA	9	10	NA	NA	NA	10	10	60	11	7
8931410_ALW_RLX_XC	300	M	22-10-2024	27.3.d.24		5	5	5	8	5	5	5	5	7	5	5	80	20	15

8931410_SEX_RLX_UN	300	M	22-10-2024	27.3.d.24		8	NA	NA	10	9	8	9	10	9	8	8	38	9	7
8931896_ALW_RLX_DB	150	M	23-10-2024	27.3.c.22		1	3	1	2	1	2	4	1	3	3	1	40	52	44
8931896_SEX_RLX_UN	150	M	23-10-2024	27.3.c.22		1	2	1	1	1	1	1	1	2	1	1	80	35	27
8931897_ALW_RLX_DX	170	M	23-10-2024	27.3.c.22		2	2	3	3	3	3	4	3	3	2	3	60	23	17
8931897_SEX_RLX_UN	170	M	23-10-2024	27.3.c.22		3	3	3	3	3	2	3	3	3	3	3	90	11	6
8931898_ALW_RLX_DD	110	F	23-10-2024	27.3.c.22		1	1	1	1	0	1	1	1	1	2	1	80	47	20
8931898_SEX_RLX_UN	110	F	23-10-2024	27.3.c.22		2	3	1	1	0	1	4	3	3	1	1	40	68	58
8931899_ALW_RLX_XD	210	F	23-10-2024	27.3.c.22		4	3	4	4	3	4	4	4	4	5	4	70	15	9
8931899_SEX_RLX_UN	210	F	23-10-2024	27.3.c.22		4	4	3	5	3	3	5	4	6	4	4	40	24	18
8931900_ALW_RLX_DX	220	F	23-10-2024	27.3.c.22		4	3	4	5	4	4	5	4	4	4	4	70	14	9
8931900_SEX_RLX_UN	220	F	23-10-2024	27.3.c.22		4	3	4	5	4	4	4	5	5	5	4	50	16	13
8931903_ALW_RLX_DD	360	F	23-10-2024	27.3.c.22		8	7	8	8	8	8	8	8	8	8	8	90	4	2
8931903_SEX_RLX_UN	360	F	23-10-2024	27.3.c.22		7	7	7	9	7	6	8	8	7	7	7	60	11	8
8932835_ALW_RLX_DD	420	F	26-10-2024	27.3.c.22		7	6	7	9	7	8	10	8	9	8	7	30	15	12
8932835_SEX_RLX_UN	420	F	26-10-2024	27.3.c.22		10	NA	10	NA	10	6	11	NA	NA	10	10	67	19	12
8932847_ALW_RLX_DX	400	F	26-10-2024	27.3.c.22		8	8	9	10	9	9	9	9	9	10	9	60	7	4
8932847_SEX_RLX_UN	400	F	26-10-2024	27.3.c.22		10	9	12	NA	10	7	10	11	11	10	10	44	14	9
8932851_ALW_RLX_DX	360	F	26-10-2024	27.3.c.22		8	6	8	10	8	8	9	9	9	7	8	40	14	10
8932851_SEX_RLX_UN	360	F	26-10-2024	27.3.c.22		8	7	8	NA	8	7	10	11	8	6	8	44	19	13
8932852_ALW_RLX_DD	390	F	26-10-2024	27.3.c.22		10	8	9	13	10	9	10	12	12	9	10	30	16	13
8932852_SEX_RLX_UN	390	F	26-10-2024	27.3.c.22		14	14	13	13	12	10	16	16	14	12	14	30	14	10
8932853_ALW_RLX_XX	360	F	26-10-2024	27.3.c.22		9	9	9	10	10	10	11	10	10	10	10	60	6	5
8932853_SEX_RLX_UN	360	F	26-10-2024	27.3.c.22		9	10	10	10	10	7	10	10	10	8	10	70	11	9
8937794_ALW_RLX_DD	310	F	01-11-2024	27.3.a.21		11	NA	13	16	11	11	16	NA	14	NA	11	43	17	14
8937794_SEX_RLX_UN	310	F	01-11-2024	27.3.a.21		NA	NA	NA	16	12	5	12	NA	11	NA	12	40	35	23
8937965_ALW_RLX_XB	300	F	02-11-2024	27.3.a.21		8	7	8	9	8	9	9	10	9	NA	9	44	10	8
8937965_SEX_RLX_UN	300	F	02-11-2024	27.3.a.21		8	10	8	9	9	8	9	9	9	NA	9	56	8	6
8937970_ALW_RLX_DD	380	F	02-11-2024	27.3.a.21		16	NA	15	22	14	15	22	NA	19	NA	15	29	19	17
8937970_SEX_RLX_UN	380	F	02-11-2024	27.3.a.21		12	NA	NA	19	17	11	17	NA	16	NA	17	33	20	17
8938118_ALW_RLX_DD	230	F	02-11-2024	27.3.a.21		3	2	3	4	3	3	3	3	3	NA	3	78	17	7
8938118_SEX_RLX_UN	230	F	02-11-2024	27.3.a.21		3	3	4	3	3	3	3	3	4	NA	3	78	14	11
8938119_ALW_RLX_XX	250	F	02-11-2024	27.3.a.21		6	6	6	6	6	6	6	6	6	NA	6	100	0	0
8938119_SEX_RLX_UN	250	F	02-11-2024	27.3.a.21		5	6	6	6	6	7	5	6	6	NA	6	67	10	7
8938120_ALW_RLX_DX	270	F	02-11-2024	27.3.a.21		4	4	4	5	4	5	4	5	4	NA	4	67	12	10
8938120_SEX_RLX_UN	270	F	02-11-2024	27.3.a.21		5	5	5	5	4	5	6	6	6	NA	5	56	13	10
8938122_ALW_RLX_DX	320	F	02-11-2024	27.3.a.21		5	5	5	5	5	5	5	6	6	NA	5	78	8	7
8938122_SEX_RLX_UN	320	F	02-11-2024	27.3.a.21		5	5	5	6	5	5	6	5	9	NA	5	67	23	16
8938124_ALW_RLX_XB	370	F	02-11-2024	27.3.a.21		10	10	11	14	14	8	13	13	13	NA	13	33	18	15
8938124_SEX_RLX_UN	370	F	02-11-2024	27.3.a.21		16	15	17	17	17	16	16	17	16	NA	17	44	4	4
8938383_ALW_RLX_XX	130	M	03-11-2024	27.3.a.21		0	1	0	0	0	1	2	0	1	NA	0	56	NA	NA
8938383_SEX_RLX_UN	130	M	03-11-2024	27.3.a.21		NA	1	NA	1	0	1	1	NA	0	NA	1	67	77	67
8938384_ALW_RLX_BD	140	M	03-11-2024	27.3.a.21		0	NA	1	1	0	1	4	1	1	NA	1	62	111	64

8938384_SEX_RLX_UN	140	M	03-11-2024	27.3.a.21		NA	NA	NA	1	0	1	0	NA	0	NA	0	60	NA	NA
8938385_ALW_RLX_DX	180	M	03-11-2024	27.3.a.21		1	2	1	1	1	1	3	1	2	NA	1	67	50	41
8938385_SEX_RLX_UN	180	M	03-11-2024	27.3.a.21		1	1	1	2	1	2	4	1	2	NA	1	56	60	44
8938386_ALW_RLX_XX	190	F	03-11-2024	27.3.a.21		2	3	2	3	2	3	4	3	3	NA	3	56	24	19
8938386_SEX_RLX_UN	190	F	03-11-2024	27.3.a.21		2	2	2	2	2	2	2	2	3	NA	2	89	16	9
8943123_ALW_RLX_XX	210	M	06-11-2024	27.3.d.25		5	NA	4	5	3	4	6	5	6	NA	5	38	22	17
8943123_SEX_RLX_UN	210	M	06-11-2024	27.3.d.25		2	4	3	5	4	3	6	NA	6	NA	4	25	35	28
8943125_ALW_RLX_XX	190	M	06-11-2024	27.3.d.25		2	1	2	3	2	3	5	3	4	NA	2	33	43	33
8943125_SEX_RLX_UN	190	M	06-11-2024	27.3.d.25		1	1	1	2	2	2	NA	1	2	NA	1	50	36	33
8943126_ALW_RLX_XX	160	M	06-11-2024	27.3.d.25		3	1	1	1	1	1	3	2	4	NA	1	56	62	52
8943126_SEX_RLX_UN	160	M	06-11-2024	27.3.d.25		1	NA	2	1	1	1	1	1	2	NA	1	75	37	30
8943851_ALW_RLX_XX	300	F	09-11-2024	27.3.d.25		5	4	5	5	5	5	5	5	5	NA	5	89	7	4
8943851_SEX_RLX_UN	300	F	09-11-2024	27.3.d.25		5	5	5	5	5	5	5	5	5	NA	5	100	0	0
8943852_ALW_RLX_DD	290	F	09-11-2024	27.3.d.25		5	4	5	6	4	4	6	5	5	NA	5	44	16	12
8943852_SEX_RLX_UN	290	F	09-11-2024	27.3.d.25		6	6	6	6	6	4	7	6	6	NA	6	78	13	7
8944472_ALW_RLX_XX	350	F	11-11-2024	27.3.d.25		8	7	10	10	8	8	10	9	8	NA	8	44	13	11
8944472_SEX_RLX_UN	350	F	11-11-2024	27.3.d.25		9	7	9	13	8	6	8	NA	8	NA	8	38	24	16
8945041_ALW_RLX_XX	340	F	12-11-2024	27.3.d.25		8	6	7	10	7	8	11	11	10	NA	8	22	22	19
8945041_SEX_RLX_UN	340	F	12-11-2024	27.3.d.25		10	8	10	11	12	9	8	10	11	NA	10	33	14	10
8945050_ALW_RLX_XX	310	F	12-11-2024	27.3.d.25		8	7	9	11	8	8	8	9	9	NA	8	44	13	10
8945050_SEX_RLX_UN	310	F	12-11-2024	27.3.d.25		8	NA	NA	12	5	5	10	NA	10	NA	5	33	35	28
8946786_ALW_RLX_XX	220	M	10-11-2024	27.3.d.25		2	NA	1	1	1	1	2	2	4	NA	1	50	59	43
8946786_SEX_RLX_UN	220	M	10-11-2024	27.3.d.25		1	2	1	2	2	2	1	2	NA	NA	2	62	32	29
8946954_ALW_RLX_BD	350	F	06-11-2024	27.3.d.25		7	8	8	10	8	9	9	8	9	NA	8	44	10	8
8946954_SEX_RLX_UN	350	F	06-11-2024	27.3.d.25		11	12	12	14	11	10	10	14	11	NA	11	33	13	10
ALS22404308_17_ALW	330		24-06-2024	27.3.d.24		4	4	NA	4	4	3	4	4	5	5	4	67	15	10
ALS22404308_42_ALW	380		24-06-2024	27.3.d.24		NA	NA	NA	NA	5	5	NA	NA	7	NA	5	67	20	16
ALS22404308_51_ALW	390		24-06-2024	27.3.d.24		11	9	9	11	8	8	11	10	9	9	9	40	12	11
ALS22409314_01_ALW	390		17-09-2024	27.3.d.24		3	2	3	3	4	3	3	3	3	4	3	70	18	12
ALS22409314_89_ALW	350		17-09-2024	27.3.d.24		8	6	8	7	8	5	8	8	8	9	8	60	16	12
ALS42405309_113_ALW	310		24-06-2024	27.3.d.24		7	6	7	7	6	6	7	7	7	8	7	60	9	7
ALS42405309_151_ALW	190		24-06-2024	27.3.d.24		3	3	3	3	2	3	3	NA	3	5	3	78	25	13
ALS42405309_154_ALW	180		24-06-2024	27.3.d.24		2	2	3	3	2	2	NA	NA	3	3	2	50	21	20
ALS42405309_160_ALW	130		24-06-2024	27.3.d.24		2	2	NA	2	2	2	NA	3	2	3	2	75	21	17
ALS42405309_164_ALW	380		24-06-2024	27.3.d.24		5	4	6	NA	5	5	5	NA	4	6	5	50	15	10
ALS42405309_165_ALW	330		24-06-2024	27.3.d.24		5	4	5	4	5	4	5	NA	4	4	4	56	12	11
ALS42405309_167_ALW	290		24-06-2024	27.3.d.24		4	4	5	4	5	5	4	NA	4	4	4	67	12	10
ALS42405309_168_ALW	190		24-06-2024	27.3.d.24		2	2	3	2	2	3	4	NA	3	4	2	44	30	25
ALS42409315_106_ALW	350		17-09-2024	27.3.d.24		NA	NA	NA	NA	4	3	5	NA	NA	4	4	50	20	12
ALS42409315_114_ALW	260		17-09-2024	27.3.d.24		4	2	NA	4	3	3	4	NA	3	5	4	38	26	21
ALS42409315_118_ALW	300		17-09-2024	27.3.d.24		NA	NA	NA	NA	NA	3	4	NA	4	NA	4	67	16	12
ALS42409315_126_ALW	310		17-09-2024	27.3.d.24		3	4	NA	NA	5	4	NA	NA	6	6	4	33	26	21

ALS42409315_127_ALW	290		17-09-2024	27.3.d.24		3	3	4	4	4	4	4	4	4	5	4	70	15	9
ALS42409315_128_ALW	180		17-09-2024	27.3.d.24		2	2	NA	5	3	2	3	4	5	4	2	33	37	31
ALS42409315_130_ALW	190		17-09-2024	27.3.d.24		2	2	NA	3	2	2	3	3	2	3	2	56	22	20
ALSS22404308_17_SEX	330		24-06-2024	27.3.d.24		10	9	NA	9	7	8	9	NA	9	9	9	62	10	7
ALSS22404308_42_SEX	380		24-06-2024	27.3.d.24		9	10	NA	9	8	8	9	NA	9	9	9	62	7	5
ALSS22404308_51_SEX	390		24-06-2024	27.3.d.24		10	9	10	10	9	8	10	NA	10	9	10	56	8	7
ALSS22409314_01_SEX	390		17-09-2024	27.3.d.24		10	10	11	10	10	7	10	NA	12	10	10	67	13	7
ALSS22409314_89_SEX	350		17-09-2024	27.3.d.24		9	9	9	9	9	9	9	NA	9	9	9	100	0	0
ALSS42405309_113_SEX	310		24-06-2024	27.3.d.24		7	9	NA	7	8	7	8	9	8	NA	7	38	11	8
ALSS42405309_151_SEX	190		24-06-2024	27.3.d.24		2	3	4	2	2	2	2	NA	2	NA	2	75	31	24
ALSS42405309_154_SEX	180		24-06-2024	27.3.d.24		2	2	3	2	1	2	2	NA	2	3	2	67	28	19
ALSS42405309_160_SEX	130		24-06-2024	27.3.d.24		2	2	3	2	2	2	2	2	2	3	2	80	19	15
ALSS42405309_164_SEX	380		24-06-2024	27.3.d.24		7	8	NA	10	9	4	9	NA	8	10	8	25	24	17
ALSS42405309_165_SEX	330		24-06-2024	27.3.d.24		5	6	6	5	5	5	5	6	6	6	5	50	10	9
ALSS42405309_167_SEX	290		24-06-2024	27.3.d.24		4	NA	NA	10	7	4	4	7	10	7	4	38	38	30
ALSS42405309_168_SEX	190		24-06-2024	27.3.d.24		4	4	5	4	3	4	4	NA	4	4	4	78	12	6
ALSS42409315_102_SEX	170		17-09-2024	27.3.d.24		6	5	6	7	6	6	6	NA	6	5	6	67	10	7
ALSS42409315_106_SEX	350		17-09-2024	27.3.d.24		8	NA	NA	13	9	6	11	NA	11	NA	11	33	26	21
ALSS42409315_114_SEX	260		17-09-2024	27.3.d.24		4	4	5	5	4	4	5	NA	5	6	4	44	15	13
ALSS42409315_118_SEX	300		17-09-2024	27.3.d.24		NA	NA	4	5	NA	3	2	NA	4	NA	4	40	32	24
ALSS42409315_126_SEX	310		17-09-2024	27.3.d.24		9	9	9	10	9	7	9	NA	11	9	9	67	12	7
ALSS42409315_127_SEX	290		17-09-2024	27.3.d.24		5	4	4	5	3	4	3	NA	4	5	4	44	19	14
ALSS42409315_128_SEX	180		17-09-2024	27.3.d.24		2	2	2	3	2	2	2	NA	3	4	2	67	30	24
ALSS42409315_130_SEX	190		17-09-2024	27.3.d.24		2	1	2	4	2	2	3	NA	3	3	2	44	36	29
ALSS42409315_136_SEX	290		17-09-2024	27.3.d.24		6	6	6	7	6	6	6	NA	6	6	6	89	5	3
PLE_2011_Q3_sd21_011_R_ALW	80	U	02-02-2011	27.3.a.21		1	1	1	1	1	1	1	1	1	NA	1	100	0	0
PLE_2019_Q1_sd21_009_R_ALW	270	M	22-01-2019	27.3.a.21		NA	NA	NA	18	NA	5	14	NA	NA	NA	18	33	54	40
PLE_2020_Q1_sd21_005_R_ALW	270	F	23-01-2025	27.3.a.21		4	4	5	5	4	5	5	5	5	NA	5	67	11	10
PLE_2020_Q3_sd21_019_R_ALW	320	F	05-09-2020	27.3.a.21		NA	NA	NA	18	NA	8	14	NA	NA	NA	18	33	38	27
PLE_2020_Q3_sd21_020_R_ALW	290	F	11-09-2020	27.3.a.21		7	6	11	12	8	6	12	12	12	NA	12	44	29	26
PLE_2021_Q1_sd21_008_R_ALW	340	M	24-01-2021	27.3.a.21		10	11	11	12	11	10	12	11	11	NA	11	56	6	4
PLE_2024_Q3_sd21_012_R_ALW	120	F	23-08-2024	27.3.a.21		1	0	1	1	1	1	1	1	1	NA	1	89	38	22
PLE_2024_Q3_sd21_013_R_ALW	250	F	22-08-2024	27.3.a.21		2	2	2	2	2	3	2	2	2	NA	2	89	16	9
PLE_2024_Q3_sd21_014_R_ALW	230	M	26-08-2024	27.3.a.21		3	3	3	4	3	3	4	3	3	NA	3	78	14	11
PLE_2024_Q3_sd21_015_R_ALW	240	M	23-08-2024	27.3.a.21		4	4	4	5	4	4	5	4	4	NA	4	78	10	8
PLE_2024_Q3_sd21_016_R_ALW	220	M	23-08-2024	27.3.a.21		5	5	6	5	4	5	6	4	6	NA	5	44	15	12
PLE_2024_Q3_sd21_017_R_ALW	290	F	22-08-2024	27.3.a.21		5	NA	4	6	5	4	7	6	5	NA	5	38	20	15
PLE_2024_Q3_sd21_018_R_ALW	350	F	22-08-2024	27.3.a.21		6	5	6	7	5	5	7	6	6	NA	6	44	13	10
PLE_2024_Q3_sd21_021_R_ALW	290	F	25-08-2024	27.3.a.21		11	10	10	11	11	10	11	10	10	NA	10	56	5	5
PLE_2025_Q1_sd21_001_R_ALW	110	M	25-01-2025	27.3.a.21		1	1	1	1	0	0	1	1	1	NA	1	78	57	44
PLE_2025_Q1_sd21_001_R_SEX	110	M	25-01-2025	27.3.a.21		1	1	1	1	1	0	1	1	1	NA	1	89	38	22
PLE_2025_Q1_sd21_002_R_ALW	170	M	25-01-2025	27.3.a.21		2	1	2	2	2	1	2	2	2	NA	2	78	25	19

PLE_2025_Q1_sd21_002_R_SEX	170	M	25-01-2025	27.3.a.21		2	2	2	2	2	1	2	2	2	NA	2	89	18	10
PLE_2025_Q1_sd21_003_R_ALW	190	F	25-01-2025	27.3.a.21		3	2	3	3	3	3	3	3	3	NA	3	89	12	7
PLE_2025_Q1_sd21_003_R_SEX	190	F	25-01-2025	27.3.a.21		3	3	3	3	3	3	3	3	3	NA	3	100	0	0
PLE_2025_Q1_sd21_004_R_ALW	240	F	28-01-2025	27.3.a.21		4	3	4	5	4	4	4	5	5	NA	4	56	16	12
PLE_2025_Q1_sd21_004_R_SEX	240	F	28-01-2025	27.3.a.21		4	3	4	4	4	4	4	4	4	NA	4	89	9	5
PLE_2025_Q1_sd21_005_R_SEX	270	F	23-01-2025	27.3.a.21		4	4	5	5	5	4	4	5	5	NA	5	56	12	11
PLE_2025_Q1_sd21_006_R_ALW	260	F	27-01-2025	27.3.a.21		6	7	7	7	6	6	6	6	7	NA	6	56	8	8
PLE_2025_Q1_sd21_006_R_SEX	260	F	27-01-2025	27.3.a.21		5	6	7	6	6	7	6	6	7	NA	6	56	11	8
PLE_2025_Q1_sd21_007_R_ALW	340	F	27-01-2025	27.3.a.21		7	7	8	8	5	7	8	8	8	NA	8	56	14	10
PLE_2025_Q1_sd21_007_R_SEX	340	F	27-01-2025	27.3.a.21		8	6	7	7	7	7	8	6	7	NA	7	56	10	6
PLE_2025_Q1_sd21_008_R_SEX	340	M	24-01-2021	27.3.a.21		13	15	NA	15	13	12	14	14	14	NA	14	38	8	6
PLE_2025_Q1_sd21_009_R_SEX	270	M	22-01-2019	27.3.a.21		NA	NA	NA	20	8	8	NA	NA	16	NA	8	50	46	38
PLE_2025_Q1_sd21_010_R_ALW	360	F	30-01-2025	27.3.a.21		11	11	10	11	11	11	11	10	11	NA	11	78	4	3
PLE_2025_Q1_sd21_010_R_SEX	360	F	30-01-2025	27.3.a.21		10	12	11	11	11	10	11	11	11	NA	11	67	6	4
PLE_2025_Q1_sd21_011_R_SEX	80	U	02-02-2011	27.3.a.21		1	1	1	1	1	1	0	1	0	NA	1	78	57	44
PLE_2025_Q1_sd21_012_R_SEX	120	F	23-08-2024	27.3.a.21		1	0	1	1	0	1	3	1	1	NA	1	67	87	44
PLE_2025_Q1_sd21_013_R_SEX	250	F	22-08-2024	27.3.a.21		2	1	3	2	3	3	3	3	3	NA	3	67	28	23
PLE_2025_Q1_sd21_014_R_SEX	230	M	26-08-2024	27.3.a.21		3	2	3	3	3	3	3	3	3	NA	3	89	12	7
PLE_2025_Q1_sd21_015_R_SEX	240	M	23-08-2024	27.3.a.21		NA	3	NA	4	4	2	5	4	4	NA	4	57	26	19
PLE_2025_Q1_sd21_016_R_SEX	220	M	23-08-2024	27.3.a.21		4	6	6	5	5	3	7	5	8	NA	5	33	28	21
PLE_2025_Q1_sd21_017_R_SEX	290	F	22-08-2024	27.3.a.21		5	5	5	6	4	5	5	NA	7	NA	5	62	17	12
PLE_2025_Q1_sd21_018_R_SEX	350	F	22-08-2024	27.3.a.21		6	7	NA	7	6	5	8	8	8	NA	8	38	16	13
PLE_2025_Q1_sd21_019_R_SEX	320	F	05-09-2020	27.3.a.21		22	19	NA	23	21	19	22	22	23	NA	22	38	7	6
PLE_2025_Q1_sd21_020_R_SEX	290	F	11-09-2020	27.3.a.21		12	11	NA	13	11	10	12	12	12	NA	12	50	8	6
PLE_2025_Q1_sd21_021_R_SEX	290	F	25-08-2024	27.3.a.21		11	11	12	11	11	11	11	12	11	NA	11	78	4	3
PLE_SD26_10_ALW	280	F	21-02-2025	27.3.d.26		NA	3	4	4	5	3	4	NA	4	NA	4	57	18	13
PLE_SD26_10_SEX	280	F	21-02-2025	27.3.d.26		4	3	5	6	4	4	5	NA	6	NA	4	38	23	19
PLE_SD26_11_ALW	220	M	01-12-2024	27.3.d.26		3	NA	4	4	2	2	6	NA	4	NA	4	43	39	30
PLE_SD26_11_SEX	220	M	01-12-2024	27.3.d.26		4	3	5	7	3	4	6	NA	6	NA	4	25	31	26
PLE_SD26_12_ALW	310	F	21-02-2025	27.3.d.26		6	5	6	6	6	6	7	NA	6	NA	6	75	9	4
PLE_SD26_12_SEX	310	F	21-02-2025	27.3.d.26		6	5	6	6	6	6	5	NA	6	NA	6	75	8	7
PLE_SD26_13_ALW	250	F	16-11-2024	27.3.d.26		5	4	5	4	4	4	5	NA	4	NA	4	62	12	11
PLE_SD26_13_SEX	250	F	16-11-2024	27.3.d.26		6	6	6	8	4	4	6	NA	9	NA	6	50	28	19
PLE_SD26_14_ALW	280	F	21-02-2025	27.3.d.26		7	6	8	8	6	7	7	NA	8	NA	7	38	12	9
PLE_SD26_14_SEX	280	F	21-02-2025	27.3.d.26		7	7	7	7	7	5	7	NA	7	NA	7	88	10	6
PLE_SD26_15_ALW	250	M	24-02-2025	27.3.d.26		4	3	5	5	3	4	5	NA	5	NA	5	50	21	18
PLE_SD26_15_SEX	250	M	24-02-2025	27.3.d.26		4	5	5	5	4	NA	5	NA	NA	NA	5	67	11	10
PLE_SD26_16_ALW	300	F	01-12-2024	27.3.d.26		8	8	7	8	8	8	9	NA	8	NA	8	75	7	3
PLE_SD26_16_SEX	300	F	01-12-2024	27.3.d.26		8	NA	7	8	8	7	8	NA	9	NA	8	57	9	6
PLE_SD26_17_ALW	240	M	01-12-2024	27.3.d.26		3	2	4	2	2	3	2	NA	3	NA	2	50	28	24
PLE_SD26_17_SEX	240	M	01-12-2024	27.3.d.26		5	4	4	NA	3	3	4	NA	8	NA	4	43	39	27
PLE_SD26_18_ALW	320	F	21-02-2025	27.3.d.26		7	7	8	9	8	8	9	NA	8	NA	8	50	9	6

PLE_SD26_18_SEX	320	F	21-02-2025	27.3.d.26		8	8	9	10	10	9	8	NA	10	NA	8	38	10	8
PLE_SD26_19_ALW	230	M	24-02-2025	27.3.d.26		5	4	5	6	5	5	5	NA	5	NA	5	75	11	5
PLE_SD26_19_SEX	230	M	24-02-2025	27.3.d.26		7	6	NA	9	4	4	NA	NA	7	NA	7	33	31	24
PLE_SD26_1_ALW	100	F	20-02-2025	27.3.d.26		3	NA	1	1	1	2	2	3	2	NA	1	38	45	35
PLE_SD26_1_SEX	100	F	20-02-2025	27.3.d.26		1	1	NA	1	1	1	1	NA	NA	NA	1	100	0	0
PLE_SD26_20_ALW	220	M	15-11-2024	27.3.d.26		2	2	3	2	2	2	6	NA	5	NA	2	62	53	42
PLE_SD26_20_SEX	220	M	15-11-2024	27.3.d.26		4	NA	4	4	4	3	3	NA	7	NA	4	57	32	20
PLE_SD26_2_ALW	120	M	14-11-2024	27.3.d.26		1	0	1	1	1	NA	1	1	1	NA	1	88	40	25
PLE_SD26_2_SEX	120	M	14-11-2024	27.3.d.26		1	0	1	1	0	1	1	NA	1	NA	1	75	62	50
PLE_SD26_3_ALW	140	M	14-11-2024	27.3.d.26		1	1	1	1	1	1	1	1	1	NA	1	100	0	0
PLE_SD26_3_SEX	140	M	14-11-2024	27.3.d.26		1	0	1	1	0	1	1	NA	3	NA	1	62	93	50
PLE_SD26_4_ALW	140	F	21-02-2025	27.3.d.26		2	1	2	2	1	2	2	1	2	NA	2	67	30	27
PLE_SD26_4_SEX	140	F	21-02-2025	27.3.d.26		2	2	2	2	1	2	2	NA	3	NA	2	75	27	12
PLE_SD26_5_ALW	150	M	21-02-2025	27.3.d.26		2	1	2	2	1	2	2	2	2	NA	2	78	25	19
PLE_SD26_5_SEX	150	M	21-02-2025	27.3.d.26		2	1	2	2	1	2	2	NA	2	NA	2	75	26	21
PLE_SD26_6_ALW	230	F	15-11-2024	27.3.d.26		3	NA	3	5	3	3	6	3	5	NA	3	62	32	28
PLE_SD26_6_SEX	230	F	15-11-2024	27.3.d.26		2	2	3	2	2	3	2	NA	4	NA	2	62	30	25
PLE_SD26_7_ALW	190	M	18-02-2025	27.3.d.26		4	3	3	3	2	2	5	1	3	NA	3	44	40	28
PLE_SD26_7_SEX	190	M	18-02-2025	27.3.d.26		4	2	4	3	2	3	4	NA	4	NA	4	50	27	23
PLE_SD26_8_ALW	200	M	01-12-2024	27.3.d.26		2	NA	2	1	1	2	3	NA	3	NA	2	43	41	29
PLE_SD26_8_SEX	200	M	01-12-2024	27.3.d.26		2	1	2	2	2	2	2	NA	3	NA	2	75	27	12
PLE_SD26_9_ALW	250	M	01-12-2024	27.3.d.26		2	NA	NA	2	3	2	3	NA	NA	NA	2	60	23	20
PLE_SD26_9_SEX	250	M	01-12-2024	27.3.d.26		6	NA	7	7	5	3	8	NA	7	NA	7	43	27	21

Sectioned otolith (Strata_SE) Multimodal cases

Table 1.1.2: Strata_SE .Total number of samples (NSample) and percentage of cases (fish samples) with multiple modes depending on the approach to weight the experience of the reader which will be considered when defining the fish age mode. PercMM_traditional shows the percentage of the total samples for which multiple modes are obtained when all the readers are equally weighted. PercMM_linear_weight shows the percentage of the total samples for which multiple modes are obtained when the weight assigned to the different readers decreases linearly with the experience, while in the PercMM_negexp the weight applied decreases with a negative exponential shape with the experience. The PercMM_multistage shows the percentage of multiple mode cases when a combination of the different methodologies is used, as explained in the material and methods section

NSample	PercMM_traditional	PercMM_linear_weight	PercMM_negexp_weight	PercMM_multistage
198	14 %	3 %	0 %	0 %

Whole Otolith (Strata_AL) Multimodal cases

Table 1.1.3: Strata_AL .Total number of samples (NSample) and percentage of cases (fish samples) with multiple modes depending on the approach to weight the experience of the reader which will be considered when defining the fish age mode. PercMM_traditional shows the percentage of the total

samples for which multiple modes are obtained when all the readers are equally weighted. PercMM_linear_weight shows the percentage of the total samples for which multiple modes are obtained when the weight assigned to the different readers decreases linearly with the experience, while in the PercMM_negexp the weight applied decreases with a negative exponential shape with the experience. The PercMM_multistage shows the percentage of multiple mode cases when a combination of the different methodologies is used, as explained in the material and methods section

NSample	PercMM_traditional	PercMM_linear_weight	PercMM_negexp_weight	PercMM_multistage
196	12 %	2 %	0 %	0 %

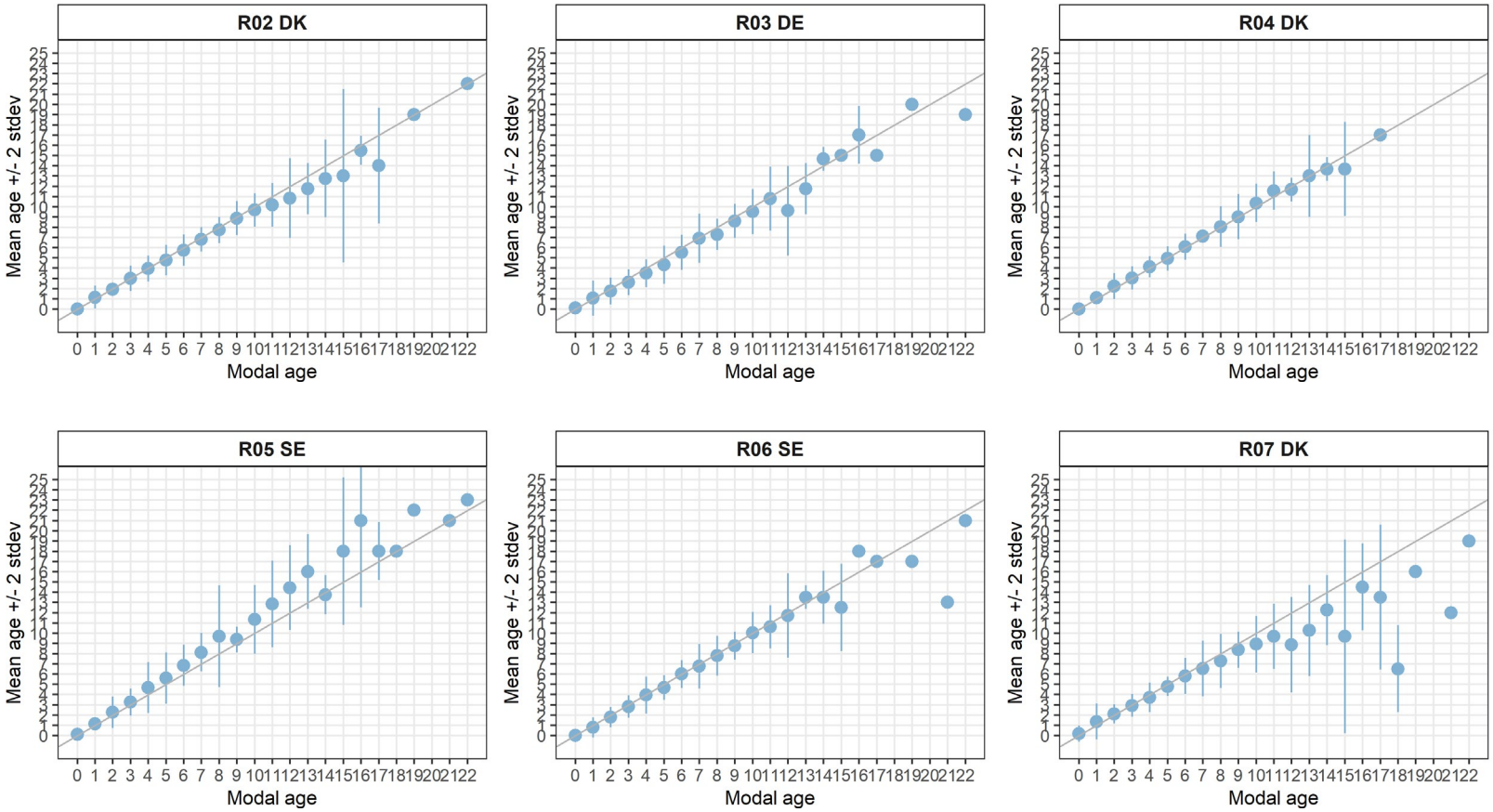
List of multimodal cases

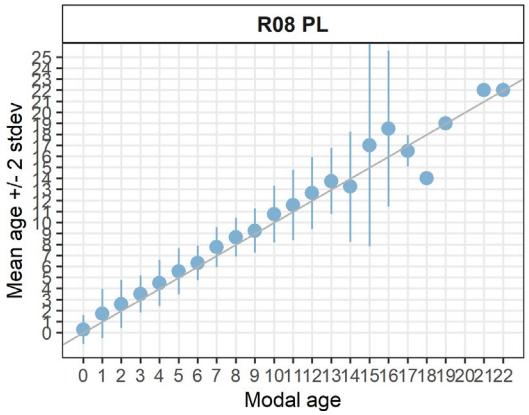
Table 1.1.4: List of cases for which multiple modes where obtained when all readers are considered. The column NModes_trad shows the number of multiple modes for each FishID or sampleID when all readers are given the same expertise weight.

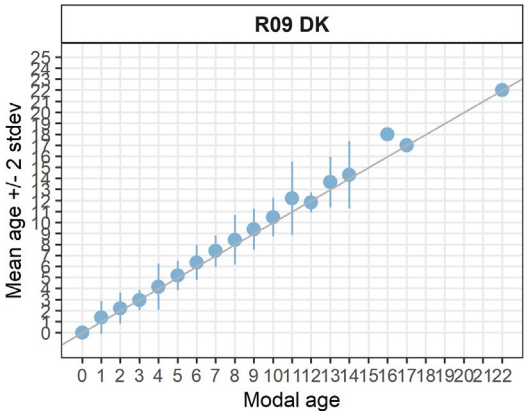
NModes_trad	SampleID
2	**8815035_SEX_RLX_UN**
2	**8815036_ALW_RLX_DD**
3	**8824598_ALW_RLX_X0**
3	**8824598_SEX_RLX_UN**
2	**8825545_ALW_RLX_DX**
3	**8837702_SEX_RLX_UN**
3	**8837703_SEX_RLX_UN**
2	**8837921_ALW_RLX_DD**
3	**8839097_SEX_RLX_UN**
2	**8846970_SEX_RLX_UN**
2	**8846986_ALW_RLX_DD**
2	**8846987_SEX_RLX_UN**
5	**8849670_SEX_RLX_UN**
2	**8851526_ALW_RLX_DB**
2	**8851527_SEX_RLX_UN**
2	**8855099_ALW_RLX_DB**
2	**8860430_SEX_RLX_UN**
2	**8880345_ALW_RLX_XX**
2	**8880345_SEX_RLX_UN**
5	**8896605_ALW_RLX_XX**
2	**8896605_SEX_RLX_UN**
2	**8896607_ALW_RLX_XX**
2	**8897052_ALW_RLX_XX**
2	**8897053_SEX_RLX_UN**
2	**8930405_SEX_RLX_UN**
2	**8931410_SEX_RLX_UN**
2	**8932835_ALW_RLX_DD**
2	**8932852_ALW_RLX_DD**
2	**8937970_ALW_RLX_DD**
2	**8938124_SEX_RLX_UN**
3	**8943123_SEX_RLX_UN**

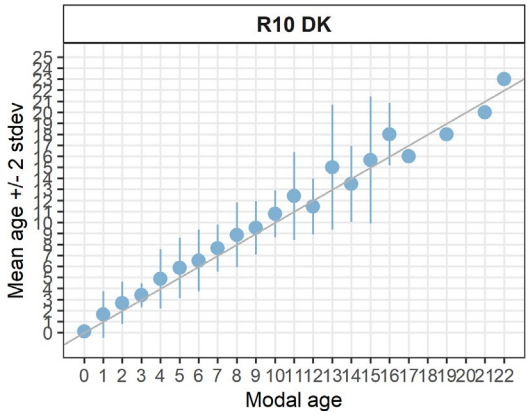
NModes_trad	SampleID
2	**8943125_ALW_RLX_XX**
2	**8943125_SEX_RLX_UN**
4	**8945041_ALW_RLX_XX**
2	**8945050_SEX_RLX_UN**
2	**ALS42405309_154_ALW**
2	**ALS42409315_114_ALW**
2	**ALS42409315_126_ALW**
2	**ALSS42405309_113_SEX**
3	**ALSS42405309_164_SEX**
2	**ALSS42405309_165_SEX**
2	**ALSS42405309_167_SEX**
2	**ALSS42409315_114_SEX**
3	**PLE_2019_Q1_sd21_009_R_ALW**
3	**PLE_2020_Q3_sd21_019_R_ALW**
2	**PLE_SD26_1_ALW**
3	**PLE_SD26_11_SEX**
2	**PLE_SD26_14_ALW**
2	**PLE_SD26_18_SEX**
2	**PLE_SD26_19_SEX**

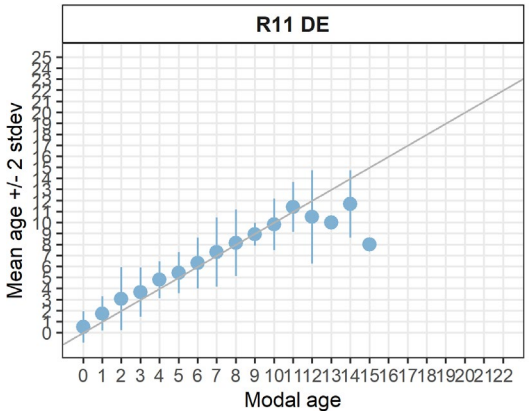
Separate age bias plots by reader based on all samples


R02 DK
R03 DE
R04 DK
R05 SE
R06 SE
R07 DK
Mean age +/- 2 stdev
Modal age


R08 PL
Mean age +/- 2 stdev
Modal age


R09 DK
Mean age +/- 2 stdev
Modal age


R10 DK
Mean age +/- 2 stdev
Modal age


R11 DE
Mean age +/- 2 stdev
Modal age

Annex 2. Additional results advanced readers

Table 2.1.4: Data overview including modal age and statistics per sample.

Fish ID	length	sex	Catch date	ICES area	R02 DK	R03 DE	R05 SE	R06 SE	R08 PL	Modal age	PA %	CV %	APE %
8749796_ALW_RLX_DX	340	F	22-10-2023	27.3.d.24	6	7	8	8	8	8	60	12	10
8749796_SEX_RLX_UN	340	F	22-10-2023	27.3.d.24	7	7	9	7	9	7	60	14	12
8749973_ALW_RLX_DB	260	M	22-10-2023	27.3.d.24	3	3	4	3	4	3	60	16	14
8749973_SEX_RLX_UN	260	M	22-10-2023	27.3.d.24	6	NA	NA	3	5	6	33	33	24
8749976_ALW_RLX_XB	310	F	22-10-2023	27.3.d.24	7	6	9	8	8	8	40	15	12
8749976_SEX_RLX_UN	310	F	22-10-2023	27.3.d.24	8	8	NA	8	8	8	100	0	0
8749977_ALW_RLX_DX	400	F	22-10-2023	27.3.d.24	7	7	8	8	8	8	60	7	6
8749977_SEX_RLX_UN	400	F	22-10-2023	27.3.d.24	8	6	10	8	9	8	40	18	13
8815035_ALW_RLX_DD	430	F	02-02-2024	27.3.c.22	10	10	12	11	11	10	40	8	6
8815035_SEX_RLX_UN	430	F	02-02-2024	27.3.c.22	14	15	13	15	13	15	40	7	6
8815036_ALW_RLX_DD	460	F	02-02-2024	27.3.c.22	11	9	15	12	NA	11	25	21	15
8815036_SEX_RLX_UN	460	F	02-02-2024	27.3.c.22	9	9	NA	9	9	9	100	0	0
8815037_ALW_RLX_DD	460	F	02-02-2024	27.3.c.22	9	10	10	10	10	10	80	5	3
8815037_SEX_RLX_UN	460	F	02-02-2024	27.3.c.22	10	12	13	11	11	11	40	10	8
8824598_ALW_RLX_X0	380	F	20-02-2024	27.3.b.23	6	6	10	7	NA	6	50	26	19
8824598_SEX_RLX_UN	380	F	20-02-2024	27.3.b.23	NA	NA	NA	11	NA	11	100	NA	0
8824844_ALW_RLX_DD	340	F	20-02-2024	27.3.b.23	9	8	9	9	8	9	60	6	6
8824844_SEX_RLX_UN	340	F	20-02-2024	27.3.b.23	9	10	13	10	11	10	40	14	11
8825242_ALW_RLX_BD	130	M	21-02-2024	27.3.b.23	1	1	1	1	1	1	100	0	0
8825242_SEX_RLX_UN	130	M	21-02-2024	27.3.b.23	NA	2	3	1	3	3	50	43	33
8825243_ALW_RLX_DB	140	M	21-02-2024	27.3.b.23	2	1	1	2	2	2	60	34	30
8825243_SEX_RLX_UN	140	M	21-02-2024	27.3.b.23	2	1	2	1	2	2	60	34	30
8825244_ALW_RLX_DD	150	F	21-02-2024	27.3.b.23	3	3	2	2	4	3	40	30	23
8825244_SEX_RLX_UN	150	F	21-02-2024	27.3.b.23	2	1	3	2	2	2	60	35	20
8825256_ALW_RLX_DX	270	F	21-02-2024	27.3.b.23	3	3	5	3	5	3	60	29	25
8825256_SEX_RLX_UN	270	F	21-02-2024	27.3.b.23	3	4	6	4	5	4	40	26	20
8825257_ALW_RLX_DD	280	F	21-02-2024	27.3.b.23	6	6	6	6	6	6	100	0	0
8825257_SEX_RLX_UN	280	F	21-02-2024	27.3.b.23	5	4	5	5	5	5	80	9	7
8825545_ALW_RLX_DX	100	M	21-02-2024	27.3.d.24	1	1	1	1	2	1	80	37	27
8825545_SEX_RLX_UN	100	M	21-02-2024	27.3.d.24	1	1	1	1	1	1	100	0	0
8825546_ALW_RLX_DD	110	F	21-02-2024	27.3.d.24	1	1	1	1	2	1	80	37	27
8825546_SEX_RLX_UN	110	F	21-02-2024	27.3.d.24	1	1	1	1	1	1	100	0	0
8825561_ALW_RLX_DD	260	M	21-02-2024	27.3.d.24	3	4	3	3	3	3	80	14	10
8825561_SEX_RLX_UN	260	M	21-02-2024	27.3.d.24	7	6	NA	6	7	6	50	9	8
8825562_ALW_RLX_XX	280	F	21-02-2024	27.3.d.24	4	4	5	5	5	5	60	12	10
8825562_SEX_RLX_UN	280	F	21-02-2024	27.3.d.24	5	4	5	5	5	5	80	9	7
8825564_ALW_RLX_DX	300	F	21-02-2024	27.3.d.24	6	6	7	6	8	6	60	14	11
8825564_SEX_RLX_UN	300	F	21-02-2024	27.3.d.24	8	7	NA	8	8	8	75	6	5
8825732_ALW_RLX_DD	270	F	22-02-2024	27.3.d.24	5	5	5	5	5	5	100	0	0
8825732_SEX_RLX_UN	270	F	22-02-2024	27.3.d.24	6	5	6	6	6	6	80	8	6

8826206_ALW_RLX_DD	340	F	22-02-2024	27.3.d.24	11	11	12	12	12	12	60	5	4
8826206_SEX_RLX_UN	340	F	22-02-2024	27.3.d.24	11	11	12	12	11	11	60	5	4
8826207_ALW_RLX_DD	330	F	22-02-2024	27.3.d.24	9	8	9	9	9	9	80	5	4
8826207_SEX_RLX_UN	330	F	22-02-2024	27.3.d.24	8	8	9	9	8	8	60	7	6
8826410_ALW_RLX_DX	350	F	22-02-2024	27.3.d.24	7	6	8	7	7	7	60	10	6
8826410_SEX_RLX_UN	350	F	22-02-2024	27.3.d.24	8	8	8	8	9	8	80	5	4
8826411_ALW_RLX_DX	360	F	22-02-2024	27.3.d.24	9	8	9	9	9	9	80	5	4
8826411_SEX_RLX_UN	360	F	22-02-2024	27.3.d.24	7	8	8	8	8	8	80	6	4
8828253_ALW_RLX_DX	110	F	24-02-2024	27.3.c.22	1	1	1	1	1	1	100	0	0
8828253_SEX_RLX_UN	110	F	24-02-2024	27.3.c.22	1	2	1	1	2	1	60	39	34
8828254_ALW_RLX_DX	120	M	24-02-2024	27.3.c.22	2	1	2	2	2	2	80	25	18
8828254_SEX_RLX_UN	120	M	24-02-2024	27.3.c.22	1	2	2	1	3	1	40	46	36
8828263_ALW_RLX_DX	210	M	24-02-2024	27.3.c.22	NA	NA	3	3	NA	3	100	0	0
8828263_SEX_RLX_UN	210	M	24-02-2024	27.3.c.22	2	2	3	3	3	3	60	21	18
8828264_ALW_RLX_DD	220	F	24-02-2024	27.3.c.22	3	2	5	3	5	3	40	37	31
8828264_SEX_RLX_UN	220	F	24-02-2024	27.3.c.22	5	3	5	5	7	5	60	28	16
8829000_ALW_RLX_DD	320	F	25-02-2024	27.3.c.22	6	5	7	6	7	6	40	13	10
8829000_SEX_RLX_UN	320	F	25-02-2024	27.3.c.22	8	7	8	8	7	8	60	7	6
8829005_ALW_RLX_BB	260	M	25-02-2024	27.3.c.22	5	5	5	5	5	5	100	0	0
8829005_SEX_RLX_UN	260	M	25-02-2024	27.3.c.22	5	5	6	5	5	5	80	9	6
8829217_ALW_RLX_DD	320	M	25-02-2024	27.3.c.22	7	NA	8	7	6	7	50	12	7
8829217_SEX_RLX_UN	320	M	25-02-2024	27.3.c.22	NA	NA	NA	9	12	9	50	20	14
8837693_ALW_RLX_XX	130	M	07-03-2024	27.3.d.25	2	1	2	2	2	2	80	25	18
8837693_SEX_RLX_UN	130	M	07-03-2024	27.3.d.25	2	1	2	2	2	2	80	25	18
8837700_ALW_RLX_XD	230	M	07-03-2024	27.3.d.25	3	2	3	3	4	3	60	24	13
8837700_SEX_RLX_UN	230	M	07-03-2024	27.3.d.25	3	2	3	3	3	3	80	16	11
8837701_ALW_RLX_XX	240	M	07-03-2024	27.3.d.25	5	4	8	5	8	5	40	31	27
8837701_SEX_RLX_UN	240	M	07-03-2024	27.3.d.25	5	5	NA	5	NA	5	100	0	0
8837702_ALW_RLX_XX	250	M	07-03-2024	27.3.d.25	4	3	4	4	4	4	80	12	8
8837702_SEX_RLX_UN	250	M	07-03-2024	27.3.d.25	8	NA	NA	5	8	8	67	25	19
8837703_ALW_RLX_XX	260	M	07-03-2024	27.3.d.25	5	4	7	4	9	4	40	37	30
8837703_SEX_RLX_UN	260	M	07-03-2024	27.3.d.25	NA	NA	NA	NA	4	4	100	NA	0
8837921_ALW_RLX_DD	210	M	07-03-2024	27.3.d.25	3	2	3	2	2	2	60	23	20
8837921_SEX_RLX_UN	210	M	07-03-2024	27.3.d.25	NA	2	NA	2	3	2	67	25	19
8839097_ALW_RLX_DX	370	F	11-03-2024	27.3.d.25	9	9	10	10	10	10	60	6	5
8839097_SEX_RLX_UN	370	F	11-03-2024	27.3.d.25	10	13	15	11	15	15	40	18	14
8839792_ALW_RLX_XX	370	F	13-03-2024	27.3.d.25	8	8	10	8	10	8	60	12	11
8839792_SEX_RLX_UN	370	F	13-03-2024	27.3.d.25	7	8	NA	6	9	7	25	17	13
8841018_ALW_RLX_DD	300	F	16-03-2024	27.3.d.25	8	7	8	8	8	8	80	6	4
8841018_SEX_RLX_UN	300	F	16-03-2024	27.3.d.25	7	6	NA	6	7	6	50	9	8
8846969_ALW_RLX_XX	350	F	09-04-2024	27.3.c.22	6	6	7	6	7	6	60	9	8
8846969_SEX_RLX_UN	350	F	09-04-2024	27.3.c.22	5	6	8	6	6	6	60	18	12

8846970_ALW_RLX_DX	350	F	09-04-2024	27.3.c.22	8	7	11	8	11	8	40	21	18
8846970_SEX_RLX_UN	350	F	09-04-2024	27.3.c.22	10	15	15	11	13	15	40	18	14
8846980_ALW_RLX_DD	370	F	09-04-2024	27.3.c.22	9	9	10	10	10	10	60	6	5
8846980_SEX_RLX_UN	370	F	09-04-2024	27.3.c.22	8	10	12	9	10	10	40	15	11
8846986_ALW_RLX_DD	390	F	09-04-2024	27.3.c.22	10	NA	14	14	10	10	50	19	17
8846986_SEX_RLX_UN	390	F	09-04-2024	27.3.c.22	12	13	17	13	13	13	60	14	10
8846987_ALW_RLX_DX	430	F	09-04-2024	27.3.c.22	11	NA	13	9	10	11	25	16	12
8846987_SEX_RLX_UN	430	F	09-04-2024	27.3.c.22	15	16	18	NA	16	16	50	8	5
8849669_ALW_RLX_D0	390	F	22-04-2024	27.3.a.21	12	12	15	13	13	12	40	9	6
8849669_SEX_RLX_UN	390	F	22-04-2024	27.3.a.21	12	11	16	12	16	12	40	18	16
8849670_ALW_RLX_DD	390	F	22-04-2024	27.3.a.21	13	12	18	14	16	13	20	16	13
8849670_SEX_RLX_UN	390	F	22-04-2024	27.3.a.21	NA	NA	21	13	22	21	33	26	20
8849985_ALW_RLX_XB	290	F	15-04-2024	27.3.a.21	8	8	9	7	9	8	40	10	8
8849985_SEX_RLX_UN	290	F	15-04-2024	27.3.a.21	7	8	10	7	7	7	60	17	12
8851526_ALW_RLX_DB	210	F	11-04-2024	27.3.c.22	4	4	5	5	5	5	60	12	10
8851526_SEX_RLX_UN	210	F	11-04-2024	27.3.c.22	4	4	4	4	4	4	100	0	0
8851527_ALW_RLX_DD	200	F	11-04-2024	27.3.c.22	4	3	4	4	4	4	80	12	8
8851527_SEX_RLX_UN	200	F	11-04-2024	27.3.c.22	4	4	5	4	5	4	60	12	11
8851541_ALW_RLX_XD	130	F	11-04-2024	27.3.c.22	2	2	2	2	3	2	80	20	15
8851541_SEX_RLX_UN	130	F	11-04-2024	27.3.c.22	2	2	2	1	2	2	80	25	18
8851542_ALW_RLX_BX	130	F	11-04-2024	27.3.c.22	3	3	3	3	3	3	100	0	0
8851542_SEX_RLX_UN	130	F	11-04-2024	27.3.c.22	3	3	3	2	3	3	80	16	11
8851543_ALW_RLX_DX	120	M	11-04-2024	27.3.c.22	1	3	1	1	3	1	60	61	53
8851543_SEX_RLX_UN	120	M	11-04-2024	27.3.c.22	1	2	1	1	4	1	60	72	53
8854947_ALW_RLX_XX	120	M	17-04-2024	27.3.a.21	3	3	3	3	3	3	100	0	0
8854947_SEX_RLX_UN	120	M	17-04-2024	27.3.a.21	2	4	NA	2	5	2	50	46	38
8854948_ALW_RLX_DX	110		17-04-2024	27.3.a.21	3	3	3	3	3	3	100	0	0
8854948_SEX_RLX_UN	110		17-04-2024	27.3.a.21	3	3	3	2	3	3	80	16	11
8855097_ALW_RLX_DB	240	F	07-05-2024	27.3.a.21	3	3	3	3	4	3	80	14	10
8855097_SEX_RLX_UN	240	F	07-05-2024	27.3.a.21	2	2	3	3	4	2	40	30	23
8855098_ALW_RLX_XX	230	F	07-05-2024	27.3.a.21	5	4	5	5	5	5	80	9	7
8855098_SEX_RLX_UN	230	F	07-05-2024	27.3.a.21	5	4	5	5	5	5	80	9	7
8855099_ALW_RLX_DB	220	F	07-05-2024	27.3.a.21	4	4	5	5	5	5	60	12	10
8855099_SEX_RLX_UN	220	F	07-05-2024	27.3.a.21	5	6	5	5	6	5	60	10	9
8860430_ALW_RLX_XX	270	M	08-05-2024	27.3.a.21	6	8	12	7	8	8	40	28	19
8860430_SEX_RLX_UN	270	M	08-05-2024	27.3.a.21	10	NA	18	11	14	10	25	27	21
8860431_ALW_RLX_DX	250	F	08-05-2024	27.3.a.21	5	6	6	6	6	6	80	8	6
8860431_SEX_RLX_UN	250	F	08-05-2024	27.3.a.21	5	7	8	6	8	8	40	19	15
8862585_ALW_RLX_XX	230	M	27-05-2024	27.3.b.23	3	2	3	2	2	2	60	23	20
8862585_SEX_RLX_UN	230	M	27-05-2024	27.3.b.23	3	4	3	3	3	3	80	14	10
8862960_ALW_RLX_XD	200	F	27-05-2024	27.3.b.23	3	2	3	2	3	3	60	21	18
8862960_SEX_RLX_UN	200	F	27-05-2024	27.3.b.23	2	2	2	2	2	2	100	0	0

8862963_ALW_RLX_DX	260	F	27-05-2024	27.3.b.23	3	3	3	3	5	3	80	26	19
8862963_SEX_RLX_UN	260	F	27-05-2024	27.3.b.23	3	3	3	3	4	3	80	14	10
8862964_ALW_RLX_X0	290	F	27-05-2024	27.3.b.23	4	3	5	4	5	4	40	20	15
8862964_SEX_RLX_UN	290	F	27-05-2024	27.3.b.23	4	3	4	4	5	4	60	18	10
8880345_ALW_RLX_XX	200	M	31-07-2024	27.3.b.23	2	NA	2	2	1	2	75	29	21
8880345_SEX_RLX_UN	200	M	31-07-2024	27.3.b.23	2	NA	2	1	1	2	50	38	33
8880346_ALW_RLX_XX	230	M	31-07-2024	27.3.b.23	2	2	3	2	3	2	60	23	20
8880346_SEX_RLX_UN	230	M	31-07-2024	27.3.b.23	2	NA	3	2	2	2	75	22	17
8880347_ALW_RLX_DX	240	F	31-07-2024	27.3.b.23	4	2	5	4	5	4	40	31	20
8880347_SEX_RLX_UN	240	F	31-07-2024	27.3.b.23	3	3	4	4	4	4	60	15	13
8896602_ALW_RLX_XD	340	F	02-09-2024	27.3.b.23	5	3	6	5	5	5	60	23	15
8896602_SEX_RLX_UN	340	F	02-09-2024	27.3.b.23	4	4	5	4	4	4	80	11	8
8896603_ALW_RLX_DD	370	F	02-09-2024	27.3.b.23	10	9	11	8	11	11	40	13	11
8896603_SEX_RLX_UN	370	F	02-09-2024	27.3.b.23	NA	NA	NA	11	12	11	50	6	4
8896604_ALW_RLX_XM	380	F	02-09-2024	27.3.b.23	7	5	6	7	6	7	40	13	10
8896604_SEX_RLX_UN	380	F	02-09-2024	27.3.b.23	5	10	9	7	7	7	40	26	20
8896605_ALW_RLX_XX	420	F	02-09-2024	27.3.b.23	NA	NA	17	NA	16	17	50	4	3
8896605_SEX_RLX_UN	420	F	02-09-2024	27.3.b.23	16	18	24	18	21	18	40	16	13
8896607_ALW_RLX_XX	360	F	02-09-2024	27.3.b.23	6	3	6	5	6	6	60	25	18
8896607_SEX_RLX_UN	360	F	02-09-2024	27.3.b.23	4	NA	NA	5	NA	4	50	16	11
8896609_ALW_RLX_0D	410	F	02-09-2024	27.3.b.23	9	10	13	10	12	10	40	15	13
8896609_SEX_RLX_UN	410	F	02-09-2024	27.3.b.23	19	20	22	17	19	19	40	9	7
8896610_ALW_RLX_XM	360	F	02-09-2024	27.3.b.23	7	6	8	7	8	7	40	12	9
8896610_SEX_RLX_UN	360	F	02-09-2024	27.3.b.23	8	7	11	8	10	8	40	19	15
8897044_ALW_RLX_DX	280	F	03-09-2024	27.3.c.22	4	5	5	4	5	5	60	12	10
8897044_SEX_RLX_UN	280	F	03-09-2024	27.3.c.22	3	3	5	4	4	3	40	22	17
8897045_ALW_RLX_DX	280	F	03-09-2024	27.3.c.22	5	5	6	5	6	5	60	10	9
8897045_SEX_RLX_UN	280	F	03-09-2024	27.3.c.22	6	6	8	6	8	6	60	16	14
8897046_ALW_RLX_XX	290	F	03-09-2024	27.3.c.22	3	3	3	3	3	3	100	0	0
8897046_SEX_RLX_UN	290	F	03-09-2024	27.3.c.22	3	2	4	4	4	4	60	26	21
8897047_ALW_RLX_DX	290	F	03-09-2024	27.3.c.22	5	4	6	5	6	5	40	16	12
8897047_SEX_RLX_UN	290	F	03-09-2024	27.3.c.22	5	5	5	5	6	5	80	9	6
8897051_ALW_RLX_DX	310	F	03-09-2024	27.3.c.22	9	8	9	10	11	9	40	12	9
8897051_SEX_RLX_UN	310	F	03-09-2024	27.3.c.22	10	10	11	11	10	10	60	5	5
8897052_ALW_RLX_XX	320	F	03-09-2024	27.3.c.22	7	8	8	9	8	8	60	9	5
8897052_SEX_RLX_UN	320	F	03-09-2024	27.3.c.22	6	5	7	7	6	6	40	13	10
8897053_ALW_RLX_DX	320	F	03-09-2024	27.3.c.22	8	8	9	9	9	9	60	6	6
8897053_SEX_RLX_UN	320	F	03-09-2024	27.3.c.22	8	9	10	8	9	8	40	10	7
8909036_ALW_RLX_XX	500	F	17-09-2024	27.3.c.22	10	8	10	12	11	10	40	15	10
8909036_SEX_RLX_UN	500	F	17-09-2024	27.3.c.22	12	NA	17	15	12	12	50	17	14
8909043_ALW_RLX_XX	370	F	17-09-2024	27.3.c.22	10	9	12	10	12	10	40	13	11
8909043_SEX_RLX_UN	370	F	17-09-2024	27.3.c.22	10	10	15	11	12	10	40	18	13

8913061_ALW_RLX_XX	270	F	16-09-2024	27.3.c.22	3	2	4	3	4	3	40	26	20
8913061_SEX_RLX_UN	270	F	16-09-2024	27.3.c.22	3	3	4	3	3	3	80	14	10
8922583_ALW_RLX_XD	320	F	03-10-2024	27.3.b.23	3	NA	6	7	5	3	25	33	24
8922584_ALW_RLX_XX	350	F	03-10-2024	27.3.b.23	6	5	8	7	6	6	40	18	14
8922584_SEX_RLX_UN	350	F	03-10-2024	27.3.b.23	9	10	12	10	11	10	40	11	8
8929688_ALW_RLX_DX	350	F	20-10-2024	27.3.b.23	4	4	6	5	5	4	40	17	13
8929688_SEX_RLX_UN	350	F	20-10-2024	27.3.b.23	5	NA	NA	5	7	5	67	20	16
8930400_ALW_RLX_XX	100	F	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930400_SEX_RLX_UN	100	F	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930401_ALW_RLX_XB	110	M	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930401_SEX_RLX_UN	110	M	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930402_ALW_RLX_XB	90	M	20-10-2024	27.3.b.23	0	0	0	0	1	0	80	NA	NA
8930402_SEX_RLX_UN	90	M	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930403_ALW_RLX_DX	190	M	20-10-2024	27.3.b.23	2	1	3	2	4	2	40	48	37
8930403_SEX_RLX_UN	190	M	20-10-2024	27.3.b.23	2	2	2	2	2	2	100	0	0
8930404_ALW_RLX_XD	220	F	20-10-2024	27.3.b.23	1	0	2	1	1	1	60	71	40
8930404_SEX_RLX_UN	220	F	20-10-2024	27.3.b.23	1	1	1	1	1	1	100	0	0
8930405_ALW_RLX_XX	240	M	20-10-2024	27.3.b.23	3	3	4	3	4	3	60	16	14
8930405_SEX_RLX_UN	240	M	20-10-2024	27.3.b.23	5	4	5	4	5	5	60	12	10
8930406_ALW_RLX_XD	290	F	20-10-2024	27.3.b.23	5	4	6	5	6	5	40	16	12
8930406_SEX_RLX_UN	290	F	20-10-2024	27.3.b.23	5	5	5	5	5	5	100	0	0
8930408_ALW_RLX_XX	80	M	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930408_SEX_RLX_UN	80	M	20-10-2024	27.3.b.23	0	0	0	0	0	0	100	NA	NA
8930720_ALW_RLX_BB	80	F	21-10-2024	27.3.d.24	0	0	0	0	NA	0	100	NA	NA
8930720_SEX_RLX_UN	80	F	21-10-2024	27.3.d.24	0	0	0	0	0	0	100	NA	NA
8930725_ALW_RLX_XX	210	F	21-10-2024	27.3.d.24	2	3	3	2	5	2	40	41	27
8930725_SEX_RLX_UN	210	F	21-10-2024	27.3.d.24	2	NA	2	2	3	2	75	22	17
8930726_ALW_RLX_X0	130	M	21-10-2024	27.3.d.24	1	1	1	1	2	1	80	37	27
8930726_SEX_RLX_UN	130	M	21-10-2024	27.3.d.24	1	0	1	0	1	1	60	91	80
8930727_ALW_RLX_X0	310	F	21-10-2024	27.3.d.24	5	4	7	5	7	5	40	24	20
8930727_SEX_RLX_UN	310	F	21-10-2024	27.3.d.24	5	4	5	5	5	5	80	9	7
8930728_ALW_RLX_DD	260	F	21-10-2024	27.3.d.24	2	2	4	2	2	2	80	37	27
8930728_SEX_RLX_UN	260	F	21-10-2024	27.3.d.24	3	2	2	3	3	3	60	21	18
8931409_ALW_RLX_X0	320	F	22-10-2024	27.3.d.24	9	10	10	8	10	10	60	10	8
8931409_SEX_RLX_UN	320	F	22-10-2024	27.3.d.24	12	NA	NA	9	NA	12	50	20	14
8931410_ALW_RLX_XC	300	M	22-10-2024	27.3.d.24	5	5	8	5	5	5	80	24	17
8931410_SEX_RLX_UN	300	M	22-10-2024	27.3.d.24	8	NA	10	9	9	9	50	9	6
8931896_ALW_RLX_DB	150	M	23-10-2024	27.3.c.22	1	3	2	1	4	1	40	59	47
8931896_SEX_RLX_UN	150	M	23-10-2024	27.3.c.22	1	2	1	1	1	1	80	37	27
8931897_ALW_RLX_DX	170	M	23-10-2024	27.3.c.22	2	2	3	3	4	2	40	30	23
8931897_SEX_RLX_UN	170	M	23-10-2024	27.3.c.22	3	3	3	3	3	3	100	0	0
8931898_ALW_RLX_DD	110	F	23-10-2024	27.3.c.22	1	1	1	0	1	1	80	56	40

8931898_SEX_RLX_UN	110	F	23-10-2024	27.3.c.22	2	3	1	0	4	2	20	NA	NA
8931899_ALW_RLX_XD	210	F	23-10-2024	27.3.c.22	4	3	4	3	4	4	60	15	13
8931899_SEX_RLX_UN	210	F	23-10-2024	27.3.c.22	4	4	5	3	5	4	40	20	15
8931900_ALW_RLX_DX	220	F	23-10-2024	27.3.c.22	4	3	5	4	5	4	40	20	15
8931900_SEX_RLX_UN	220	F	23-10-2024	27.3.c.22	4	3	5	4	4	4	60	18	10
8931903_ALW_RLX_DD	360	F	23-10-2024	27.3.c.22	8	7	8	8	8	8	80	6	4
8931903_SEX_RLX_UN	360	F	23-10-2024	27.3.c.22	7	7	9	7	8	7	60	12	9
8932835_ALW_RLX_DD	420	F	26-10-2024	27.3.c.22	7	6	9	7	10	7	40	21	17
8932835_SEX_RLX_UN	420	F	26-10-2024	27.3.c.22	10	NA	NA	10	11	10	67	6	4
8932847_ALW_RLX_DX	400	F	26-10-2024	27.3.c.22	8	8	10	9	9	8	40	10	7
8932847_SEX_RLX_UN	400	F	26-10-2024	27.3.c.22	10	9	NA	10	10	10	75	5	4
8932851_ALW_RLX_DX	360	F	26-10-2024	27.3.c.22	8	6	10	8	9	8	40	18	13
8932851_SEX_RLX_UN	360	F	26-10-2024	27.3.c.22	8	7	NA	8	10	8	50	15	11
8932852_ALW_RLX_DD	390	F	26-10-2024	27.3.c.22	10	8	13	10	10	10	60	18	11
8932852_SEX_RLX_UN	390	F	26-10-2024	27.3.c.22	14	14	13	12	16	14	40	11	8
8932853_ALW_RLX_XX	360	F	26-10-2024	27.3.c.22	9	9	10	10	11	9	40	9	7
8932853_SEX_RLX_UN	360	F	26-10-2024	27.3.c.22	9	10	10	10	10	10	80	5	3
8937794_ALW_RLX_DD	310	F	01-11-2024	27.3.a.21	11	NA	16	11	16	11	50	21	19
8937794_SEX_RLX_UN	310	F	01-11-2024	27.3.a.21	NA	NA	16	12	12	12	67	17	13
8937965_ALW_RLX_XB	300	F	02-11-2024	27.3.a.21	8	7	9	8	9	8	40	10	8
8937965_SEX_RLX_UN	300	F	02-11-2024	27.3.a.21	8	10	9	9	9	9	60	8	4
8937970_ALW_RLX_DD	380	F	02-11-2024	27.3.a.21	16	NA	22	14	22	22	50	22	19
8937970_SEX_RLX_UN	380	F	02-11-2024	27.3.a.21	12	NA	19	17	17	17	50	18	13
8938118_ALW_RLX_DD	230	F	02-11-2024	27.3.a.21	3	2	4	3	3	3	60	24	13
8938118_SEX_RLX_UN	230	F	02-11-2024	27.3.a.21	3	3	3	3	3	3	100	0	0
8938119_ALW_RLX_XX	250	F	02-11-2024	27.3.a.21	6	6	6	6	6	6	100	0	0
8938119_SEX_RLX_UN	250	F	02-11-2024	27.3.a.21	5	6	6	6	5	6	60	10	9
8938120_ALW_RLX_DX	270	F	02-11-2024	27.3.a.21	4	4	5	4	4	4	80	11	8
8938120_SEX_RLX_UN	270	F	02-11-2024	27.3.a.21	5	5	5	4	6	5	60	14	8
8938122_ALW_RLX_DX	320	F	02-11-2024	27.3.a.21	5	5	5	5	5	5	100	0	0
8938122_SEX_RLX_UN	320	F	02-11-2024	27.3.a.21	5	5	6	5	6	5	60	10	9
8938124_ALW_RLX_XB	370	F	02-11-2024	27.3.a.21	10	10	14	14	13	10	40	17	14
8938124_SEX_RLX_UN	370	F	02-11-2024	27.3.a.21	16	15	17	17	16	16	40	5	4
8938383_ALW_RLX_XX	130	M	03-11-2024	27.3.a.21	0	1	0	0	2	0	60	NA	NA
8938383_SEX_RLX_UN	130	M	03-11-2024	27.3.a.21	NA	1	1	0	1	1	75	67	50
8938384_ALW_RLX_BD	140	M	03-11-2024	27.3.a.21	0	NA	1	0	4	0	50	NA	NA
8938384_SEX_RLX_UN	140	M	03-11-2024	27.3.a.21	NA	NA	1	0	0	0	67	NA	NA
8938385_ALW_RLX_DX	180	M	03-11-2024	27.3.a.21	1	2	1	1	3	1	60	56	45
8938385_SEX_RLX_UN	180	M	03-11-2024	27.3.a.21	1	1	2	1	4	1	60	72	53
8938386_ALW_RLX_XX	190	F	03-11-2024	27.3.a.21	2	3	3	2	4	2	40	30	23
8938386_SEX_RLX_UN	190	F	03-11-2024	27.3.a.21	2	2	2	2	2	2	100	0	0
8943123_ALW_RLX_XX	210	M	06-11-2024	27.3.d.25	5	NA	5	3	6	5	50	26	18

8943123_SEX_RLX_UN	210	M	06-11-2024	27.3.d.25	2	4	5	4	6	4	40	35	25
8943125_ALW_RLX_XX	190	M	06-11-2024	27.3.d.25	2	1	3	2	5	2	40	58	43
8943125_SEX_RLX_UN	190	M	06-11-2024	27.3.d.25	1	1	2	2	NA	1	50	38	33
8943126_ALW_RLX_XX	160	M	06-11-2024	27.3.d.25	3	1	1	1	3	1	60	61	53
8943126_SEX_RLX_UN	160	M	06-11-2024	27.3.d.25	1	NA	1	1	1	1	100	0	0
8943851_ALW_RLX_XX	300	F	09-11-2024	27.3.d.25	5	4	5	5	5	5	80	9	7
8943851_SEX_RLX_UN	300	F	09-11-2024	27.3.d.25	5	5	5	5	5	5	100	0	0
8943852_ALW_RLX_DD	290	F	09-11-2024	27.3.d.25	5	4	6	4	6	4	40	20	16
8943852_SEX_RLX_UN	290	F	09-11-2024	27.3.d.25	6	6	6	6	7	6	80	7	5
8944472_ALW_RLX_XX	350	F	11-11-2024	27.3.d.25	8	7	10	8	10	8	40	16	13
8944472_SEX_RLX_UN	350	F	11-11-2024	27.3.d.25	9	7	13	8	8	8	40	26	18
8945041_ALW_RLX_XX	340	F	12-11-2024	27.3.d.25	8	6	10	7	11	8	20	25	20
8945041_SEX_RLX_UN	340	F	12-11-2024	27.3.d.25	10	8	11	12	8	8	40	18	15
8945050_ALW_RLX_XX	310	F	12-11-2024	27.3.d.25	8	7	11	8	8	8	60	18	12
8945050_SEX_RLX_UN	310	F	12-11-2024	27.3.d.25	8	NA	12	5	10	8	25	34	26
8946786_ALW_RLX_XX	220	M	10-11-2024	27.3.d.25	2	NA	1	1	2	2	50	38	33
8946786_SEX_RLX_UN	220	M	10-11-2024	27.3.d.25	1	2	2	2	1	2	60	34	30
8946954_ALW_RLX_BD	350	F	06-11-2024	27.3.d.25	7	8	10	8	9	8	40	14	10
8946954_SEX_RLX_UN	350	F	06-11-2024	27.3.d.25	11	12	14	11	10	11	40	13	10
ALS22404308_17_ALW	330		24-06-2024	27.3.d.24	4	4	4	4	4	4	100	0	0
ALS22404308_42_ALW	380		24-06-2024	27.3.d.24	NA	NA	NA	5	NA	5	100	NA	0
ALS22404308_51_ALW	390		24-06-2024	27.3.d.24	11	9	11	8	11	11	60	14	12
ALS22409314_01_ALW	390		17-09-2024	27.3.d.24	3	2	3	4	3	3	60	24	13
ALS22409314_89_ALW	350		17-09-2024	27.3.d.24	8	6	7	8	8	8	60	12	10
ALS42405309_113_ALW	310		24-06-2024	27.3.d.24	7	6	7	6	7	7	60	8	7
ALS42405309_151_ALW	190		24-06-2024	27.3.d.24	3	3	3	2	3	3	80	16	11
ALS42405309_154_ALW	180		24-06-2024	27.3.d.24	2	2	3	2	NA	2	75	22	17
ALS42405309_160_ALW	130		24-06-2024	27.3.d.24	2	2	2	2	NA	2	100	0	0
ALS42405309_164_ALW	380		24-06-2024	27.3.d.24	5	4	NA	5	5	5	75	11	8
ALS42405309_165_ALW	330		24-06-2024	27.3.d.24	5	4	4	5	5	5	60	12	10
ALS42405309_167_ALW	290		24-06-2024	27.3.d.24	4	4	4	5	4	4	80	11	8
ALS42405309_168_ALW	190		24-06-2024	27.3.d.24	2	2	2	2	4	2	80	37	27
ALS42409315_106_ALW	350		17-09-2024	27.3.d.24	NA	NA	NA	4	5	4	50	16	11
ALS42409315_114_ALW	260		17-09-2024	27.3.d.24	4	2	4	3	4	4	60	26	21
ALS42409315_118_ALW	300		17-09-2024	27.3.d.24	NA	NA	NA	NA	4	4	100	NA	0
ALS42409315_126_ALW	310		17-09-2024	27.3.d.24	3	4	NA	5	NA	3	33	25	17
ALS42409315_127_ALW	290		17-09-2024	27.3.d.24	3	3	4	4	4	4	60	15	13
ALS42409315_128_ALW	180		17-09-2024	27.3.d.24	2	2	5	3	3	2	40	41	27
ALS42409315_130_ALW	190		17-09-2024	27.3.d.24	2	2	3	2	3	2	60	23	20
ALSS22404308_17_SEX	330		24-06-2024	27.3.d.24	10	9	9	7	9	9	60	12	8
ALSS22404308_42_SEX	380		24-06-2024	27.3.d.24	9	10	9	8	9	9	60	8	4
ALSS22404308_51_SEX	390		24-06-2024	27.3.d.24	10	9	10	9	10	10	60	6	5

ALSS22409314_01_SEX	390		17-09-2024	27.3.d.24	10	10	10	10	10	10	100	0	0
ALSS22409314_89_SEX	350		17-09-2024	27.3.d.24	9	9	9	9	9	9	100	0	0
ALSS42405309_113_SEX	310		24-06-2024	27.3.d.24	7	9	7	8	8	7	40	11	8
ALSS42405309_151_SEX	190		24-06-2024	27.3.d.24	2	3	2	2	2	2	80	20	15
ALSS42405309_154_SEX	180		24-06-2024	27.3.d.24	2	2	2	1	2	2	80	25	18
ALSS42405309_160_SEX	130		24-06-2024	27.3.d.24	2	2	2	2	2	2	100	0	0
ALSS42405309_164_SEX	380		24-06-2024	27.3.d.24	7	8	10	9	9	9	40	13	10
ALSS42405309_165_SEX	330		24-06-2024	27.3.d.24	5	6	5	5	5	5	80	9	6
ALSS42405309_167_SEX	290		24-06-2024	27.3.d.24	4	NA	10	7	4	4	50	46	36
ALSS42405309_168_SEX	190		24-06-2024	27.3.d.24	4	4	4	3	4	4	80	12	8
ALSS42409315_102_SEX	170		17-09-2024	27.3.d.24	6	5	7	6	6	6	60	12	7
ALSS42409315_106_SEX	350		17-09-2024	27.3.d.24	8	NA	13	9	11	8	25	22	17
ALSS42409315_114_SEX	260		17-09-2024	27.3.d.24	4	4	5	4	5	4	60	12	11
ALSS42409315_118_SEX	300		17-09-2024	27.3.d.24	NA	NA	5	NA	2	5	50	61	43
ALSS42409315_126_SEX	310		17-09-2024	27.3.d.24	9	9	10	9	9	9	80	5	3
ALSS42409315_127_SEX	290		17-09-2024	27.3.d.24	5	4	5	3	3	5	40	25	20
ALSS42409315_128_SEX	180		17-09-2024	27.3.d.24	2	2	3	2	2	2	80	20	15
ALSS42409315_130_SEX	190		17-09-2024	27.3.d.24	2	1	4	2	3	2	40	48	37
ALSS42409315_136_SEX	290		17-09-2024	27.3.d.24	6	6	7	6	6	6	80	7	5
PLE_2011_Q3_sd21_011_R_ALW	80	U	02-02-2011	27.3.a.21	1	1	1	1	1	1	100	0	0
PLE_2019_Q1_sd21_009_R_ALW	270	M	22-01-2019	27.3.a.21	NA	NA	18	NA	14	18	50	18	12
PLE_2020_Q1_sd21_005_R_ALW	270	F	23-01-2025	27.3.a.21	4	4	5	4	5	4	60	12	11
PLE_2020_Q3_sd21_019_R_ALW	320	F	05-09-2020	27.3.a.21	NA	NA	18	NA	14	18	50	18	12
PLE_2020_Q3_sd21_020_R_ALW	290	F	11-09-2020	27.3.a.21	7	6	12	8	12	12	40	31	27
PLE_2021_Q1_sd21_008_R_ALW	340	M	24-01-2021	27.3.a.21	10	11	12	11	12	11	40	7	6
PLE_2024_Q3_sd21_012_R_ALW	120	F	23-08-2024	27.3.a.21	1	0	1	1	1	1	80	56	40
PLE_2024_Q3_sd21_013_R_ALW	250	F	22-08-2024	27.3.a.21	2	2	2	2	2	2	100	0	0
PLE_2024_Q3_sd21_014_R_ALW	230	M	26-08-2024	27.3.a.21	3	3	4	3	4	3	60	16	14
PLE_2024_Q3_sd21_015_R_ALW	240	M	23-08-2024	27.3.a.21	4	4	5	4	5	4	60	12	11
PLE_2024_Q3_sd21_016_R_ALW	220	M	23-08-2024	27.3.a.21	5	5	5	4	6	5	60	14	8
PLE_2024_Q3_sd21_017_R_ALW	290	F	22-08-2024	27.3.a.21	5	NA	6	5	7	5	50	17	13
PLE_2024_Q3_sd21_018_R_ALW	350	F	22-08-2024	27.3.a.21	6	5	7	5	7	5	40	17	13
PLE_2024_Q3_sd21_021_R_ALW	290	F	25-08-2024	27.3.a.21	11	10	11	11	11	11	80	4	3
PLE_2025_Q1_sd21_001_R_ALW	110	M	25-01-2025	27.3.a.21	1	1	1	0	1	1	80	56	40
PLE_2025_Q1_sd21_001_R_SEX	110	M	25-01-2025	27.3.a.21	1	1	1	1	1	1	100	0	0
PLE_2025_Q1_sd21_002_R_ALW	170	M	25-01-2025	27.3.a.21	2	1	2	2	2	2	80	25	18
PLE_2025_Q1_sd21_002_R_SEX	170	M	25-01-2025	27.3.a.21	2	2	2	2	2	2	100	0	0
PLE_2025_Q1_sd21_003_R_ALW	190	F	25-01-2025	27.3.a.21	3	2	3	3	3	3	80	16	11
PLE_2025_Q1_sd21_003_R_SEX	190	F	25-01-2025	27.3.a.21	3	3	3	3	3	3	100	0	0
PLE_2025_Q1_sd21_004_R_ALW	240	F	28-01-2025	27.3.a.21	4	3	5	4	4	4	60	18	10
PLE_2025_Q1_sd21_004_R_SEX	240	F	28-01-2025	27.3.a.21	4	3	4	4	4	4	80	12	8
PLE_2025_Q1_sd21_005_R_SEX	270	F	23-01-2025	27.3.a.21	4	4	5	5	4	4	60	12	11

PLE_2025_Q1_sd21_006_R_ALW	260	F	27-01-2025	27.3.a.21	6	7	7	6	6	6	60	9	8
PLE_2025_Q1_sd21_006_R_SEX	260	F	27-01-2025	27.3.a.21	5	6	6	6	6	6	80	8	6
PLE_2025_Q1_sd21_007_R_ALW	340	F	27-01-2025	27.3.a.21	7	7	8	5	8	7	40	17	11
PLE_2025_Q1_sd21_007_R_SEX	340	F	27-01-2025	27.3.a.21	8	6	7	7	8	8	40	12	9
PLE_2025_Q1_sd21_008_R_SEX	340	M	24-01-2021	27.3.a.21	13	15	15	13	14	13	40	7	6
PLE_2025_Q1_sd21_009_R_SEX	270	M	22-01-2019	27.3.a.21	NA	NA	20	8	NA	20	50	61	43
PLE_2025_Q1_sd21_010_R_ALW	360	F	30-01-2025	27.3.a.21	11	11	11	11	11	11	100	0	0
PLE_2025_Q1_sd21_010_R_SEX	360	F	30-01-2025	27.3.a.21	10	12	11	11	11	11	60	6	4
PLE_2025_Q1_sd21_011_R_SEX	80	U	02-02-2011	27.3.a.21	1	1	1	1	0	1	80	56	40
PLE_2025_Q1_sd21_012_R_SEX	120	F	23-08-2024	27.3.a.21	1	0	1	0	3	1	40	NA	NA
PLE_2025_Q1_sd21_013_R_SEX	250	F	22-08-2024	27.3.a.21	2	1	2	3	3	2	40	38	29
PLE_2025_Q1_sd21_014_R_SEX	230	M	26-08-2024	27.3.a.21	3	2	3	3	3	3	80	16	11
PLE_2025_Q1_sd21_015_R_SEX	240	M	23-08-2024	27.3.a.21	NA	3	4	4	5	4	50	20	12
PLE_2025_Q1_sd21_016_R_SEX	220	M	23-08-2024	27.3.a.21	4	6	5	5	7	5	40	21	16
PLE_2025_Q1_sd21_017_R_SEX	290	F	22-08-2024	27.3.a.21	5	5	6	4	5	5	60	14	8
PLE_2025_Q1_sd21_018_R_SEX	350	F	22-08-2024	27.3.a.21	6	7	7	6	8	6	40	12	9
PLE_2025_Q1_sd21_019_R_SEX	320	F	05-09-2020	27.3.a.21	22	19	23	21	22	22	40	7	5
PLE_2025_Q1_sd21_020_R_SEX	290	F	11-09-2020	27.3.a.21	12	11	13	11	12	11	40	7	5
PLE_2025_Q1_sd21_021_R_SEX	290	F	25-08-2024	27.3.a.21	11	11	11	11	11	11	100	0	0
PLE_SD26_10_ALW	280	F	21-02-2025	27.3.d.26	NA	3	4	5	4	4	50	20	12
PLE_SD26_10_SEX	280	F	21-02-2025	27.3.d.26	4	3	6	4	5	4	40	26	20
PLE_SD26_11_ALW	220	M	01-12-2024	27.3.d.26	3	NA	4	2	6	3	25	46	33
PLE_SD26_11_SEX	220	M	01-12-2024	27.3.d.26	4	3	7	3	6	3	40	39	33
PLE_SD26_12_ALW	310	F	21-02-2025	27.3.d.26	6	5	6	6	7	6	60	12	7
PLE_SD26_12_SEX	310	F	21-02-2025	27.3.d.26	6	5	6	6	5	6	60	10	9
PLE_SD26_13_ALW	250	F	16-11-2024	27.3.d.26	5	4	4	4	5	4	60	12	11
PLE_SD26_13_SEX	250	F	16-11-2024	27.3.d.26	6	6	8	4	6	6	60	24	13
PLE_SD26_14_ALW	280	F	21-02-2025	27.3.d.26	7	6	8	6	7	6	40	12	9
PLE_SD26_14_SEX	280	F	21-02-2025	27.3.d.26	7	7	7	7	7	7	100	0	0
PLE_SD26_15_ALW	250	M	24-02-2025	27.3.d.26	4	3	5	3	5	3	40	25	20
PLE_SD26_15_SEX	250	M	24-02-2025	27.3.d.26	4	5	5	4	5	5	60	12	10
PLE_SD26_16_ALW	300	F	01-12-2024	27.3.d.26	8	8	8	8	9	8	80	5	4
PLE_SD26_16_SEX	300	F	01-12-2024	27.3.d.26	8	NA	8	8	8	8	100	0	0
PLE_SD26_17_ALW	240	M	01-12-2024	27.3.d.26	3	2	2	2	2	2	80	20	15
PLE_SD26_17_SEX	240	M	01-12-2024	27.3.d.26	5	4	NA	3	4	4	50	20	12
PLE_SD26_18_ALW	320	F	21-02-2025	27.3.d.26	7	7	9	8	9	7	40	12	10
PLE_SD26_18_SEX	320	F	21-02-2025	27.3.d.26	8	8	10	10	8	8	60	12	11
PLE_SD26_19_ALW	230	M	24-02-2025	27.3.d.26	5	4	6	5	5	5	60	14	8
PLE_SD26_19_SEX	230	M	24-02-2025	27.3.d.26	7	6	9	4	NA	7	25	32	23
PLE_SD26_1_ALW	100	F	20-02-2025	27.3.d.26	3	NA	1	1	2	1	50	55	43
PLE_SD26_1_SEX	100	F	20-02-2025	27.3.d.26	1	1	1	1	1	1	100	0	0
PLE_SD26_20_ALW	220	M	15-11-2024	27.3.d.26	2	2	2	2	6	2	80	64	46

PLE_SD26_20_SEX	220	M	15-11-2024	27.3.d.26	4	NA	4	4	3	4	75	13	10
PLE_SD26_2_ALW	120	M	14-11-2024	27.3.d.26	1	0	1	1	1	1	80	56	40
PLE_SD26_2_SEX	120	M	14-11-2024	27.3.d.26	1	0	1	0	1	1	60	91	80
PLE_SD26_3_ALW	140	M	14-11-2024	27.3.d.26	1	1	1	1	1	1	100	0	0
PLE_SD26_3_SEX	140	M	14-11-2024	27.3.d.26	1	0	1	0	1	1	60	91	80
PLE_SD26_4_ALW	140	F	21-02-2025	27.3.d.26	2	1	2	1	2	2	60	34	30
PLE_SD26_4_SEX	140	F	21-02-2025	27.3.d.26	2	2	2	1	2	2	80	25	18
PLE_SD26_5_ALW	150	M	21-02-2025	27.3.d.26	2	1	2	1	2	2	60	34	30
PLE_SD26_5_SEX	150	M	21-02-2025	27.3.d.26	2	1	2	1	2	2	60	34	30
PLE_SD26_6_ALW	230	F	15-11-2024	27.3.d.26	3	NA	5	3	6	3	50	35	29
PLE_SD26_6_SEX	230	F	15-11-2024	27.3.d.26	2	2	2	2	2	2	100	0	0
PLE_SD26_7_ALW	190	M	18-02-2025	27.3.d.26	4	3	3	2	5	3	40	34	26
PLE_SD26_7_SEX	190	M	18-02-2025	27.3.d.26	4	2	3	2	4	2	40	33	27
PLE_SD26_8_ALW	200	M	01-12-2024	27.3.d.26	2	NA	1	1	3	1	50	55	43
PLE_SD26_8_SEX	200	M	01-12-2024	27.3.d.26	2	1	2	2	2	2	80	25	18
PLE_SD26_9_ALW	250	M	01-12-2024	27.3.d.26	2	NA	2	3	3	2	50	23	20
PLE_SD26_9_SEX	250	M	01-12-2024	27.3.d.26	6	NA	7	5	8	6	25	20	15

Sectioned otolith (Strata_SE) Multimodal cases

Table .2.1.2: Strata_SE .Total number of samples (NSample) and percentage of cases (fish samples) with multiple modes depending on the approach to weight the experience of the reader which will be considered when defining the fish age mode. PercMM_traditional shows the percentage of the total samples for which multiple modes are obtained when all the readers are equally weighted. PercMM_linear_weight shows the percentage of the total samples for which multiple modes are obtained when the weight assigned to the different readers decreases linearly with the experience, while in the PercMM_negexp the weight applied decreases with a negative exponential shape with the experience. The PercMM_multistage shows the percentage of multiple mode cases when a combination of the different methodologies is used, as explained in the material and methods section

NSample	PercMM_traditional	PercMM_linear_weight	PercMM_negexp_weight	PercMM_multistage
197	19 %	2 %	0 %	0 %

Whole Otolith (Strata_AL) Multimodal cases

Table 2.1.3: Strata_AL .Total number of samples (NSample) and percentage of cases (fish samples) with multiple modes depending on the approach to weight the experience of the reader which will be considered when defining the fish age mode. PercMM_traditional shows the percentage of the total samples for which multiple modes are obtained when all the readers are equally weighted. PercMM_linear_weight shows the percentage of the total samples for which multiple modes are obtained when the weight assigned to the different readers decreases linearly with the experience, while in the

PercMM_negexp the weight applied decreases with a negative exponential shape with the experience. The PercMM_multistage shows the percentage of multiple mode cases when a combination of the different methodologies is used, as explained in the material and methods section

NSample	PercMM_traditional	PercMM_linear_weight	PercMM_negexp_weight	PercMM_multistage
196	26 %	1 %	0 %	0 %

List of multimodal cases

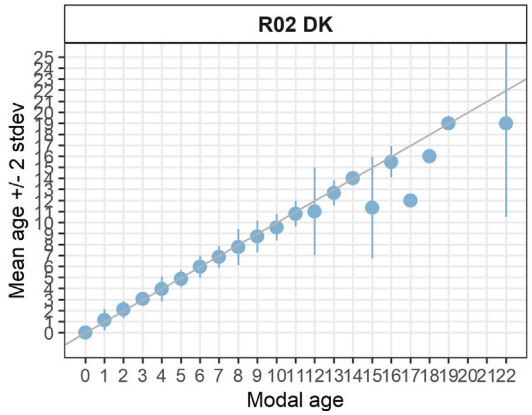
Table 2.1.4: List of cases for which multiple modes where obtained when all readers are considered. The column NModes_trad shows the number of multiple modes for each FishID or sampleID when all readers are given the same expertise weight.

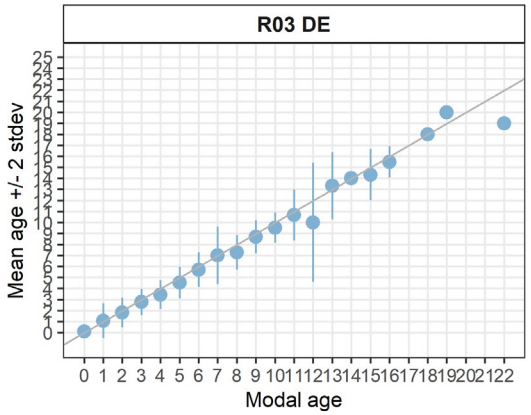
NModes_trad	SampleID
3	**8749973_SEX_RLX_UN**
2	**8815035_ALW_RLX_DD**
2	**8815035_SEX_RLX_UN**
4	**8815036_ALW_RLX_DD**
2	**8825244_ALW_RLX_DD**
2	**8825561_SEX_RLX_UN**
2	**8828254_SEX_RLX_UN**
2	**8828264_ALW_RLX_DD**
2	**8829000_ALW_RLX_DD**
2	**8829217_SEX_RLX_UN**
2	**8837701_ALW_RLX_XX**
4	**8839792_SEX_RLX_UN**
2	**8841018_SEX_RLX_UN**
2	**8846970_ALW_RLX_DX**
2	**8846986_ALW_RLX_DD**
4	**8846987_ALW_RLX_DX**
2	**8849669_ALW_RLX_D0**
2	**8849669_SEX_RLX_UN**
5	**8849670_ALW_RLX_DD**
3	**8849670_SEX_RLX_UN**
2	**8849985_ALW_RLX_XB**
2	**8855097_SEX_RLX_UN**
4	**8860430_SEX_RLX_UN**
2	**8862964_ALW_RLX_X0**
2	**8880345_SEX_RLX_UN**
2	**8880347_ALW_RLX_DX**
2	**8896603_SEX_RLX_UN**
2	**8896604_ALW_RLX_XM**
2	**8896605_ALW_RLX_XX**
2	**8896607_SEX_RLX_UN**
2	**8896610_ALW_RLX_XM**

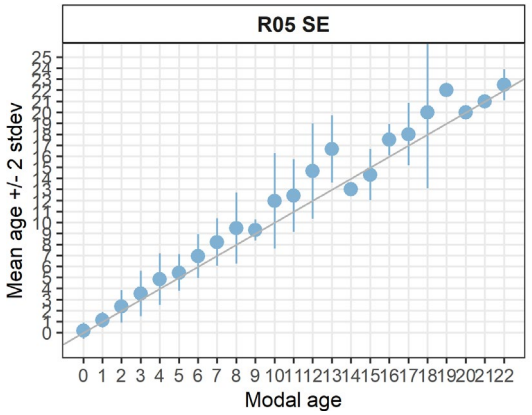
NModes_trad	SampleID
2	8897044_SEX_RLX_UN
2	8897047_ALW_RLX_DX
2	8897052_SEX_RLX_UN
2	8897053_SEX_RLX_UN
2	8909043_ALW_RLX_XX
2	8913061_ALW_RLX_XX
4	8922583_ALW_RLX_XD
2	8929688_ALW_RLX_DX
2	8930406_ALW_RLX_XD
2	8930725_ALW_RLX_XX
2	8930727_ALW_RLX_X0
2	8931409_SEX_RLX_UN
2	8931897_ALW_RLX_DX
5	8931898_SEX_RLX_UN
2	8931899_SEX_RLX_UN
2	8931900_ALW_RLX_DX
2	8932847_ALW_RLX_DX
2	8932853_ALW_RLX_XX
2	8937794_ALW_RLX_DD
2	8937965_ALW_RLX_XB
2	8938124_ALW_RLX_XB
2	8938124_SEX_RLX_UN
2	8938386_ALW_RLX_XX
2	8943125_SEX_RLX_UN
2	8943852_ALW_RLX_DD
2	8944472_ALW_RLX_XX
5	8945041_ALW_RLX_XX
4	8945050_SEX_RLX_UN
2	8946786_ALW_RLX_XX
2	ALS42409315_106_ALW
3	ALS42409315_126_ALW
2	ALS42409315_128_ALW
2	ALSS42405309_113_SEX
4	ALSS42409315_106_SEX
2	ALSS42409315_118_SEX
2	ALSS42409315_127_SEX
2	PLE_2019_Q1_sd21_009_R_ALW
2	PLE_2020_Q3_sd21_019_R_ALW
2	PLE_2021_Q1_sd21_008_R_ALW
2	PLE_2024_Q3_sd21_018_R_ALW
2	PLE_2025_Q1_sd21_007_R_ALW
2	PLE_2025_Q1_sd21_007_R_SEX
2	PLE_2025_Q1_sd21_008_R_SEX
2	PLE_2025_Q1_sd21_009_R_SEX

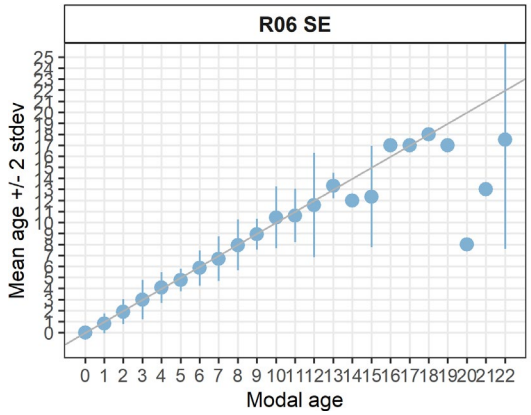
NModes_trad	SampleID
2	**PLE_2025_Q1_sd21_012_R_SEX**
2	**PLE_2025_Q1_sd21_013_R_SEX**
2	**PLE_2025_Q1_sd21_018_R_SEX**
2	**PLE_2025_Q1_sd21_020_R_SEX**
4	**PLE_SD26_11_ALW**
2	**PLE_SD26_14_ALW**
2	**PLE_SD26_15_ALW**
2	**PLE_SD26_18_ALW**
4	**PLE_SD26_19_SEX**
2	**PLE_SD26_7_SEX**
2	**PLE_SD26_9_ALW**
4	**PLE_SD26_9_SEX**

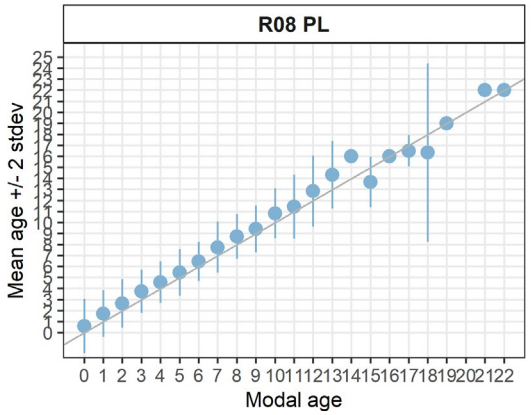
Separate age bias plots by reader


R02 DK
Mean age +/- 2 stdev
Modal age


R03 DE
Mean age +/- 2 stdev
Modal age


R05 SE
Mean age +/- 2 stdev
Modal age


R06 SE
Mean age +/- 2 stdev
Modal age


R08 PL
Mean age +/- 2 stdev
Modal age