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Report on Greenland halibut (*Reinhardtius hippoglossoides*) caught during the 2025 trawl survey in Subarea 0

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Abstract

A stratified-random otter trawl survey was conducted in Divisions 0A and 0B in fall 2025. The survey took place from October 19 to November 20, 2025. A Bacalao trawl was used with the R.V. Tarajoq. Survey stations were randomly located within depth strata in Divs. 0A and 0B. Near-bottom temperatures were similar to previous surveys varying between -0.81 to 1.57°C in Div. 0A and -0.33 to 4.16°C in Div. 0B. The highest mean temperature was in the 601-800 m stratum and the coldest mean was in the 201-400 m stratum in Div. 0A, and the highest mean temperature was in the 801-1000 m stratum and the coldest mean was in the 201-400 m stratum in Div. 0B. Greenland halibut were distributed throughout the survey area. A majority of both females (94.34%) and males (88.7%) were immature in Division 0A, but the ratios were more balanced in 0B, where 48.65% and 35.74% of females and males, respectively, were immature. The 2025 biomass estimates for 0A and 0B were 8.59e+04 t (S.E. 1.21e+04) and 2.12e+05 t (S.E. 6.32e+04), respectively. The 2025 abundance estimates for 0A and 0B were 1.19e+08 (S.E. 1.90e+07) and 1.51e+08 (S.E. 3.25e+07), respectively. These biomass and abundance values cannot be compared directly with the 1999-2017 time series from the R.V. Pâmiut because a calibration is not available to account for the changes in vessel and gear, and revisions to survey strata that were applied in 2022.

Introduction

A depth-stratified random multi-species bottom trawl survey was conducted in southern Division 0A (0A-South; to approximately 72.5°N) and Div. 0B in Northwest Atlantic Fisheries Organization Subarea 0 using the R.V. Tarajoq during October 19 to November 20, 2025. Surveys during 2022-2025 used a Bacalao trawl; previous surveys during 1999-2019 used an Alfredo III trawl with the R.V. Pâmiut (1999-2017) and F.V. Helga Maria (2019). The survey stratification was altered in 2022 by adding a 201-400 m depth stratum to the existing strata (401-600, 601-800, 801-1000, 1001-1200, 1201-1400, 1401-1500 m). With the changes in vessel, gear, and stratification in 2022, without calibration experiments, data from 2022-2025 represent a new time series from the data collected during 1999-2019.

Deep-water surveys in 0A-South started in 1999 and were completed every second year between 2004 and 2014, then annually between 2015 and 2017. Surveys in 0B were less frequent, occurring in 2000, 2001, 2011 and 2013 to 2016. These surveys were all completed using the R.V. Pâmiut. Following retirement of the R.V. Pâmiut in 2018 the F.V. Helga Maria was used to conduct a survey of 0A-south in 2019, but post-survey analysis identified significant differences in trawl performance below 700 m, therefore the data were not accepted for assessing the status of the NAFO Subarea 0 stock. In 2022, surveys in 0A-south and 0B resumed using the R.V. Tarajoq (Table 1). Detailed descriptions of changes in survey coverage, timing, vessel and gear are provided in HEDGES (2023).

The survey objectives are to: 1) Collect data required to establish age structure and estimate the population abundance, biomass, and recruitment of Greenland halibut; 2) Record numbers caught and collect length and weight data on all other commercial species to support by-catch monitoring through the calculation of abundance and biomass indices, and size structure of individual species; 3) Record numbers and collect weight data on all non-commercial species caught to allow calculation of abundance and biomass indices for individual species; 4) Collect additional data and biological samples as desired and as time permits (e.g. lengths for by-catch, maturity information, coral samples, other special requests); 5) Calculate total biomass caught per tow and per survey as an index of overall ecosystem productivity; 6) Collect temperature data at each fishing station.

Table 1. Survey locations, dates, vessels and gear used since 1999 in NAFO Subarea 0.

Year	0A-North	0A-South	0B	Vessel	Gear	Accepted
1999		X		R.V. Pâmiut	Alfredo III	Y
2000			X	R.V. Pâmiut	Alfredo III	Y
2001		X	X	R.V. Pâmiut	Alfredo III	Y
2002						
2003						
2004	X	X		R.V. Pâmiut	Alfredo III	Y
2005						
2006		X		R.V. Pâmiut	Alfredo III	Y
2007						
2008		X		R.V. Pâmiut	Alfredo III	Y
2009						
2010	X	X		R.V. Pâmiut	Alfredo III	Y
2011			X	R.V. Pâmiut	Alfredo III	Y
2012	X	X		R.V. Pâmiut	Alfredo III	Y
2013			X	R.V. Pâmiut	Alfredo III	Y
2014		X	X	R.V. Pâmiut	Alfredo III	Y
2015		X	X	R.V. Pâmiut	Alfredo III	Y

Year	0A-North	0A-South	0B	Vessel	Gear	Accepted
2016		X	X	R.V. Pâmiut	Alfredo III	Y
2017		X		R.V. Pâmiut	Alfredo III	Y
2018						
2019		X		F.V. Helga Maria	Alfredo III	N
2020						
2021						
2022		X	X	R.V. Tarajoq		Y
2023		X	X	R.V. Tarajoq		Y
2024		X	X	R.V. Tarajoq		Y
2025		X	X	R.V. Tarajoq		Y

Methods

Stratification and Set Selection

A depth stratification scheme similar to that used by the Greenland Institute of Natural Resources for the Division 1CD survey was developed in 2008 to facilitate comparisons between surveys conducted in Canadian and Greenland waters. The depth bins were redefined in 2022 using updated bathymetric data, resulting in slight differences from the depth bins used in surveys conducted between 1999 and 2019. Therefore, sets completed during 1999-2019 were re-assigned to the new depth strata post-hoc to allow consistent spatial extrapolation when calculating abundance and biomass indices across years (Figures 1, 2 and 3, and Table 2). Previous revisions to the survey strata and changes to earlier index calculations are described in TREBLE (2020).

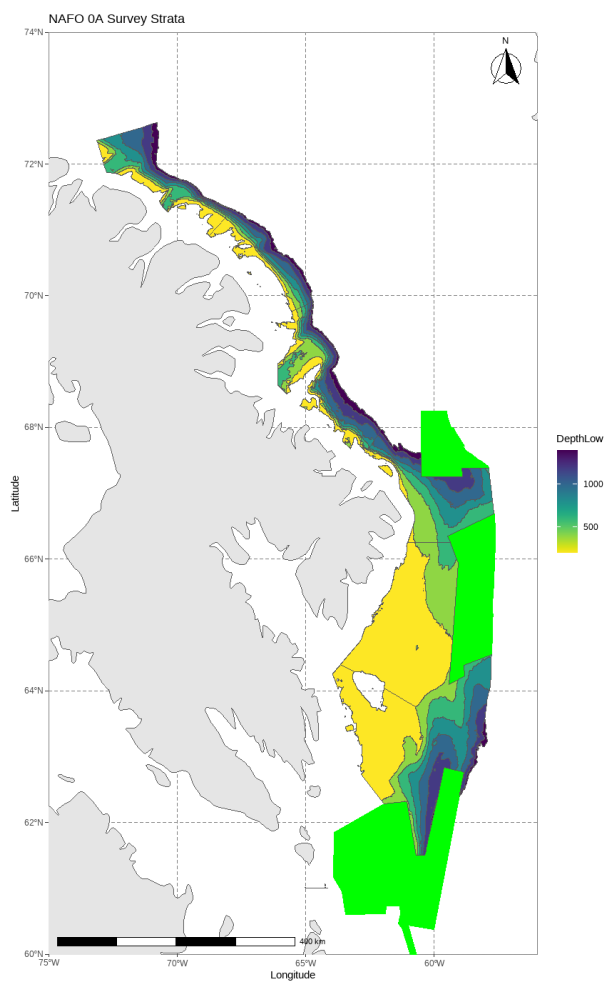


Figure 1. Map of NAFO areas and survey strata.

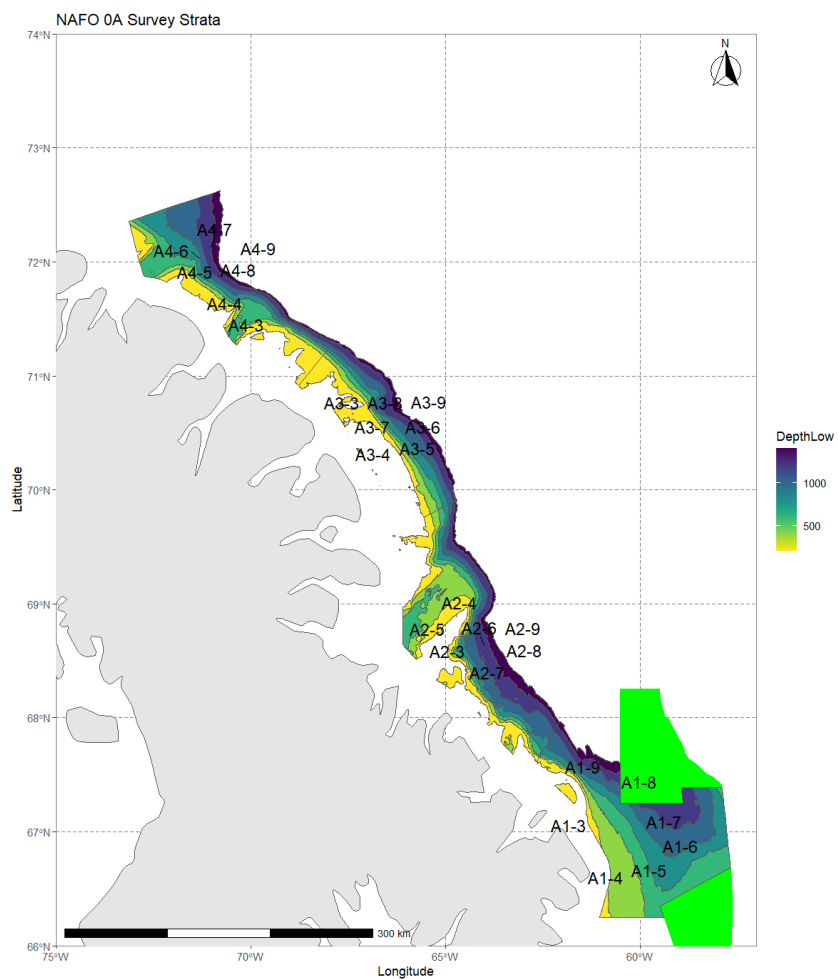


Figure 2. Stratification scheme for Division 0A-South.

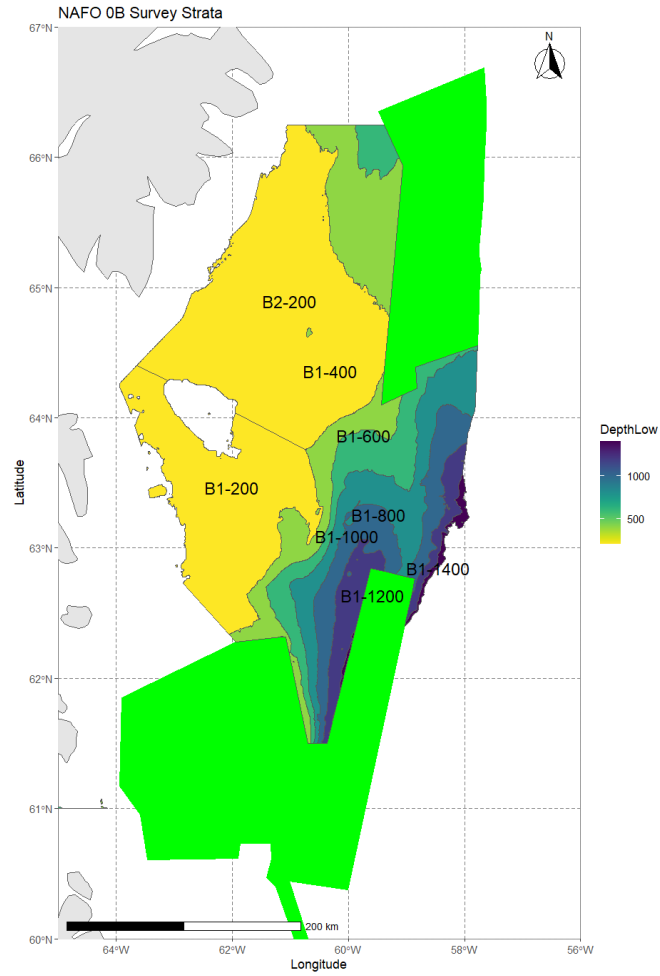


Figure 3. Stratification scheme for Division 0B.

Table 2. Survey stratification scheme for NAFO Subarea 0.

Survey Area	Stratum	Depth Stratum (m)	Area (km ²)	Assigned Sets (1/750 km ²)
0A	A1-3	201-400	2,441.00	2
0A	A1-4	401-600	2,151.56	5
0A	A1-5	601-800	794.75	5
0A	A1-6	801-1000	603.81	5
0A	A1-7	1001-1200	745.21	5
0A	A1-8	1201-1400	812.76	2
0A	A2-3	201-400	5,095.00	2
0A	A2-4	401-600	4,649.39	4
0A	A2-5	601-800	2,250.41	2
0A	A2-6	801-1000	1,144.81	2
0A	A2-7	1001-1200	1,873.10	3
0A	A2-8	1201-1400	2,151.49	3
0A	A2-9	1401-1500	1,153.19	2
0A	A3-3	201-400	1,950.00	2
0A	A3-4	401-600	784.79	2
0A	A3-5	601-800	759.93	2
0A	A3-6	801-1000	1,020.40	2
0A	A3-7	1001-1200	1,306.99	2
0A	A3-8	1201-1400	1,145.95	2
0A	A4-3	201-400	3,926.00	2
0A	A4-4	401-600	1,921.58	2
0A	A4-5	601-800	2,483.22	3
0A	A4-6	801-1000	1,375.61	3
0A	A4-7	1001-1200	1,635.65	2
0A	A4-8	1201-1400	1,071.88	2
0B	B1-1000	1001-1200	6,585.63	7
0B	B1-1200	1201-1400	4,753.85	6
0B	B1-1400	1401-1500	1,964.57	2
0B	B1-200	201-400	11,285.00	16
0B	B1-400	401-600	17,396.93	16
0A	B1-600	601-800	2,282.96	2
0B	B1-600	601-800	2,282.96	8
0B	B1-800	801-1000	8,053.13	10
0B	B2-200	201-400	25,879.00	24

The survey area between 200 and 1500 m in Div. 0A-South (to approximately 72°N) is 47,924 km² (Table 1) within which 79 sets are randomly assigned to 28 sub-strata (4 sub-stratum in each of 7 depth strata). In Div. 0B, 110 survey stations are divided among 8 sub-strata (2 sub-strata within the 201-400 m depth stratum; all other depth strata are not subdivided). Set selection is based on a coverage level of approximately 1 set per 750 km². A minimum of two sets are randomly selected from numbered units within each sub-stratum using a

buffered random design (KINGSLEY (2004)). If a set cannot be fished due to bad bottom, ice, etc. then the tow is taken in an adjacent unit as close to the missed site within the sub-stratum as feasible given the conditions. When this is not possible the tow may be re-located to an area of the sub-stratum where there are “holes” in the set coverage and a unit location selected at random from those available in that area.

Vessel and Gear

The surveys prior to 2019 were conducted by the RV Pâmiut, a 1084 GRT stern trawler measuring 53 m in length. An Alfredo III bottom otter trawl with rock hopper ground gear was used. Mesh size was 140 mm with a 30 mm mesh liner in the cod end. Trawl doors were Injector International, measuring 7.5 m² and weighing 2800 kg. These doors replaced the Greenland Perfect doors (9.25 m² and 2420 kg) in 2004. The average net height was 20 cm higher with the new doors but the overall net performance was not significantly different (95% level) (Jørgensen personal communication). More information about the trawl and gear can be found in JØRGENSEN (1998). A Furuno based system mounted on the head rope measured net height and was used to determine bottom contact and the start/finish of each tow. Scanmar sensors measured the distance between the trawl doors and since 2010 the wingspread.

The 2019 survey vessel, FV Helga Maria, was 1470 GRT and 57 m in length. The trawl gear and rigging as described above remained unchanged. The warps, bridle, ground gear and distance from the hanging blocks were kept the same as on the RV Pâmiut. The fishing procedures were also the same, the RV Pâmiut captain and crew were involved prior to and during the survey. See Novaczek WHEELAND L. J. and Nogueira (2020) for additional information on vessel comparison and gear performance.

Since 2022 the survey has been conducted using the RV Tarajoq, which is a 2841 GRT and 61.4 m long stern trawler. The RV Tarajoq used a Bacalao trawl but followed the same fishing procedures as the RV Pâmiut and had the same captain and crew.

Oceanographic Sampling

A Seabird 19 CTD (conductivity, temperature and depth recorder) was mounted on the head-rope beginning in 2010 and was used to determine temperature, depth and time spent on the bottom. In the few cases where there were no data from the CTD, data from the Furuno trawl eye sensor was used to determine bottom temperature.

Two oceanographic lines that cross the shelf and slope at Broughton Island (near 68°N) and Cape Christian (near 71°N) were included in survey plans prior to 2022. These transect lines were completed when conditions (time and ice) allowed. The transect lines were removed from the survey design in 2022 because they had not been completed in most years. The trawl mounted CTD continues to provide temperature and salinity data at the trawl mouth to associate environmental conditions with trawl catches. In addition, in 2017 an annual ecosystem-focused survey commenced on the CCGS Amundsen. The Knowledge and Ecosystem Base Advice for Baffin Bay (KEBABB) program collects physical, chemical and biological oceanographic data, and larval fish and zooplankton samples, in 0A-south to provide an ecosystem context for population assessments in the area. The KEBABB program collects more diverse and consistent data than was achieved with the CTD transects.

Trawling Procedure

The targeted tow duration was 30 minutes, however, tows down to 15 minutes in length were considered acceptable. Average towing speed was 3.0 knots. Trawling took place throughout a 24 hr period in order to maximize the use of the ship's time and complete the necessary number and distribution of tows.

Biological Data Collection and Analysis

Numbers and total weight caught were recorded on a set by set basis for each species. Detailed sampling was carried out on Greenland halibut and shrimp. For other commercial species (e.g. redfish, grenadiers, skates)

sexed length measurements were collected. Lengths were measured to the lowest 1 cm total length (0.5 cm pre anal fin length for grenadiers) using a standard meter board. Large catches of Greenland halibut, redfish or shrimp were sub-sampled. Sub-samples of Greenland halibut were comprised of at least 200 fish. Adjustments were made during analysis to estimate total number caught in each case. Greenland halibut sampling consisted of a visual assessment of maturity for all individuals based on maturity stages described in Riget and Boje (1989). For each sampled fish the whole weight was recorded at sea using an electronic balance. Otoliths for age determination were collected from 5 fish per 3 cm length group per sex per set. Various species from the catch were collected or had tissue samples taken for use by other researchers within DFO.

Biomass and Abundance Indices

The swept area method was used in the estimation of biomass and abundance for Greenland halibut: Swept area (km^2) = (wingspread (m) x haul-length)/1,000,000. Prior to 2022, when wingspread (aka outer bobbin distance) was not available it was calculated as: $10.122 + \text{distance between trawl doors (m)} \times 0.142$. This relationship is based on flume tank measurements of the trawl and rigging (JØRGENSEN (1998)). In 2022 when wingspread was not available for a set the mean wingspread value for sets in the depth stratum was imputed. If neither wingspread or doorspread was available and the tow was valid then the mean wingspread value for that trip was used. The haul-length used in the sweptarea calculations was calculated as the great-circle distance between the start and end positions of the tow. Abundance and biomass were calculated for each set and standardized to 1 km^2 :

Abundance (n/km^2) = catch (n)/sweptarea (km^2)

Biomass (tons/km^2) = catch (kgs)/swept area (km^2)/1000

A sub-stratum area may be included in the analysis even if it contains less than 2 sets, if the total number of sets for the depth stratum is greater than 2. In other words, sets are assigned at the sub-strata level but the analysis and threshold for inclusion is done at the depth strata level. This approach to the analysis was reviewed in 2014 and considered acceptable, given the index based nature of the assessment.

Mean and standard error for abundance and biomass were calculated for each depth strata containing 2 or more sets. As noted above, these estimates are not calculated at the finer sub-strata level but at the larger depth strata level. Estimates of total abundance and biomass were then calculated for each depth strata (mean x area surveyed (km^2)) and summed over all depth strata. Standard error values were calculated for the overall total.

Abundance at length was calculated for each depth strata (standardized to km^2 and weighted by tow), and a total abundance at each length (weighted by the area within each depth strata) was calculated (mean number/ $\text{km}^2 \times \text{area surveyed (km}^2\text{)}$). The sum across all lengths and depth categories was calculated and compared to the overall abundance value determined above as a means of confirming the results. Note that the 1401-1500 m depth strata was poorly covered in 1999, 2001 and 2006 and the survey area was adjusted (reduced) accordingly for those years (Table 3).

Results and Discussion

The 2025 survey was scheduled at a similar time of year to surveys in 2023 and 2024, occurring during October 19 to November 20, 2025. The vessel encountered rough weather in NAFO Div. 0B near the start of the second half of the survey which contributed to a large number of stations being missed (38/110 stations). In total, 78/79 stations were completed in Div. 0A-south and 72/110 stations were completed in Div. 0B. The one missed station in Div. 0A-South was in the 201-400 m stratum. The missed stations in Div. 0B included 36 stations near the mouth of Cumberland Sound in the 201-400 m stratum (60 stations were assigned to the stratum), and one station in each of the 801-1000 and 1001-1200 m strata. All survey strata had sufficient completed stations for inclusion in biomass index calculations. The number of stations completed per survey strata in each year is presented in Table 3.

Survey Timing

Most of the 0A surveys have taken place between late September and early November. An analyses of effects of survey timing was conducted int 2020 (NOVACZEK WHEELAND L. J. (2020)). The analysis found that in 2019, when the survey occurred in August, Greenland halibut were located shallower than was typical. The analysis also suggested that in 2017 when the survey occurred approximate 4 weeks earlier than usual, catches were higher in the deepest strata than was typical for previous surveys. These findings demonstrate the importance of keeping survey timing as consistent as possible, to reduce the uncertainty around results which is often difficult to understand.

The 2022 survey occurred from October 28 to November 28, which was the latest the survey has occurred. The survey design for future years is to maintain consistency in survey timing, occurring over a 30 days period between mid-October and late November.

Table 3. Distribution of survey sets among strata in Subarea 0 by year. Areas with fewer than 2 completed survey sets were removed due to incomplete set coverage.

Survey Area	Stratum	Depth Stratum (m)	1999	2000	2001	2004	2006	2008	2010	2011	2012	2013	2014	2015	2016	2017	2019	2022	2023	2024	2025
0A	A1-4	401-600	8			6	5	4	5		4		6	4	5	6	3	6	5	5	5
0A	A1-5	601-800	4		5	5	7	7	7		7		8	7	7	9	7	7	5	5	5
0A	A1-6	801-1000	5		3	6	4	8	8		7		7	6	6	5	6	5	5	5	5
0A	A1-7	1001-1200	2		3	4	2	4	4		4		5	5	4	4	3	3	5	5	4
0A	A1-8	1201-1400	3		4	3		4	5		5		5	2	3	3	3	3	2	3	3
0A	A2-4	401-600	2		3		7	3	5		5		4	5	5	3	6		4	4	5
0A	A2-6	801-1000	2					2	2		2		2		3	4	2		2		3
0A	A2-7	1001-1200	4		2	2	5	2	2		3		4	2		5	2	2	3	3	2
0A	A2-8	1201-1400	2		5	5	3	3	3		3		4	3	3	5	4		3	3	3
0A	A3-4	401-600	3				4	2	2		2		2	2		2	2		2	2	2
0A	A3-6	801-1000	3		2	3		2	2		2		2	2	2	3	2		2	2	2
0A	A3-7	1001-1200	2			4			2		2		2	3	2	2	2		2	2	2
0A	A3-8	1201-1400	2			2		3	2		2		2	3	2	2	2		2	2	2
0A	A4-5	601-800	2			2			3		3		2	3	3		3		3	3	3
0B	B1-1000	1001-1200		6	5					8		8	8	8	8			8	7	7	7
0B	B1-1200	1201-1400		4	2					5		4	6	4	6			5	6	5	6
0B	B1-400	401-600		4	2					12		12	7	11	11			15	16	16	16
0B	B1-600	601-800		8	6					8		10	7	9	8			8	8	8	8

Survey Area	Stratum	Depth Stratum (m)	1999	2000	2001	2004	2006	2008	2010	2011	2012	2013	2014	2015	2016	2017	2019	2022	2023	2024	2025
0B	B1-800	801-1000		12	8					11		11	11	9	11			11	10	10	9
0A	A2-5	601-800			3		3	4	3		3		3	4	3	3	2		2	3	
0A	A4-8	1201-1400				2		2	3		4		2	3	3		2		2	2	3
0A	A1-9	1401-1500						2			2			2	2	2	2	2		2	2
0A	A2-9	1401-1500						2	2				2		2	3			2	2	2
0A	A3-5	601-800						2	2		2		2	2	2	2	2		2	2	2
0A	A3-9	1401-1500						2	2		2		2	2	2	2				2	2
0A	A4-4	401-600						3	3		3		2	2	3		2		2	2	2
0A	A4-7	1001-1200						2	2		2		3		2		2		2	2	2
0A	A4-6	801-1000							2		2		3	2	2		2		3	2	2
0A	A4-9	1401-1500											2				2			2	
0B	B1-1400	1401-1500													2			2	2	2	2
0A	A1-3	201-400																2	2	2	
0B	B1-200	201-400																21	16	16	12
0B	B2-200	201-400																37	24	36	11
0A	A2-3	201-400																	2	4	3
0A	A3-3	201-400																	2	2	2
0A	A4-3	201-400																	2	3	3
0A	B1-600	601-800																	2	2	2

Near-bottom temperature, recorded by a CTD mounted on the trawl just behind the trawl eye, were similar to previous years, ranging from -0.81 to 1.57°C in Div. 0A and -0.33 to 4.16°C in Div. 0B (Table 4 and Figure 4). The highest mean temperature was in the 601-800 m stratum and the coldest mean was in the 201-400 m stratum in Div. 0A, and the highest mean temperature was in the 801-1000 m stratum and the coldest mean was in the 201-400 m stratum in Div. 0B.

Table 4. Mean temperature and S.E. in C by Depth Stratum for Divisions 0A-South and 0B.

Survey Area	Year	201-400	401-600	601-800	801-1000	1001-1200	1201-1400	1401-1500
0A	1999							
0A	2001							
0A	2004							
0A	2006		1.04	1.30	1.28	0.90	0.22	
0A	2008		1.18	1.38	1.22	0.81	0.39	0.10

Survey Area	Year	201-400	401-600	601-800	801-1000	1001-1200	1201-1400	1401-1500
0A	2010		1.21	1.17	1.02	0.69	0.24	0.02
0A	2012		1.53	1.51	1.18	0.69	0.28	-0.00
0A	2014		1.44	1.40	1.30	0.82	0.37	0.15
0A	2015		1.40	1.38	1.14	0.70	0.20	-0.04
0A	2016		1.23	1.16	0.86	0.59	0.30	0.13
0A	2017		1.26	1.30	0.73	0.45	0.32	0.07
0A	2019		1.28	1.16	0.96	0.63	0.17	-0.09
0A	2022	-0.94	1.35	1.42	1.15	0.72	0.43	0.17
0A	2023	-0.08	1.23	1.48	1.15	0.83	0.46	0.15
0A	2024	-0.03	1.30	1.38	1.25	0.71	0.33	0.03
0A	2025	0.15	1.40	1.48	1.11	0.66	0.26	0.04
0B	2000							
0B	2001							
0B	2011		2.44	3.46	4.02	3.84	3.71	3.58
0B	2013		2.22	3.62	4.12	3.90	3.77	3.78
0B	2014		2.76	3.38	3.96	3.83	3.67	
0B	2015	1.15	2.37	3.38	3.82	3.67	3.58	3.58
0B	2016		1.86	2.73	3.77	3.66	3.57	3.50
0B	2022	0.51	2.23	3.64	3.68	3.74	3.55	3.52
0B	2023	0.63	2.30	3.75	3.91	3.75	3.58	3.54
0B	2024	0.77	2.50	3.20	3.85	3.66	3.60	3.47
0B	2025	0.91	2.13	3.53	3.91	3.83	3.75	3.56

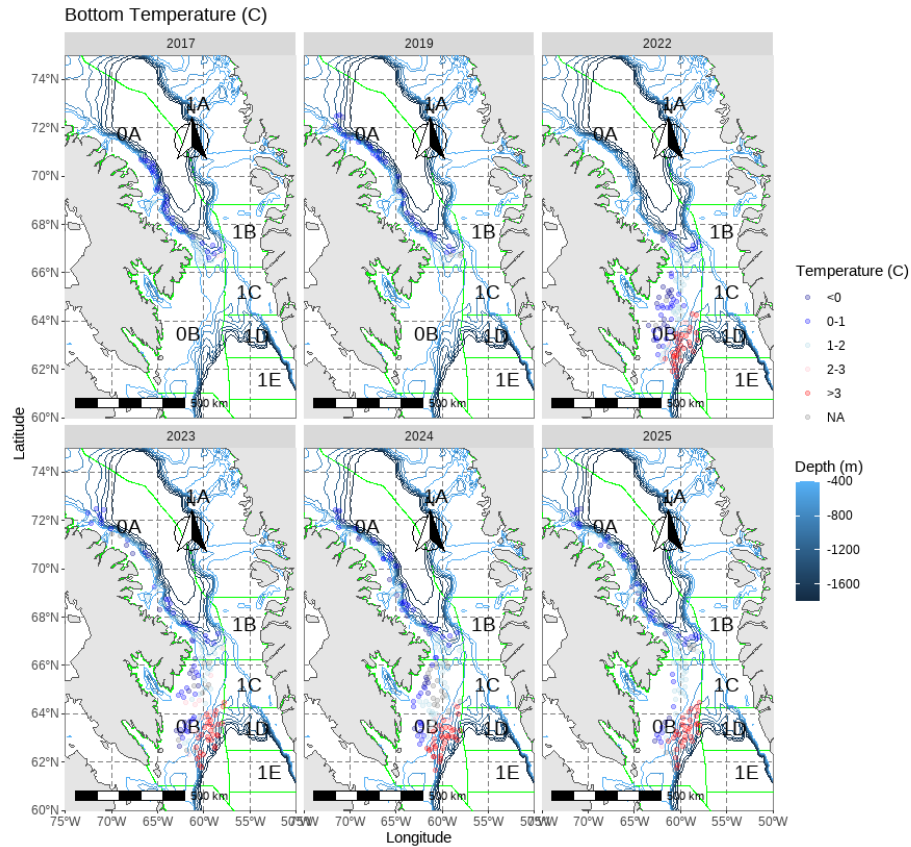


Figure 4. Bottom temperatures in Subarea 0 during the survey by year.

Greenland Halibut

The catch in 2025 was comprised of 0.4462228% females and 0.5533841% males in Div. 0A and 0.3907623% female, 0.5972965% male in Div. 0B, similar to proportions observed in previous surveys (Table 5). In Div. 0A, 94.34% and 88.7% of females and males were immature, and in 0B 48.65% and 35.74% of females and males were immature, respectively. The pattern of maturity in in both Divisions matches observations in previous years.

Table 5. Sex and maturity proportions.

Study Area	Year	Sex	Percent for Sex	Maturity	Percent for Maturity by Sex
0A	2019	Female	52	Immature	91
0A	2019	Female	52	Mature	9
0A	2019	Male	48	Immature	87
0A	2019	Male	48	Mature	13
0A	2022	Female	49	Immature	94
0A	2022	Female	49	Mature	6
0A	2022	Male	51	Immature	92
0A	2022	Male	51	Mature	8
0A	2023	Female	48	Immature	93
0A	2023	Female	48	Mature	7
0A	2023	Male	52	Immature	90
0A	2023	Male	52	Mature	10
0A	2024	Female	44	Immature	96
0A	2024	Female	44	Mature	4
0A	2024	Male	56	Immature	95
0A	2024	Male	56	Mature	5
0A	2025	Female	45	Immature	94
0A	2025	Female	45	Mature	6
0A	2025	Male	55	Immature	89
0A	2025	Male	55	Mature	11
0B	2022	Female	37	Immature	64
0B	2022	Female	37	Mature	36
0B	2022	Male	63	Immature	46
0B	2022	Male	63	Mature	54
0B	2023	Female	32	Immature	66
0B	2023	Female	32	Mature	34
0B	2023	Male	68	Immature	45
0B	2023	Male	68	Mature	55
0B	2024	Female	35	Immature	48
0B	2024	Female	35	Mature	52
0B	2024	Male	65	Immature	43
0B	2024	Male	65	Mature	57
0B	2025	Female	40	Immature	49
0B	2025	Female	40	Mature	51
0B	2025	Male	60	Immature	36
0B	2025	Male	60	Mature	64

In 2025 abundance was highest in the 801-1000 m stratum and biomass was highest in the 1001-1200 m stratum in Div. 0A, showing increasing values as depth increased to the peak values and then declining at

deeper depths (Tables 6, Figures 5 and 6). In Div. 0B biomass and abundance were much more variable among depth strata, with the highest abundance and biomass values observed in the 401-600 m stratum (Tables 6, Figures 5 and 6). The addition of the 201-400 m depth strata represented a notable increase in survey area, particularly in Div. 0B, but the strata had the lowest abundance and biomass values among depth strata in Div. 0A and the second lowest mean biomass and mean abundance values in Div. 0B, with catches in that strata largely composed of smaller Greenland halibut.

Table 6. Greenland halibut abundance and biomass with standard error by stratum.

Division	Depth Stratum (m)	Mean Abundance (#/sq km)	Abundance	Abundance SE	Mean Biomass (t/sq km)	Biomass (t)	Biomass SE
0A	201-400	103.69	1.14e+06	6.09e+05	0.05	5.66e+02	3.37e+02
0A	401-600	2,469.82	2.35e+07	7.57e+06	1.09	1.04e+04	2.53e+03
0A	601-800	2,674.27	1.69e+07	5.09e+06	1.68	1.06e+04	2.94e+03
0A	801-1000	7,976.21	3.31e+07	1.17e+07	5.32	2.21e+04	7.84e+03
0A	1001-1200	6,586.59	3.66e+07	1.49e+07	5.79	3.22e+04	1.18e+04
0A	1201-1400	862.97	4.47e+06	1.16e+06	1.00	5.19e+03	1.27e+03
0A	1401-1500	186.31	4.35e+05	1.56e+05	0.29	6.74e+02	2.04e+02
0B	201-400	1,751.77	6.51e+07	4.43e+07	2.62	9.75e+04	9.14e+04
0B	401-600	3,106.76	5.40e+07	1.63e+07	4.64	8.07e+04	3.16e+04
0B	601-800	1,999.95	4.57e+06	4.13e+05	3.10	7.07e+03	8.29e+02
0B	801-1000	2,212.43	1.78e+07	6.32e+06	3.55	2.86e+04	1.19e+04
0B	1001-1200	1,761.44	1.16e+07	2.90e+06	2.64	1.74e+04	3.84e+03
0B	1201-1400	2,004.44	9.53e+06	1.78e+06	2.72	1.29e+04	2.19e+03
0B	1401-1500	1,665.72	3.27e+06	2.54e+05	2.56	5.04e+03	9.87e+02

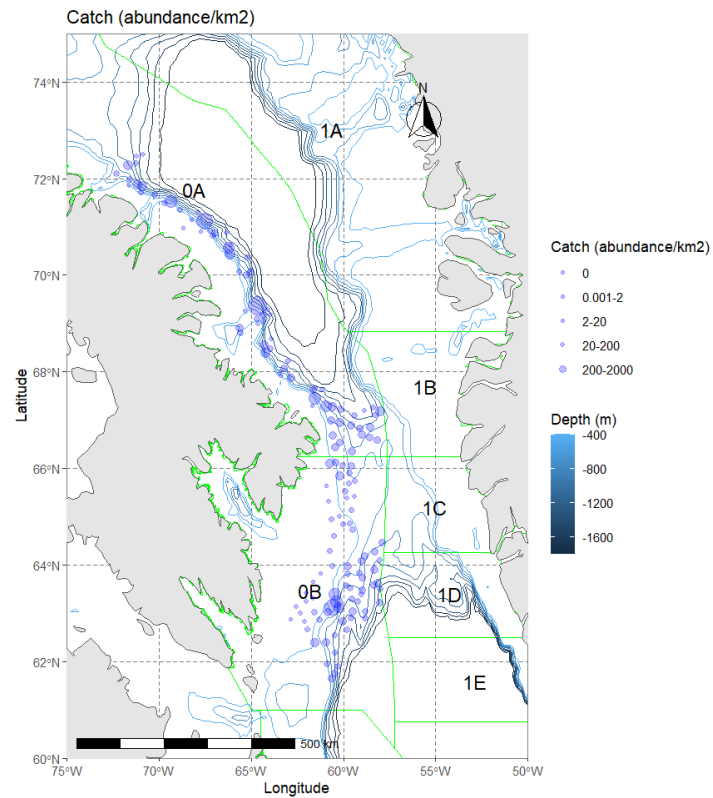


Figure 5. Abundance distribution for Greenland halibut in Subarea 0 in 2025.

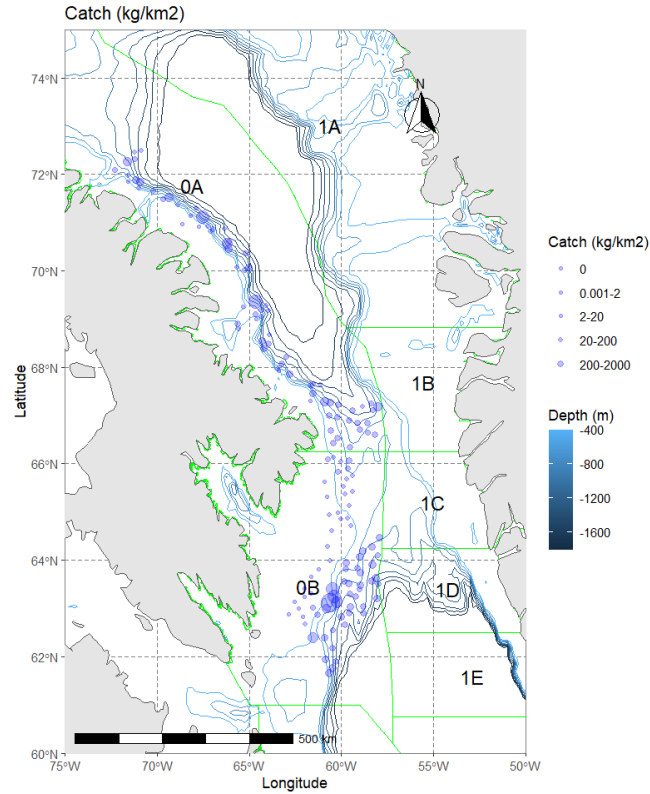


Figure 6. Biomass distribution for Greenland halibut in Subarea 0 in 2025.

Mean catch per tow (tons/km²) in Div.0A in 2025 was similar to values in preceding years, being 1.95, while mean catch per tow in Div. 0B was approximately double previous values at 2.71 (Table 7).

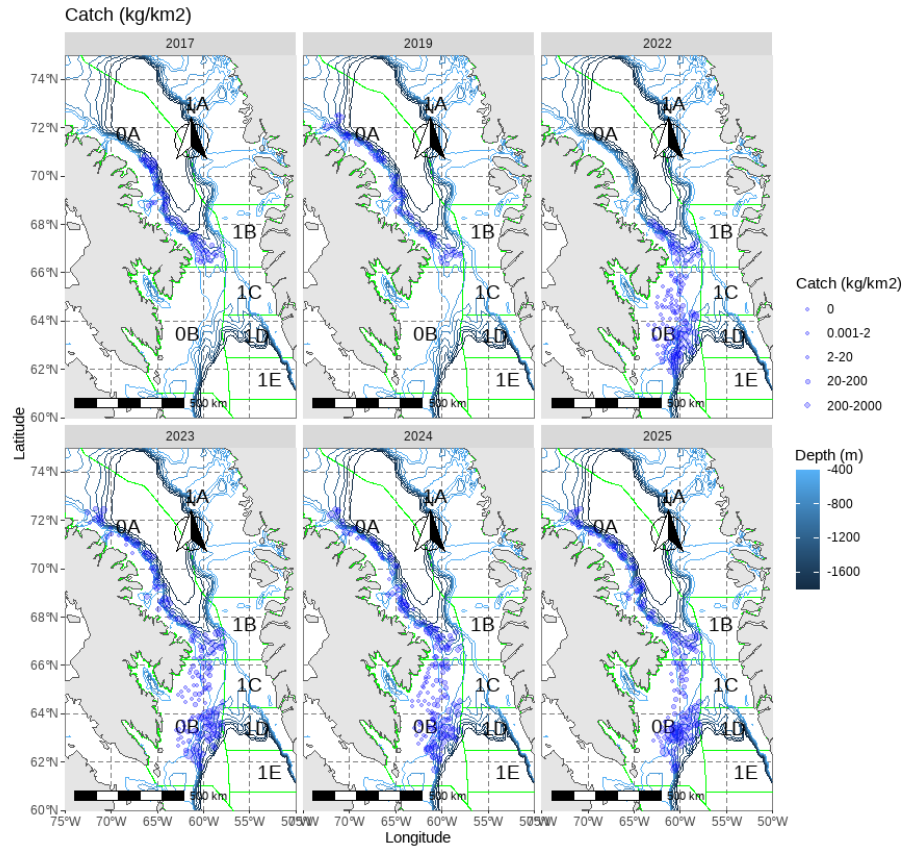
Table 7. Mean catch-per-tow (tons) standardized to sq km of Greenland Halibut from SA0 by Division and year.

Year	0A	0B
1999	1.23	
2000		1.15
2001	2.76	1.40
2004	1.99	
2006	1.01	
2008	1.64	
2010	1.63	
2011		1.41
2012	2.00	
2013		1.00
2014	2.72	1.26
2015	2.86	1.49
2016	2.93	1.63
2017	1.40	
2019	2.05	
2022	2.10	1.49
2023	1.45	1.58
2024	1.28	1.34
2025	1.95	2.71

Greenland Halibut biomass values in Divs. 0A and 0B were comparable within depth strata to values from previous years (Table 8, Figure 7). In Div. 0A, Biomass values showed a domed pattern, increasing with depth to the 1001-1200 m stratum and declining thereafter. In Div. 0B the pattern in biomass was less clear, with high values observed from 401-1000 m.

Table 8. Biomass (tons) of Greenland Halibut by depth stratum for Subarea 0.

Year	Division	201-400	401-600	601-800	801-1000	1001-1200	1201-1400	1401-1500
1999	0A		5,349.38	3,444.46	5,309.82	11,033.24	4,807.03	
2001	0A		8,967.10	9,932.61	5,693.32	8,374.01	1,513.50	
2004	0A		2,412.83	1,971.67	4,176.50	14,128.30	10,455.01	
2006	0A		2,500.80	2,095.65	819.58	9,637.23	983.48	
2008	0A		3,556.97	3,849.69	6,791.66	9,729.39	17,350.22	1,432.92
2010	0A		2,692.73	5,904.06	10,797.36	23,024.18	6,534.67	1,336.12
2012	0A		7,411.17	19,526.86	12,445.07	16,736.48	5,212.22	343.72
2014	0A		13,495.17	31,368.52	13,590.80	17,021.27	5,305.81	1,178.18
2015	0A		25,591.56	20,273.39	8,728.98	12,674.48	4,323.26	459.35
2016	0A		16,332.24	19,775.80	20,903.85	17,530.31	10,591.48	1,820.65
2017	0A		1,679.66	2,938.55	2,683.13	8,542.86	10,518.05	7,709.17
2019	0A		20,059.97	18,189.72	9,373.75	4,952.09	1,663.86	430.62
2022	0A	0.00	3,853.91	1,344.53	3,888.85	7,526.79	1,137.28	461.93
2023	0A	5,266.78	4,556.24	10,145.36	15,010.79	19,659.97	12,305.05	353.26
2024	0A	1,582.05	8,038.71	26,450.82	6,255.19	12,275.66	4,756.63	972.85
2025	0A	565.89	10,373.91	10,648.24	22,065.89	32,183.07	5,191.99	673.92
2000	0B		2,264.52	1,220.92	12,042.83	15,997.80	13,511.95	
2001	0B		7,209.74	2,257.09	13,659.78	19,517.49	12,174.66	
2011	0B		10,922.11	4,944.25	17,984.14	14,488.19	6,773.96	
2013	0B		5,627.02	2,742.18	16,001.47	8,614.74	6,260.55	
2014	0B		12,064.74	4,315.30	15,028.73	10,912.94	6,994.89	
2015	0B		6,031.68	3,325.49	27,086.40	14,370.34	7,272.39	
2016	0B		13,377.73	3,891.37	23,265.20	15,414.77	8,470.82	2,547.05
2022	0B	3,200.35	38,244.87	10,107.59	27,838.38	16,708.05	13,144.92	7,259.34
2023	0B	5,562.14	39,960.45	11,263.24	34,709.51	16,886.50	11,696.76	3,901.93
2024	0B	5,006.97	34,644.50	5,973.85	27,910.63	22,821.28	4,938.40	3,671.03
2025	0B	97,472.55	80,727.32	7,074.53	28,604.69	17,414.92	12,932.18	5,037.88



Greenland halibut abundance by stratum within Div. 0A was similar in 2025 to preceding years, showing a domed pattern with depth similar to biomass, peaking in the 801-1000 m stratum (Table 9, Figure 8). In Div. 0B, abundance was more broadly distributed, with the highest abundance in the 401-600 m stratum (Table 9, Figure 8). This pattern differed was similar to previous years.

Table 9. Abundance of Greenland Halibut by depth stratum for Subarea 0.

Year	Division	201-400	401-600	601-800	801-1000	1001-1200	1201-1400	1401-1500
1999	0A	NA	1.31e+04	9.76e+03	1.16e+04	1.45e+04	4.46e+03	NA
2001	0A	NA	1.41e+04	1.95e+04	7.58e+03	1.17e+04	1.57e+03	NA
2004	0A	NA	6.98e+03	3.59e+03	5.91e+03	1.44e+04	7.53e+03	NA
2006	0A	NA	8.15e+03	5.94e+03	1.55e+03	1.43e+04	9.13e+02	NA
2008	0A	NA	9.64e+03	9.08e+03	1.19e+04	1.45e+04	1.76e+04	1.13e+03
2010	0A	NA	7.54e+03	1.49e+04	1.98e+04	2.61e+04	5.35e+03	8.66e+02
2012	0A	NA	1.71e+04	2.95e+04	1.46e+04	1.38e+04	3.67e+03	2.64e+02
2014	0A	NA	1.94e+04	4.73e+04	1.42e+04	1.20e+04	3.42e+03	7.69e+02
2015	0A	NA	3.99e+04	2.57e+04	7.69e+03	9.24e+03	2.65e+03	2.90e+02
2016	0A	NA	3.18e+04	3.21e+04	2.36e+04	1.33e+04	7.90e+03	1.16e+03
2017	0A	NA	8.55e+03	7.73e+03	4.60e+03	1.08e+04	1.03e+04	5.68e+03
2019	0A	NA	2.13e+04	2.03e+04	7.72e+03	3.84e+03	1.05e+03	2.34e+02
2022	0A	0.00e+00	8.57e+03	3.08e+03	5.37e+03	1.20e+04	7.61e+02	4.15e+02
2023	0A	9.51e+03	1.29e+04	2.27e+04	2.32e+04	1.89e+04	9.75e+03	2.81e+02
2024	0A	3.04e+03	1.95e+04	5.37e+04	1.01e+04	1.28e+04	4.02e+03	9.49e+02
2025	0A	1.14e+03	2.35e+04	1.69e+04	3.31e+04	3.66e+04	4.47e+03	4.35e+02
2000	0B	NA	1.55e+04	1.76e+03	1.51e+04	1.88e+04	1.45e+04	NA
2001	0B	NA	1.34e+04	3.30e+03	1.65e+04	2.11e+04	1.31e+04	NA
2011	0B	NA	1.51e+04	5.09e+03	1.59e+04	1.27e+04	5.68e+03	NA
2013	0B	NA	7.61e+03	2.66e+03	1.42e+04	7.78e+03	5.33e+03	NA
2014	0B	NA	1.07e+04	3.84e+03	1.19e+04	8.80e+03	5.36e+03	NA
2015	0B	NA	1.03e+04	3.01e+03	2.10e+04	1.10e+04	5.38e+03	NA
2016	0B	NA	1.45e+04	3.79e+03	1.72e+04	1.14e+04	6.58e+03	1.70e+03
2022	0B	1.15e+04	5.10e+04	7.80e+03	2.09e+04	9.77e+03	9.36e+03	4.87e+03
2023	0B	1.48e+04	4.48e+04	8.61e+03	2.51e+04	1.13e+04	7.84e+03	2.45e+03
2024	0B	1.36e+04	2.80e+04	4.15e+03	1.69e+04	1.11e+04	3.67e+03	2.46e+03
2025	0B	6.51e+04	5.40e+04	4.57e+03	1.78e+04	1.16e+04	9.53e+03	3.27e+03

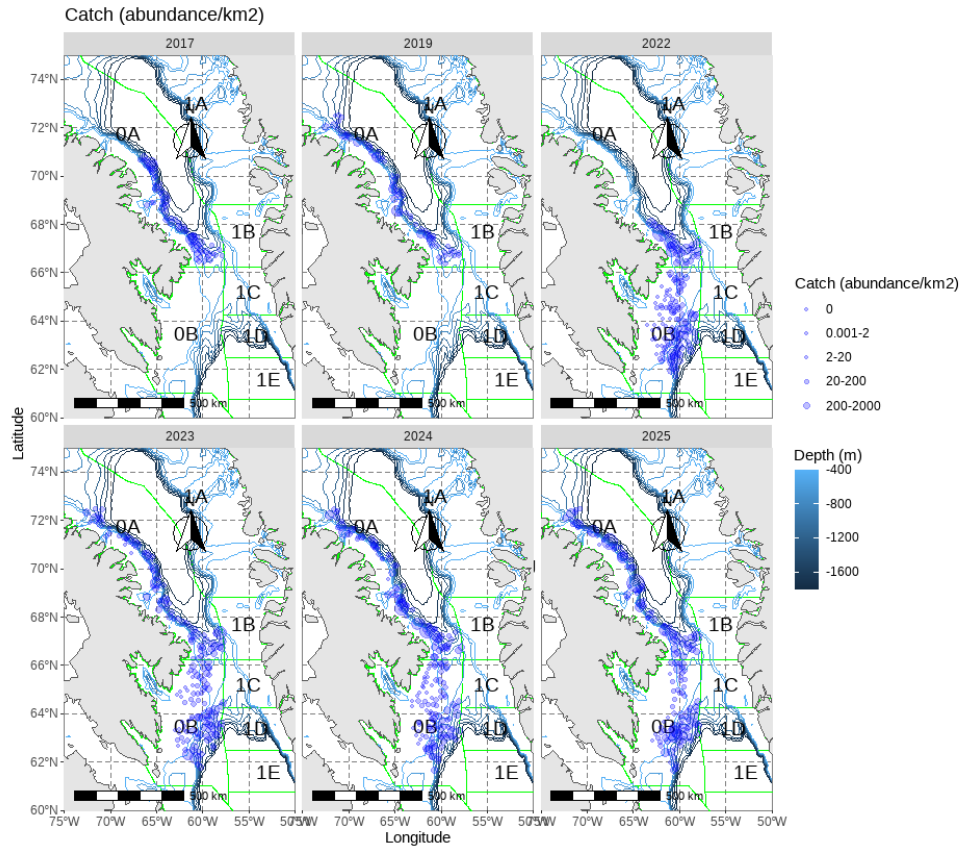


Figure 8. Abundance distribution for Greenland halibut in Subarea 0 by year.

The overall length distribution in 2025 ranged from 9 to 75 cm a mode at 42 cm, representing a leftward shift in the length frequency distribution compared to previous years (Table 10). The Bacalao trawl used in 2022 had a smaller mesh size than the Alfredo III trawl used previously with the RV Pâmiut. and FV Helga Maria. The combination of the Bacalao trawl and the addition of the 200-400 m strata were expected to increase the number of small fish captured during the survey, which was observed.

Table 10. Length distribution (3cm groups) estimated total number (000's) for Greenland halibut from Subarea 0 surveys (weighted by survey area)

Length	1999	2001	2004	2006	2008	2010	2012	2014	2015	2016	2017	2019	2022	2023	2024	2025
3	1															
6						5		2								
9		1				2							1			
12	11		2	2	1	4	3	5	10		16		11	3	5	1
15	1	3	61	39	8	31	4	8	12	4	26	1	27	41	19	2
18	34	13	43	90	81	54	258	156	38	81	219	96	227	294	52	68
21	57	63	125	409	168	144	327	71	84	152	253	86	238	414	213	115
24	281	193	163	353	207	305	129	121	224	110	395	60	143	416	547	120
27	806	246	415	459	448	589	168	214	168	213	680	94	198	527	600	218
30	1,136	422	425	503	816	982	246	563	200	378	494	138	210	561	700	687
33	1,365	747	596	560	1,252	1,087	427	923	441	402	537	161	149	828	933	921
36	1,299	1,318	751	630	1,243	1,335	701	746	998	595	668	243	230	792	1,012	1,094
39	1,178	1,596	918	615	1,319	1,492	1,038	762	1,457	1,054	757	203	409	829	1,072	1,325
42	914	1,551	1,186	542	1,289	1,381	1,318	1,004	1,249	1,469	908	271	488	907	959	1,438
45	662	1,085	1,375	385	1,111	1,130	1,285	1,327	1,215	1,217	1,170	330	433	936	812	1,301
48	394	621	1,274	247	854	730	955	1,299	1,315	979	1,079	455	374	735	638	781
51	237	300	923	135	549	510	618	1,036	1,203	732	626	469	259	534	424	472
54	149	116	448	75	342	352	309	583	867	584	307	370	195	359	258	239
57	89	50	225	34	207	188	190	286	445	345	140	218	121	248	190	137
60	46	26	107	1	119	118	100	139	211	169	89	136	73	166	110	84
63	33	10	58	3	46	82	79	85	119	89	46	91	40	96	72	65
66	10	7	34	2	26	29	50	46	61	44	31	44	15	49	51	35
69	5	5	14	1	6	13	20	17	26	18	11	27	9	21	29	21
72	4	2	15	2	3	6	9	15	11	10	2	10	3	10	13	7
75		1	6		2	4	4	5	9	3	4	4	1	2	6	8
78			6			2	3	1	5			2			5	
81			5				1		1		2	1				
84		1	2		2	2					1	2				
87			4						1	1		2				
90			1				1			1	1					
93	1		1		1									1		
96			1													
99						1										

During 2014 to 2017 the survey focused on Div. 0A-south (south of 72°N) and only extended in Div. 0B when weather and time permitted. Consequently, Div. 0B was surveyed in 2014-2016 and again in 2022-2025 (Figures 7 and 8). With revision of the survey stratification in 2022 the survey will now be undertaken in both Divs. 0A and 0B each year. The addition of the 200-400 m depth stratum in 2022 also added a significant area to survey (2022 panel in Figures 7 and 8).

Biomass and abundance indices have been calculated separately for Divs. 0A and 0B since 2022 (Figures 9 and 10). Given the use of a new survey vessel and gear in 2022, the current index values cannot be put in context with previous index values, and 2022 represented the start of a new time series. Calibration experiments could not be completed between the vessels and gears, but a model-based approach to survey standardization has been explored (HUYNH (2023)) and will be fully tested in the next full assessment.

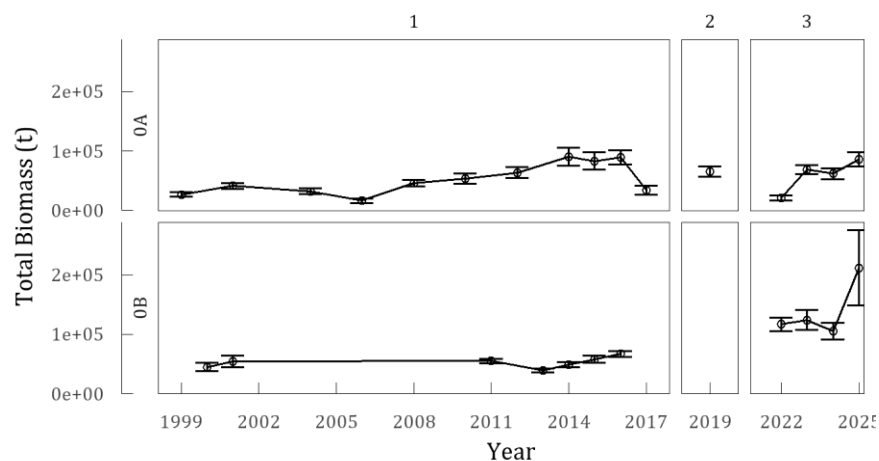


Figure 9. Biomass estimates (with SE) for Greenland halibut in Divisions 0A and 0B.

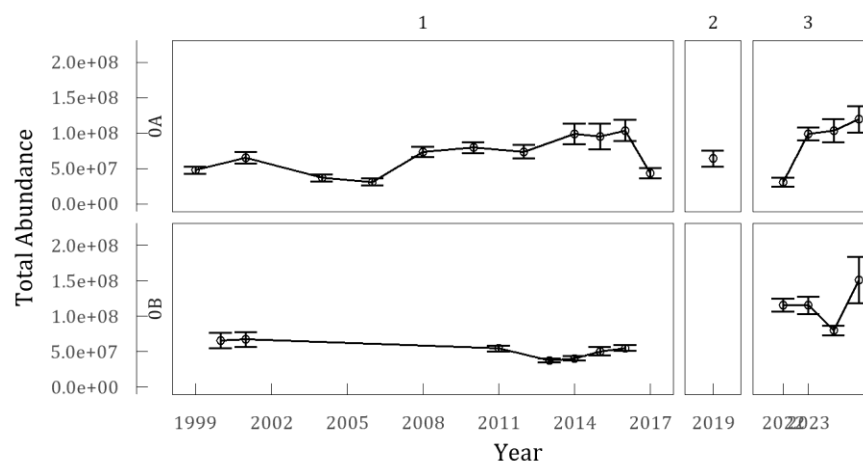


Figure 10. Abundance estimates (with SE) for Greenland halibut in Divisions 0A and 0B.

Biomass and abundance by depth in 2025 showed similar patterns to previous years, with biomass being highest between 600 and 1200 m (Figures 11) in Div. 0A. In Div. 0B biomass and abundance were more evenly distributed among the depth strata.

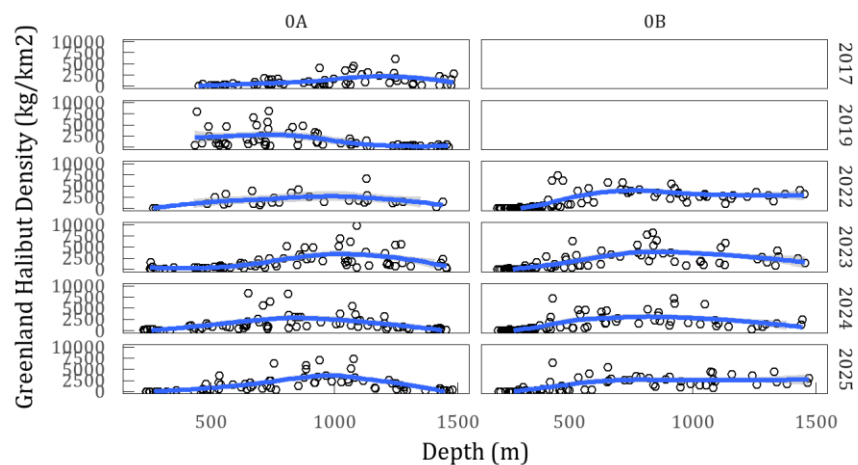


Figure 11. Biomass trends by depth strata for Subarea 0.

Greenland halibut fork length ranged from 6 to 105 cm with a mean of 43.3797668 cm. Length-frequency distributions for Divs. 0A and 0B (Figure 12) each showed a single large peak in 2025.

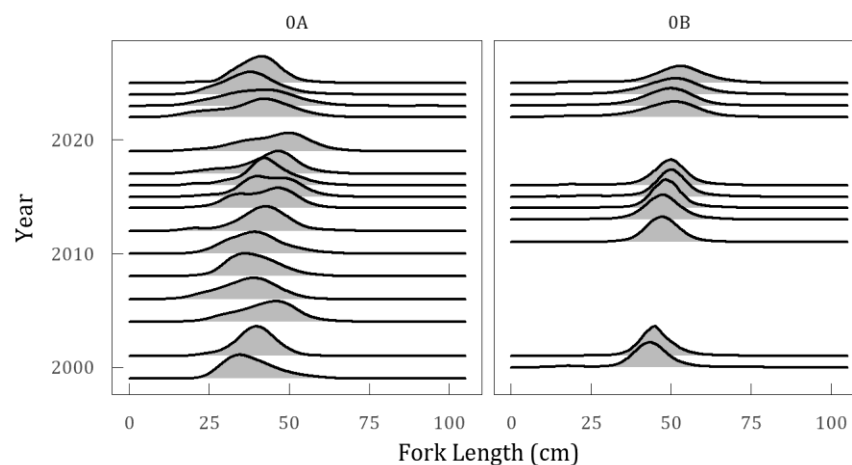


Figure 12. Length frequency distribution for Subarea 0 (numbers/km² weighted by stratum area).

In both Divs. 0A and 0B, Greenland halibut length frequencies shifted to the right with depth from 200-800 m, but distributions were relative similar across 1000-1500 m (Figure 13).

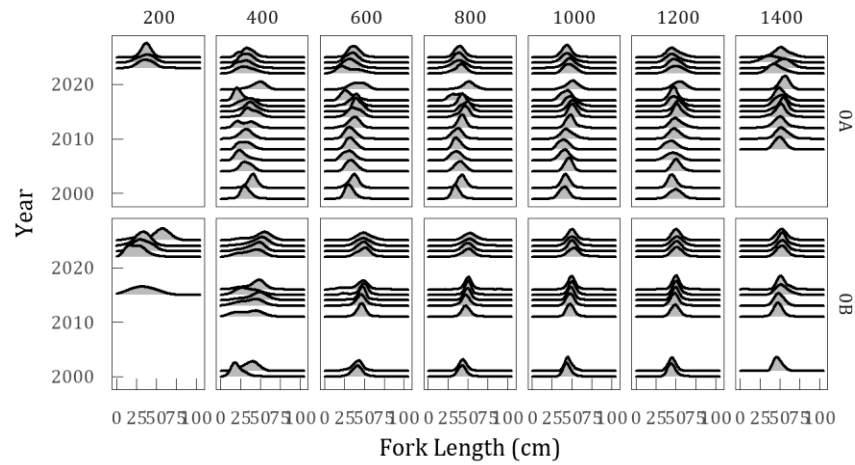


Figure 13. Annual length frequency distributions for Divisions 0A and 0B (numbers/km² weighted by stratum area).

Length at age

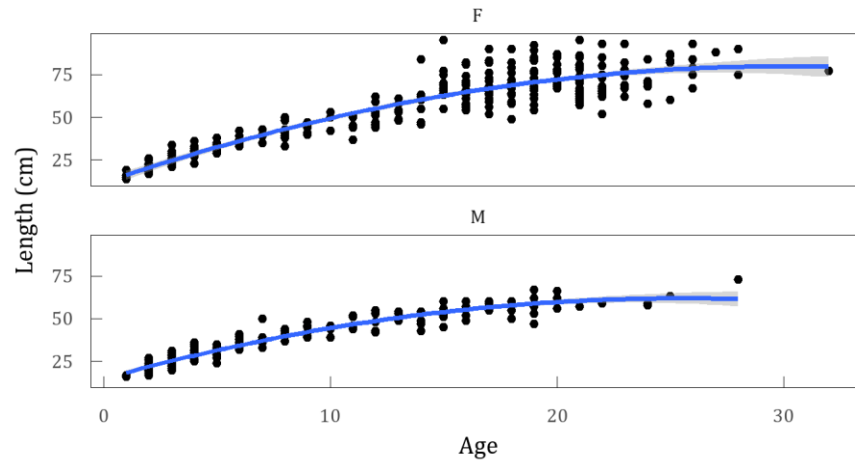


Figure 14. Greenland Halibut length at age by sex from surveys in Subarea 0.

Length-weight

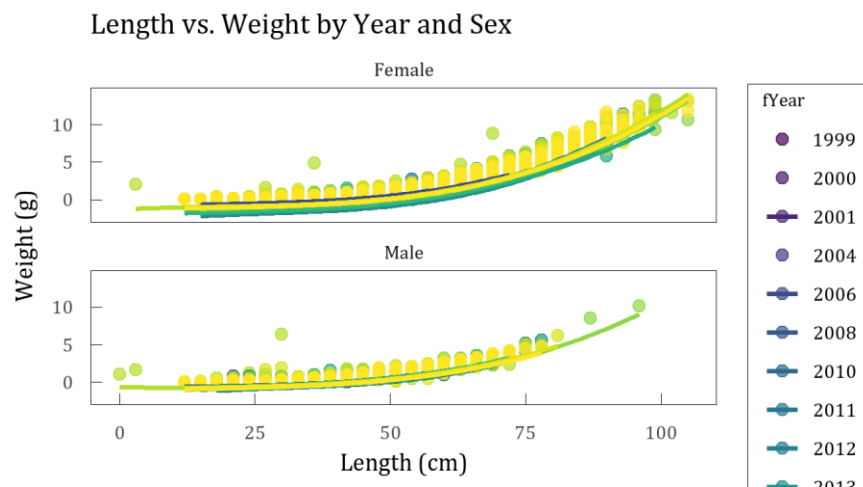


Figure 15. Length (cm) at weight (g) relationship for male and female Greenland Halibut from surveys in Subarea 0.

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Appendix A

Table 11. Greenland halibut raw catch weight, numbers (not standardised to kg/km²), temperature and depth for each survey set.

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2019	001	2019-08-15	650	600-800	0.0842916		62.840	105
0A	2019	002	2019-08-15	721	600-800	0.0809068		43.860	61
0A	2019	003	2019-08-15	739	600-800	0.0816868	1.11	24.200	40
0A	2019	004	2019-08-16	954	800-1000	0.0828334		54.440	58
0A	2019	005	2019-08-16	930	800-1000	0.0789016	1.02	79.052	87
0A	2019	006	2019-08-16	1065	1000-1200	0.0801013	0.77	50.281	39
0A	2019	007	2019-08-16	953	800-1000	0.0795040	0.94	44.920	49
0A	2019	008	2019-08-16	1237	1200-1400	0.0805907	0.27	25.500	24
0A	2019	013	2019-08-17	1311	1200-1400	0.0769344	0.20	11.700	9
0A	2019	014	2019-08-17	1298	1200-1400	0.0799817	0.26	27.240	23
0A	2019	015	2019-08-17	1426	1400-1500	0.0793149	0.02	9.489	5
0A	2019	016	2019-08-17	1464	1400-1500	0.0771592	-0.04	3.640	2
0A	2019	017	2019-08-18	1069	1000-1200	0.0809778	0.76	53.620	45
0A	2019	018	2019-08-18	1133	1000-1200	0.0832197	0.51	21.200	15
0A	2019	019	2019-08-18	1274	1200-1400	0.0744871	0.22	9.460	6
0A	2019	020	2019-08-18	1394	1200-1400	0.0785860	-0.03	16.140	11
0A	2019	021	2019-08-18	1329	1200-1400	0.0872501	0.13	15.860	10
0A	2019	022	2019-08-18	1067	1000-1200	0.0823782	0.78	96.390	80
0A	2019	023	2019-08-18	1285	1200-1400	0.0822937	0.27	30.240	17
0A	2019	024	2019-08-19	933	800-1000	0.0790938	0.89	246.480	164
0A	2019	025	2019-08-19	1445	1400-1500	0.0770107	-0.11	16.400	11
0A	2019	026	2019-08-19	1258	1200-1400	0.0816002	0.18	51.600	31
0A	2019	027	2019-08-19	1432	1400-1500	0.0775674	-0.13	12.460	6
0A	2019	028	2019-08-19	1316	1200-1400	0.0814037	0.10	39.240	23
0A	2019	030	2019-08-20	1063	1000-1200	0.0798213	0.55	149.572	117

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2019	031	2019-08-20	1422	1400-1500	0.0790663	-0.07	52.600	33
0A	2019	032	2019-08-20	931	800-1000	0.0792052		94.980	48
0A	2019	033	2019-08-20	1131	1000-1200	0.0820589	0.50	123.740	69
0A	2019	034	2019-08-20	1324	1200-1400	0.0838127		35.419	17
0A	2019	035	2019-08-20	1456	1400-1500	0.0821912	-0.22	48.880	22
0A	2019	036	2019-08-21	1348	1200-1400	0.0855382	0.06	26.020	11
0A	2019	037	2019-08-21	1145	1000-1200	0.0803758	0.38	9.010	4
0A	2019	039	2019-08-21	731	600-800	0.0783367		319.880	259
0A	2019	040	2019-08-21	830	800-1000	0.0814977	0.57	363.780	216
0A	2019	041	2019-08-21	735	600-800	0.0833573	0.78	681.640	468
0A	2019	042	2019-08-21	490	400-600	0.0791906	0.88	367.320	319
0A	2019	043	2019-08-21	693	600-800	0.0828780	0.85	141.240	125
0A	2019	044	2019-08-22	442	400-600	0.0751034	0.94	598.309	431
0A	2019	045	2019-08-22	855	800-1000	0.0743600	0.75	137.600	108
0A	2019	046	2019-08-22	464	400-600	0.0740991	0.96	67.090	71
0A	2019	047	2019-08-22	434	400-600	0.0745781	0.85	31.400	30
0A	2019	048	2019-08-22	672	600-800	0.0790270	0.93	532.080	586
0A	2019	049	2019-08-22	872	800-1000	0.0828405	0.84	397.840	292
0A	2019	050	2019-08-22	1088	1000-1200	0.0807454	0.63	75.180	55
0A	2019	051	2019-08-22	671	600-800	0.0838622	1.03	113.940	112
0A	2019	052	2019-08-22	645	600-800	0.0808674	1.10	137.660	134
0A	2019	053	2019-08-23	815	800-1000	0.0781082	1.02	256.420	213
0A	2019	054	2019-08-23	563	400-600	0.0785356	1.28	370.160	410
0A	2019	055	2019-08-23	520	400-600	0.0745432	1.30	67.580	71
0A	2019	056	2019-08-23	557	400-600	0.0746993	1.31	51.860	52
0A	2019	057	2019-08-23	530	400-600	0.0745791	1.30	71.520	94
0A	2019	058	2019-08-23	521	400-600	0.0770271	1.31	140.760	227
0A	2019	059	2019-08-23	684	600-800	0.0625601	1.29	311.100	623
0A	2019	060	2019-08-23	493	400-600	0.0745030	1.25	184.883	307
0A	2019	061	2019-08-24	728	600-800	0.0728974	1.48	411.660	375
0A	2019	062	2019-08-24	922	800-1000	0.0756758	1.19	249.880	256

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2019	063	2019-08-24	919	800-1000	0.0774907	1.05	189.740	212
0A	2019	064	2019-08-24	1025	1000-1200	0.0796856	0.80	69.720	78
0A	2019	065	2019-08-24	702	600-800	0.0835770	1.48	225.480	346
0A	2019	066	2019-08-24	556	400-600	0.0794743	1.49	70.720	92
0A	2019	067	2019-08-24	722	600-800	0.0803785	1.44	92.520	100
0A	2019	069	2019-08-25	567	400-600	0.0793743	1.84	40.345	55
0A	2019	070	2019-08-25	533	400-600	0.0757021	1.96	39.200	70
0A	2019	071	2019-08-25	851	800-1000	0.0795906	1.34	35.840	63
0A	2019	072	2019-08-25	718	600-800	0.0791536	1.32	54.240	103
0A	2022	001	2022-11-03	1130	1000-1200	0.0845553		568.420	592
0A	2022	002	2022-11-03	1132	1000-1200	0.0845553		241.260	231
0A	2022	003	2022-11-03	1279	1200-1400	0.0605584		89.920	72
0A	2022	004	2022-11-03	1414	1400-1500	0.0756867		29.040	19
0A	2022	005	2022-11-04	822	800-1000	0.0751241		1542.200	2055
0A	2022	006	2022-11-04	1441	1400-1500	0.0762490	0.17	112.340	108
0A	2022	007	2022-11-04	1249	1200-1400	0.0889679	0.39	129.780	67
0A	2022	008	2022-11-04	276	200-400	0.0733660	-0.73	0.000	0
0A	2022	009	2022-11-04	266	200-400	0.0733660	-1.16	0.000	0
0A	2022	011	2022-11-05	667	600-800	0.0815676	1.48	318.680	1109
0A	2022	012	2022-11-05	853	800-1000	0.0857730	1.35	357.600	695
0A	2022	013	2022-11-05	560	400-600	0.0773476	1.47	250.260	563
0A	2022	014	2022-11-05	515	400-600	0.0797070	1.42	202.220	709
0A	2022	015	2022-11-05	571	400-600	0.0801574	1.47	96.720	151
0A	2022	016	2022-11-05	899	800-1000	0.0785224	1.30	202.520	220
0A	2022	017	2022-11-05	755	600-800	0.0853858	1.48	194.800	434
0A	2022	018	2022-11-06	1060	400-600	0.0845553	0.82	145.460	126
0A	2022	019	2022-11-06	1136	1000-1200	0.0889541	0.66	151.810	908
0A	2022	020	2022-11-06	1098	1000-1200	0.0824646	0.80	148.880	140
0A	2022	021	2022-11-06	1236	1200-1400	0.0829966	0.48	104.100	72
0A	2022	022	2022-11-06	958	800-1000	0.0797334	0.75	114.720	136
0A	2022	023	2022-11-06	1121	1000-1200	0.0822473	0.71	105.740	108

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2022	024	2022-11-06	826	800-1000	0.0849490	1.20	296.200	384
0A	2022	025	2022-11-06	672	600-800	0.0794785	1.42	88.390	153
0A	2022	026	2022-11-07	748	600-800	0.0808588	1.37	103.780	145
0A	2022	027	2022-11-07	704	600-800	0.0815676	1.39	91.400	120
0A	2022	028	2022-11-07	776	600-800	0.0834110	1.43	112.020	148
0A	2022	029	2022-11-07	552	400-600	0.0831832	1.49	79.340	157
0A	2022	030	2022-11-07	484	400-600	0.0803918	1.41	87.950	198
0A	2022	031	2022-11-07	697	600-800	0.0787036	1.39	62.560	117
0A	2023	001	2023-10-23	689	600-800	0.0731925	1.49	98.720	138
0A	2023	002	2023-10-23	887	800-1000	0.0485387	1.33	111.720	182
0A	2023	003	2023-10-23	1071	1000-1200	0.0557872	0.86	97.640	111
0A	2023	004	2023-10-23	868	800-1000	0.0578417	1.28	170.620	252
0A	2023	005	2023-10-24	692	600-800	0.0553843	1.46	122.500	185
0A	2023	006	2023-10-24	620	600-800	0.0524222	2.26	79.780	144
0A	2023	007	2023-10-24	905	800-1000	0.0620398	1.07	152.200	181
0A	2023	008	2023-10-24	896	800-1000	0.0565751	1.07	682.580	914
0A	2023	009	2023-10-24	1127	1000-1200	0.0562607	0.48	223.080	223
0A	2023	011	2023-10-24	1045	1000-1200	0.0590466	0.83	148.310	168
0A	2023	012	2023-10-25	1215	1200-1400	0.0549034	0.51	79.850	75
0A	2023	013	2023-10-25	806	800-1000	0.0589729	1.35	307.550	378
0A	2023	014	2023-10-25	1043	1000-1200	0.0561265	0.90	91.950	108
0A	2023	015	2023-10-25	1432	1400-1500	0.0355257	0.28	52.150	32
0A	2023	017	2023-10-25	1050	1000-1200	0.0804127	1.08	83.180	83
0A	2023	018	2023-10-25	1214	1200-1400	0.0819443	0.69	97.840	78
0A	2023	019	2023-10-26	1140	1000-1200	0.0718941	0.76	65.960	52
0A	2023	020	2023-10-26	1453	1400-1500	0.0716636	0.16	29.440	25
0A	2023	021	2023-10-26	1455	1400-1500	0.0648992	0.12	13.100	9
0A	2023	022	2023-10-26	1271	1200-1400	0.0724995	0.99	413.720	404
0A	2023	024	2023-10-26	533	400-600	0.0806302	1.24	63.664	109
0A	2023	025	2023-10-26	1248	1200-1400	0.0655948		46.340	45
0A	2023	026	2023-10-27	860	800-1000	0.0668909		224.400	393

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2023	027	2023-10-27	738	600-800	0.0559250		136.760	247
0A	2023	029	2023-10-27	1422	1400-1500	0.0550593		42.520	19
0A	2023	030	2023-10-27	1223	1200-1400	0.0865693		84.880	40
0A	2023	031	2023-10-27	1310	1200-1400	0.0733066	0.06	51.000	28
0A	2023	032	2023-10-27	913	800-1000	0.0752234	1.26	370.700	444
0A	2023	033	2023-10-28	1022	1000-1200	0.0769369	1.04	528.820	400
0A	2023	034	2023-10-28	759	600-800	0.0792587	1.32	102.120	330
0A	2023	035	2023-10-28	551	400-600	0.0751874	1.12	22.400	82
0A	2023	036	2023-10-28	712	600-800	0.0738854	1.34	76.000	377
0A	2023	037	2023-10-28	312	200-400	0.0712048		6.980	29
0A	2023	038	2023-10-28	633	600-800	0.0806156		27.020	84
0A	2023	039	2023-10-28	1017	1000-1200	0.0705184	0.93	370.900	410
0A	2023	040	2023-10-28	1248	1200-1400	0.0731870	0.06	405.060	301
0A	2023	041	2023-10-28	1206	1200-1400	0.0784478	0.22	284.360	178
0A	2023	043	2023-10-29	1440	1400-1500	0.0803009	0.05	181.780	98
0A	2023	044	2023-10-29	1091	1000-1200	0.0763584	0.30	38.920	39
0A	2023	045	2023-10-29	849	800-1000	0.0757919	1.00	73.520	208
0A	2023	046	2023-10-29	795	800-1000	0.0642204	1.21	156.240	483
0A	2023	048	2023-10-29	458	400-600	0.0751874	0.92	0.000	0
0A	2023	049	2023-10-29	291	800-1000	0.0668889	0.64	0.000	0
0A	2023	050	2023-10-30	719	600-800	0.0759804	1.28	37.180	85
0A	2023	051	2023-10-30	276	200-400	0.0666226	0.56	3.490	5
0A	2023	052	2023-10-30	254	200-400	0.0740728	-0.10	1.990	2
0A	2023	053	2023-10-30	258	200-400	0.0668889	-0.79	0.000	0
0A	2023	054	2023-10-30	1091	1000-1200	0.0848671	0.82	838.240	694
0A	2023	055	2023-10-30	954	800-1000	0.0642204	1.12	118.280	143
0A	2023	056	2023-10-30	445	400-600	0.0711357	1.14	36.440	64
0A	2023	057	2023-10-30	530	400-600	0.0731510	1.22	32.200	98
0A	2023	058	2023-10-31	879	800-1000	0.0761090	1.32	376.640	710
0A	2023	059	2023-10-31	262	200-400	0.0711194	0.46	46.380	87
0A	2023	060	2023-10-31	541	400-600	0.0757896	1.28	50.520	115

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2023	062	2023-10-31		600-800	0.0713196	1.30	100.620	248
0A	2023	063	2023-10-31	514	400-600	0.0622708	1.19	37.258	83
0A	2023	064	2023-10-31	1065	1000-1200	0.0779661	1.07	485.770	528
0A	2023	065	2023-11-01	254	200-400	0.0400668	-0.74	66.800	73
0A	2023	066	2023-11-01	633	600-800	0.0723413	1.33	94.920	244
0A	2023	067	2023-11-01	465	400-600	0.0834417	1.09	30.700	63
0A	2023	068	2023-11-01	1055	1000-1200	0.0570454	0.84	105.920	101
0A	2023	069	2023-11-01	1277	1200-1400	0.0819464	0.71	120.780	93
0A	2023	070	2023-11-01	539	400-600	0.0761130	1.25	62.482	290
0A	2023	071	2023-11-01	251	200-400	0.0709156	-0.70	10.438	26
0A	2023	072	2023-11-02	348	200-400	0.0742204	0.72	36.940	130
0A	2023	073	2023-11-02	578	400-600	0.0862186	1.42	44.880	126
0A	2023	074	2023-11-02	679	600-800	0.0724512	1.44	49.920	113
0A	2023	075	2023-11-02	552	400-600	0.0720122	1.39	34.580	101
0A	2023	078	2023-11-02	431	400-600	0.0696176	1.28	28.498	115
0A	2023	079	2023-11-02	485	400-600	0.0766814	1.49	25.020	83
0A	2023	080	2023-11-03	766	600-800	0.0824308	1.41	60.280	110
0A	2023	081	2023-11-03	661	600-800	0.0787715		68.658	156
0A	2023	084	2023-11-03	617	600-800	0.0744954	1.60	66.060	117
0A	2024	001	2024-10-18	648	600-800	0.0632427		126.060	158
0A	2024	002	2024-10-18	691	600-800	0.0818121		209.480	201
0A	2024	003	2024-10-18	418	400-600	0.0627037	0.91	70.220	183
0A	2024	004	2024-10-18	410	400-600	0.0711420	0.98	68.580	185
0A	2024	005	2024-10-19	547	400-600	0.0814172	1.41	95.640	134
0A	2024	006	2024-10-19	864	800-1000	0.0779920	1.28	235.500	321
0A	2024	007	2024-10-19	1008	1000-1200	0.0728660	0.92	106.260	128
0A	2024	008	2024-10-19	1136	1000-1200	0.0820735		92.840	87
0A	2024	009	2024-10-19	1067	1000-1200	0.0787574	0.74	88.420	94
0A	2024	010	2024-10-20	1296	1200-1400	0.0658620	0.36	37.360	28
0A	2024	011	2024-10-20	1096	1000-1200	0.0753530	0.80	165.620	207
0A	2024	012	2024-10-20	740	600-800	0.0701261	1.30	456.363	756

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2024	013	2024-10-20	1212	1200-1400	0.0760127	0.49	19.860	29
0A	2024	014	2024-10-20	1408	1400-1500	0.0809648	0.05	13.480	9
0A	2024	015	2024-10-20	1175	1000-1200	0.0780327	0.67	67.980	48
0A	2024	016	2024-10-20	1423	1400-1500	0.0652580	0.04	14.300	10
0A	2024	017	2024-10-21	1264	1200-1400	0.0722838	0.20	52.900	40
0A	2024	018	2024-10-21	1453	1400-1500	0.0767832	0.08	9.700	8
0A	2024	019	2024-10-21	1305	1200-1400	0.0697344	0.36	15.820	10
0A	2024	020	2024-10-21	1256	1200-1400	0.0744667	0.38	59.480	47
0A	2024	021	2024-10-21	1146	1000-1200	0.0753666	0.63	155.320	153
0A	2024	022	2024-10-21	482	400-600	0.0782462	1.44	127.340	356
0A	2024	023	2024-10-21	463	400-600	0.0649202	1.35	38.260	84
0A	2024	024	2024-10-22	1410	1400-1500	0.0717898	0.25	18.220	20
0A	2024	025	2024-10-22	486	400-600	0.0687257	1.37	83.480	243
0A	2024	026	2024-10-22	1415	1400-1500	0.0724859	-0.14	26.860	45
0A	2024	027	2024-10-22	1204	1200-1400	0.0766080	0.41	118.280	99
0A	2024	028	2024-10-22	1086	1000-1200	0.0773122	0.59	277.060	168
0A	2024	029	2024-10-22	1431	1400-1500	0.0689225	0.01	28.320	16
0A	2024	030	2024-10-23	454	400-600	0.0727381	1.33	12.200	47
0A	2024	031	2024-10-23	816	800-1000	0.0739276	1.18	41.740	98
0A	2024	032	2024-10-23	729	600-800	0.0751055	1.36	35.880	106
0A	2024	033	2024-10-23	1073	1000-1200	0.0738456	0.65	405.940	419
0A	2024	034	2024-10-23	1202	1200-1400	0.0679008	0.60	214.700	207
0A	2024	035	2024-10-23	430	400-600	0.0816277	1.21	17.820	57
0A	2024	036	2024-10-23	231	200-400	0.0588452	-0.16	2.285	8
0A	2024	037	2024-10-23	727	600-800	0.0696530	1.23	71.640	183
0A	2024	038	2024-10-24	1427	1400-1500	0.0729172	0.03	41.700	33
0A	2024	039	2024-10-24	838	800-1000	0.0650943	1.18	194.840	414
0A	2024	040	2024-10-24	1424	1400-1500	0.0738939	-0.05	32.320	40
0A	2024	041	2024-10-24	1022	1000-1200	0.0691000	0.83	109.675	136
0A	2024	042	2024-10-24	1215	1200-1400	0.0710708	-0.02	51.160	33
0A	2024	043	2024-10-24	1278	1200-1400	0.0695272	0.10	57.870	35

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2024	044	2024-10-24	1095	1000-1200	0.0675018	0.17	62.040	47
0A	2024	045	2024-10-24	853	800-1000	0.0766464	1.10	237.290	365
0A	2024	046	2024-10-25	241	200-400	0.0792484	0.21	8.320	15
0A	2024	047	2024-10-25	712	600-800	0.0752935	1.31	420.520	1023
0A	2024	048	2024-10-25	435	400-600	0.0685783	1.15	35.160	109
0A	2024	049	2024-10-25	227	200-400	0.0381535	-0.52	3.580	10
0A	2024	050	2024-10-25	632	600-800	0.0809485	1.38	52.940	189
0A	2024	051	2024-10-25	845	800-1000	0.0768907	1.25	63.820	176
0A	2024	052	2024-10-25	611	600-800	0.0722115	1.41	35.840	125
0A	2024	053	2024-10-25	332	200-400	0.0628940	0.87	4.015	15
0A	2024	054	2024-10-26	293	200-400	0.0678065	0.55	2.740	4
0A	2024	055	2024-10-26	229	200-400	0.0562187	-0.24	0.000	0
0A	2024	056	2024-10-26	562	400-600	0.0685087	1.45	61.740	130
0A	2024	057	2024-10-26	644	600-800	0.0713761	1.44	106.840	238
0A	2024	058	2024-10-26	505	400-600	0.0717872	1.37	66.620	143
0A	2024	059	2024-10-26	232	200-400	0.0320843	-0.66	2.760	6
0A	2024	060	2024-10-26	696	600-800	0.0711833	1.40	133.020	357
0A	2024	061	2024-10-27	1023	1000-1200	0.0657265	0.84	245.120	314
0A	2024	062	2024-10-27	1383	1200-1400	0.0827655	0.39	27.720	26
0A	2024	063	2024-10-27	281	200-400	0.0637286	0.28	1.255	1
0A	2024	064	2024-10-27	818	600-800	0.0718230	1.30	879.750	1455
0A	2024	065	2024-10-27	1105	1000-1200	0.0808821	0.93	188.546	236
0A	2024	066	2024-10-27	254	200-400	0.0676719	-0.21	20.100	27
0A	2024	067	2024-10-27	811	800-1000	0.0750716	1.32	619.960	985
0A	2024	068	2024-10-28	238	200-400	0.0519386	-0.01	14.890	21
0A	2024	069	2024-10-28	652	600-800	0.0761745	1.47	637.700	1764
0A	2024	070	2024-10-28	266	200-400	0.0398163	-0.41	10.600	24
0A	2024	071	2024-10-28	816	800-1000	0.0743322	1.31	262.600	315
0A	2024	072	2024-10-28	825	800-1000	0.0748557	1.33	143.850	204
0A	2024	073	2024-10-28	575	400-600	0.0739564	1.49	51.400	77
0A	2024	074	2024-10-28	506	400-600	0.0733292	1.48	64.450	165

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2024	075	2024-10-28	731	600-800	0.0680469	1.46	59.500	95
0A	2024	076	2024-10-28	945	800-1000	0.0688508	1.26	127.850	213
0A	2024	077	2024-10-29	888	800-1000	0.0796189	1.27	75.800	103
0A	2024	078	2024-10-29	644	600-800	0.0668780	1.52	67.840	115
0A	2024	079	2024-10-29	632	600-800	0.0743621	1.38	82.680	121
0A	2025	001	2025-10-22	668	600-800	0.0887482	1.47	133.450	198
0A	2025	002	2025-10-22	726	600-800	0.0866651		115.460	156
0A	2025	003	2025-10-22	919	800-1000	0.0812154		163.540	221
0A	2025	004	2025-10-22	1058	1000-1200	0.0792312		169.350	204
0A	2025	005	2025-10-22	922	800-1000	0.0793635		164.380	221
0A	2025	006	2025-10-22	1166	1000-1200	0.0847522	0.63	63.440	65
0A	2025	007	2025-10-22	886	800-1000	0.0841794	0.96	502.840	603
0A	2025	008	2025-10-22	1164	1000-1200	0.0826804	0.52	70.120	75
0A	2025	009	2025-10-23	1293	1200-1400	0.0851161	0.38	25.700	20
0A	2025	010	2025-10-23	1233	1200-1400	0.0812473	0.49	148.460	133
0A	2025	011	2025-10-23	1028	1000-1200	0.0741918	0.65	163.195	161
0A	2025	013	2025-10-23	1454	1400-1500	0.0746538	0.02	18.565	14
0A	2025	014	2025-10-23	1465	1400-1500	0.0863355	-0.02	6.640	3
0A	2025	015	2025-10-23	1054	800-1000	0.0820530	0.97	224.360	250
0A	2025	016	2025-10-24	1116	1000-1200	0.0874384	0.82	215.680	233
0A	2025	017	2025-10-24	1428	1200-1400	0.0769340	0.11	50.620	41
0A	2025	018	2025-10-24	1453	1400-1500	0.0853830	0.21	19.240	11
0A	2025	019	2025-10-24	467	400-600	0.0858492	1.28	23.304	42
0A	2025	020	2025-10-24	1370	1200-1400	0.0867424	0.03	22.260	18
0A	2025	021	2025-10-24	1443	1400-1500	0.0797232	-0.02	20.000	10
0A	2025	022	2025-10-25	957	800-1000	0.0849160	0.91	2156.180	3200
0A	2025	023	2025-10-25	741	600-800	0.0853262	1.45	68.760	147
0A	2025	024	2025-10-25	1222	1200-1400	0.0762442	0.40	199.280	158
0A	2025	025	2025-10-25	1430	1400-1500	0.0833786	0.05	58.840	42
0A	2025	026	2025-10-25	1252	1200-1400	0.0841169	0.37	47.640	31
0A	2025	027	2025-10-25	1429	1400-1500	0.0872202	0.14	19.580	12

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2025	028	2025-10-26	763	600-800	0.0863712	1.52	36.240	78
0A	2025	029	2025-10-26	1018	1000-1200	0.0829891	1.14	1861.600	2412
0A	2025	030	2025-10-26	1446	1200-1400	0.0846754	0.16	20.820	20
0A	2025	031	2025-10-26	940	800-1000	0.0807526	1.17	568.680	951
0A	2025	032	2025-10-26	1068	1000-1200	0.0821047	0.41	430.540	479
0A	2025	033	2025-10-26	646	600-800	0.0839837	1.57	44.140	80
0A	2025	034	2025-10-26	1280	1200-1400	0.0772864	0.18	73.960	51
0A	2025	035	2025-10-27	1479	1400-1500	0.0856592	-0.07	32.940	14
0A	2025	036	2025-10-27	1282	1200-1400	0.0814715	0.07	24.140	14
0A	2025	037	2025-10-27	1077	1000-1200	0.0830360	0.23	615.080	535
0A	2025	038	2025-10-27	708	600-800	0.0846166	1.41	59.980	133
0A	2025	039	2025-10-27	321	200-400	0.0814796	0.54	5.300	13
0A	2025	040	2025-10-27	967	800-1000	0.0812154	0.92	290.340	448
0A	2025	041	2025-10-27	359	200-400	0.0847328	0.97	21.760	39
0A	2025	042	2025-10-27	708	600-800	0.0789996	1.44	54.360	102
0A	2025	043	2025-10-28	532	400-600	0.0793373	1.33	47.990	97
0A	2025	044	2025-10-28	482	400-600	0.0654477	1.16	20.410	48
0A	2025	045	2025-10-28	250	200-400	0.0782265	0.19	0.516	2
0A	2025	046	2025-10-28	252	200-400	0.0814796	0.25	0.000	0
0A	2025	047	2025-10-28	237	200-400	0.0814796	-0.28	0.000	0
0A	2025	048	2025-10-28	513	400-600	0.0820724	1.34	15.740	40
0A	2025	049	2025-10-28	853	800-1000	0.0618624	1.46	78.360	149
0A	2025	050	2025-10-28	1081	1000-1200	0.0820530	0.68	921.420	894
0A	2025	051	2025-10-29	884	800-1000	0.0839396	1.31	425.320	731
0A	2025	052	2025-10-29	485	400-600	0.0889693	1.29	40.308	76
0A	2025	053	2025-10-29	276	200-400	0.0814796	-0.01	0.000	0
0A	2025	054	2025-10-29	661	600-800	0.0844741	1.56	82.640	179
0A	2025	055	2025-10-29	467	400-600	0.0760260	1.39	47.420	100
0A	2025	056	2025-10-29	278	200-400	0.0814796	-0.03	4.660	11
0A	2025	057	2025-10-29	639	400-600	0.0818438	1.48	136.980	308
0A	2025	058	2025-10-30	498	400-600	0.0797540	1.40	31.060	82

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0A	2025	059	2025-10-30	1084	1000-1200	0.0820530	0.87	259.320	373
0A	2025	060	2025-10-30	1269	1200-1400	0.0827789	0.37	120.660	128
0A	2025	061	2025-10-30	877	800-1000	0.0897702	1.37	280.680	612
0A	2025	062	2025-10-30	432	400-600	0.0827186	1.22	14.160	30
0A	2025	063	2025-10-30	290	200-400	0.0814796	0.51	2.200	4
0A	2025	065	2025-10-31	1251	1200-1400	0.0805352		148.220	147
0A	2025	066	2025-10-31	534	400-600	0.0658164	1.56	240.380	779
0A	2025	067	2025-10-31	238	200-400	0.0814796	-0.81	0.000	0
0A	2025	068	2025-10-31	754	600-800	0.0860966	1.41	540.080	954
0A	2025	069	2025-10-31	931	800-1000	0.0812154	1.08	270.740	326
0A	2025	070	2025-10-31	588	400-600	0.0769338	1.51	126.720	224
0A	2025	071	2025-10-31	741	600-800	0.0824737	1.41	201.020	334
0A	2025	072	2025-10-31	990	800-1000	0.0849395	0.99	194.680	261
0A	2025	073	2025-11-01	530	400-600	0.0546289	1.55	107.160	214
0A	2025	074	2025-11-01	538	400-600	0.0757846	1.56	120.872	172
0A	2025	075	2025-11-01	479	400-600	0.0749995	1.56	129.680	254
0A	2025	076	2025-11-01	736	600-800	0.0786739	1.40	189.640	227
0A	2025	077	2025-11-01	658	600-800	0.0839837	1.54	172.676	195
0A	2025	078	2025-11-01	621	600-800	0.0835155	1.57	88.080	107
0B	2022	032	2022-11-07	598	400-600	0.0797420	1.39	107.960	143
0B	2022	033	2022-11-07	549	400-600	0.0786393	1.53	90.980	329
0B	2022	034	2022-11-08	390	200-400	0.0822194	1.21	44.500	122
0B	2022	035	2022-11-08	361	200-400	0.0727062	0.30	20.950	111
0B	2022	036	2022-11-08	344	200-400	0.0762029	0.09	1.050	3
0B	2022	037	2022-11-08	364	200-400	0.0733660	1.12	13.400	67
0B	2022	038	2022-11-08	432	400-600	0.0779649	1.33	66.060	274
0B	2022	039	2022-11-08	506	400-600	0.0722999	1.48	63.580	185
0B	2022	040	2022-11-08	494	400-600	0.0756052	1.44	69.560	114
0B	2022	041	2022-11-08	452	400-600	0.0870309	1.46	59.000	143
0B	2022	042	2022-11-08	432	400-600	0.0766068	1.43	43.520	139
0B	2022	043	2022-11-09	348	200-400	0.0393366	0.37	6.100	21

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2022	044	2022-11-09	280	200-400	0.0785944	-0.77	0.424	1
0B	2022	045	2022-11-09	216	200-400	0.0733660	-1.26	0.000	0
0B	2022	046	2022-11-09	278	200-400	0.0733660	-0.81	0.000	0
0B	2022	047	2022-11-09	266	200-400	0.0632264	-0.83	0.015	1
0B	2022	048	2022-11-09	274	200-400	0.0733660	-0.55	0.000	0
0B	2022	049	2022-11-09	243	200-400	0.0733660	-0.87	0.000	0
0B	2022	050	2022-11-09	311	200-400	0.0754398	-0.09	1.845	3
0B	2022	051	2022-11-09	365	200-400	0.0699824	0.64	9.850	20
0B	2022	052	2022-11-10	316	200-400	0.0821359	0.30	4.820	8
0B	2022	054	2022-11-10	329	200-400	0.0764124	0.62	3.260	17
0B	2022	055	2022-11-10	336	200-400	0.0739528	0.71	7.700	32
0B	2022	056	2022-11-10	264	200-400	0.0725542		0.000	1
0B	2022	057	2022-11-10	290	200-400	0.0733660	-0.71	0.000	0
0B	2022	059	2022-11-10	314	200-400	0.0635254	0.22	0.736	7
0B	2022	060	2022-11-10	347	200-400	0.0775237	0.71	4.180	16
0B	2022	061	2022-11-10	352	200-400	0.0754504	0.79	3.880	18
0B	2022	062	2022-11-11	346	200-400	0.0790076	0.68	3.034	13
0B	2022	063	2022-11-11	353	200-400	0.0764959	0.93	2.592	13
0B	2022	064	2022-11-11	371	200-400	0.0789596	1.13	10.680	24
0B	2022	065	2022-11-11	367	200-400	0.0816989	1.11	8.640	27
0B	2022	066	2022-11-11	348	200-400	0.0711582	1.01	17.160	43
0B	2022	067	2022-11-11	355	200-400	0.0774957	0.34	17.340	48
0B	2022	068	2022-11-11	350	200-400	0.0765195	1.02	19.640	139
0B	2022	069	2022-11-11	349	200-400	0.0822215	1.04	20.900	181
0B	2022	070	2022-11-11	371	200-400	0.0754938	1.39	31.060	89
0B	2022	071	2022-11-15	909	800-1000	0.0731007	3.73	162.540	141
0B	2022	072	2022-11-15	749	600-800	0.0770992	3.91	307.240	266
0B	2022	073	2022-11-15	473	800-1000	0.0722999	2.37	453.160	492
0B	2022	074	2022-11-15	350	200-400	0.0746008	1.13	35.700	45
0B	2022	075	2022-11-15	361	200-400	0.0733660	1.35	0.000	0
0B	2022	076	2022-11-16	357	200-400	0.0832592	1.32	11.000	15

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2022	077	2022-11-16	333	200-400	0.0763608	1.32	7.940	16
0B	2022	078	2022-11-16	300	200-400	0.0794946	0.80	1.232	6
0B	2022	079	2022-11-16	218	200-400	0.0733660	-0.88	0.000	0
0B	2022	080	2022-11-16	292	200-400	0.0733660	0.22	0.000	0
0B	2022	081	2022-11-16	250	200-400	0.0733660		0.000	0
0B	2022	082	2022-11-16	207	200-400	0.0733660	-0.92	0.000	0
0B	2022	083	2022-11-17	284	200-400	0.0735680	0.31	0.298	1
0B	2022	084	2022-11-17	209	200-400	0.0391022	-0.25	0.010	2
0B	2022	085	2022-11-17	219	200-400	0.0733660	-0.71	0.000	0
0B	2022	086	2022-11-17	239	200-400	0.0733660	-0.29	0.000	0
0B	2022	087	2022-11-17	301	200-400	0.0634560	0.83	0.380	1
0B	2022	088	2022-11-17	387	200-400	0.0713959	1.86	12.700	52
0B	2022	089	2022-11-17	452	400-600	0.0759268	3.15	555.560	509
0B	2022	090	2022-11-17	728	600-800	0.0704608	2.95	286.060	263
0B	2022	091	2022-11-17	578	400-600	0.0713846	2.34	320.000	357
0B	2022	092	2022-11-18	574	400-600	0.0757800	2.68	154.400	169
0B	2022	093	2022-11-18	708	600-800	0.0823736	3.88	346.065	270
0B	2022	094	2022-11-18	1257	1200-1400	0.0821768	3.58	295.010	234
0B	2022	095	2022-11-18	748	600-800	0.0792758	3.90	301.860	222
0B	2022	096	2022-11-18	784	600-800	0.0799500		342.600	234
0B	2022	097	2022-11-18	962	800-1000	0.0786299	3.84	198.450	122
0B	2022	098	2022-11-18	927	800-1000	0.0751214	3.80	337.500	232
0B	2022	099	2022-11-19	430	400-600	0.0782722	3.32	485.300	386
0B	2022	100	2022-11-19	1046	1000-1200	0.0863724	3.75	255.340	194
0B	2022	101	2022-11-19	656	600-800	0.0724534	3.19	420.500	341
0B	2022	102	2022-11-19	413	400-600	0.0794855	2.69	155.160	269
0B	2022	103	2022-11-19	298	200-400	0.0767012	0.78	21.820	48
0B	2022	104	2022-11-19	278	200-400	0.0683020	0.21	0.225	2
0B	2022	105	2022-11-19	209	200-400	0.0679023	-0.85	0.005	1
0B	2022	106	2022-11-20	271	200-400	0.0733660	0.24	0.000	0
0B	2022	107	2022-11-20	223	200-400	0.0733660	-0.42	0.000	0

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
OB	2022	108	2022-11-20	272	200-400	0.0698754	0.23	0.020	2
OB	2022	109	2022-11-20	364	200-400	0.0783007	2.00	1.308	3
OB	2022	110	2022-11-20	378	200-400	0.0779042	2.86	2.700	12
OB	2022	111	2022-11-20	345	200-400	0.0781712	1.82	2.935	54
OB	2022	112	2022-11-20	463	400-600	0.0515731	2.64	19.100	48
OB	2022	113	2022-11-20	299	200-400	0.0770248	1.04	2.185	21
OB	2022	114	2022-11-20	261	200-400	0.0733660	0.12	0.950	4
OB	2022	115	2022-11-20	357	200-400	0.0721886	1.40	2.420	12
OB	2022	116	2022-11-20	428	400-600	0.0772905	2.85	22.100	54
OB	2022	117	2022-11-21	388	200-400	0.0754514	3.09	18.850	36
OB	2022	118	2022-11-21	736	600-800	0.0783285		271.180	192
OB	2022	119	2022-11-21	717	600-800	0.0768523	4.02	446.860	306
OB	2022	120	2022-11-21	942	800-1000	0.0784717	3.85	274.040	172
OB	2022	121	2022-11-21	914	800-1000	0.0777566	3.89	428.740	339
OB	2022	122	2022-11-21	533	400-600	0.0268962	3.67	105.600	82
OB	2022	123	2022-11-21	1132	1000-1200	0.0483174	3.73	47.600	22
OB	2022	125	2022-11-22	1163	1000-1200	0.0740799	3.78	219.320	108
OB	2022	126	2022-11-22	1374	1200-1400	0.0780293	3.42	245.440	172
OB	2022	127	2022-11-22	1058	1000-1200	0.0868284	3.77	230.900	135
OB	2022	128	2022-11-22	846	800-1000	0.0812443	3.73	207.670	147
OB	2022	129	2022-11-22	856	800-1000	0.0790222	3.85	273.450	191
OB	2022	130	2022-11-22	975	800-1000	0.0844604	3.81	245.280	119
OB	2022	131	2022-11-23	1123	1000-1200	0.0773091	3.73	210.000	110
OB	2022	132	2022-11-23	1306	1200-1400	0.0801234		229.920	154
OB	2022	133	2022-11-23	1220	1200-1400	0.0755077	3.62	194.660	141
OB	2022	134	2022-11-23	1050	1000-1200	0.0768273	3.73	241.820	140
OB	2022	135	2022-11-23	1029	1000-1200	0.0818916	3.76	219.180	113
OB	2022	136	2022-11-23	1155	1000-1200	0.0756920	3.70	166.120	116
OB	2022	137	2022-11-23	1329	1200-1400	0.0745677	3.57	122.480	75
OB	2022	138	2022-11-24	940	800-1000	0.0708945	3.80	235.315	144
OB	2022	139	2022-11-24	1434	1400-1500	0.0675245	3.46	278.440	177

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2022	140	2022-11-24	977	800-1000	0.0744202	3.78	94.620	71
0B	2022	141	2022-11-25	1454	1400-1500	0.0693906	3.57	226.680	162
0B	2023	077	2023-11-02	275	200-400	0.0748856	-0.46	3.700	12
0B	2023	082	2023-11-03	509	400-600	0.0778811		37.640	86
0B	2023	083	2023-11-03	545	400-600	0.0747285	1.53	62.460	187
0B	2023	085	2023-11-06	478	400-600	0.0785720	2.20	33.460	43
0B	2023	086	2023-11-06	575	400-600	0.0832733	1.82	72.120	95
0B	2023	087	2023-11-06	535	400-600	0.0819486	1.79	72.800	117
0B	2023	088	2023-11-07	327	200-400	0.0741052	0.26	12.950	74
0B	2023	089	2023-11-07	318	200-400	0.0702954	0.48	19.700	108
0B	2023	090	2023-11-07	246	200-400	0.0684044	-0.66	2.100	10
0B	2023	091	2023-11-07	257	200-400	0.0733393	-0.18	0.348	2
0B	2023	093	2023-11-07	290	200-400	0.0720349	0.00	0.730	4
0B	2023	094	2023-11-07	362	200-400	0.0761582	0.61	26.900	139
0B	2023	095	2023-11-07	423	400-600	0.0728220	1.51	35.300	175
0B	2023	096	2023-11-07	442	400-600	0.0771889	1.98	59.348	159
0B	2023	097	2023-11-08	426	400-600	0.0774248		25.450	45
0B	2023	098	2023-11-08	440	400-600	0.0794752	1.73	91.400	109
0B	2023	099	2023-11-08	411	400-600	0.0699815		37.700	87
0B	2023	100	2023-11-08	366	200-400	0.0679042	1.48	28.980	101
0B	2023	101	2023-11-08	315	200-400	0.0626970		6.320	25
0B	2023	102	2023-11-08	346	200-400	0.0691099	1.03	12.120	54
0B	2023	103	2023-11-08	329	200-400	0.0785354	1.00	13.740	54
0B	2023	104	2023-11-08	283	200-400	0.0630886	-0.02	3.740	10
0B	2023	105	2023-11-08	263	200-400	0.0720349		0.000	0
0B	2023	106	2023-11-08	270	200-400	0.0720349	-0.60	0.000	0
0B	2023	107	2023-11-09	276	200-400	0.0720349	0.36	0.000	0
0B	2023	108	2023-11-09	268	200-400	0.0720349	0.22	0.000	0
0B	2023	109	2023-11-09	308	200-400	0.0702074	0.35	0.830	2
0B	2023	110	2023-11-09	314	200-400	0.0630250	0.69	0.110	1
0B	2023	111	2023-11-09	338	200-400	0.0657376	2.12	3.310	14

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2023	112	2023-11-09	330	200-400	0.0723163	1.96	2.975	17
0B	2023	113	2023-11-09	338	200-400	0.0773507	2.40	12.920	48
0B	2023	114	2023-11-09	363	200-400	0.0757992	2.28	6.660	35
0B	2023	115	2023-11-09	338	200-400	0.0749122	1.32	10.560	22
0B	2023	116	2023-11-10	824	800-1000	0.0816314	3.95	153.900	163
0B	2023	117	2023-11-10	880	800-1000	0.0767469	3.99	276.380	210
0B	2023	118	2023-11-10	839	800-1000	0.0849113	4.00	702.300	590
0B	2023	119	2023-11-10	815	800-1000	0.0711188	3.98	557.960	438
0B	2023	120	2023-11-10	528	400-600	0.0785215	2.40	246.100	256
0B	2023	121	2023-11-10	512	400-600	0.0775750	3.16	494.350	439
0B	2023	122	2023-11-11	627	600-800	0.0764439	3.70	89.350	92
0B	2023	123	2023-11-11	668	600-800	0.0778833	3.99	265.080	213
0B	2023	124	2023-11-11	791	600-800	0.0784523	3.96	249.200	164
0B	2023	125	2023-11-11	775	600-800	0.0391286	3.99	213.150	128
0B	2023	126	2023-11-11	1114	1000-1200	0.0800780	3.77	388.940	292
0B	2023	127	2023-11-11	1348	1200-1400	0.0780797	3.48	231.100	149
0B	2023	128	2023-11-11	1428	1400-1500	0.0725873		183.130	120
0B	2023	129	2023-11-12	841	800-1000	0.0749599		397.400	216
0B	2023	130	2023-11-12	974	800-1000	0.0735231	3.75	67.360	61
0B	2023	131	2023-11-12	835	800-1000	0.0710694	3.94	230.550	141
0B	2023	132	2023-11-12	366	200-400	0.0677735	2.53	104.900	119
0B	2023	133	2023-11-12	406	400-600	0.0733313	2.97	214.900	298
0B	2023	134	2023-11-12	255	200-400	0.0699907	0.21	19.550	26
0B	2023	135	2023-11-13	270	200-400	0.0728519	0.90	0.565	1
0B	2023	136	2023-11-13	274	200-400	0.0865456	-0.60	0.785	2
0B	2023	137	2023-11-13	237	200-400	0.0720349	-0.57	0.000	0
0B	2023	138	2023-11-13	280	200-400	0.0720349	-0.21	0.000	0
0B	2023	139	2023-11-13	237	200-400	0.0727026	0.27	0.070	17
0B	2023	140	2023-11-13	208	200-400	0.0715434		0.025	7
0B	2023	141	2023-11-13	216	200-400	0.0720349	-0.16	0.015	5
0B	2023	142	2023-11-13	262	200-400	0.0691747	1.07	0.010	3

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
OB	2023	143	2023-11-14	363	200-400	0.0742875	1.93	21.500	45
OB	2023	144	2023-11-14	855	800-1000	0.0774273	3.97	504.430	317
OB	2023	145	2023-11-14	706	600-800	0.0790634		225.900	182
OB	2023	146	2023-11-14	349	200-400	0.0764960		45.060	79
OB	2023	147	2023-11-14	430	400-600	0.0685571	2.75	863.600	607
OB	2023	148	2023-11-14	781	600-800	0.0773043	3.72	1186.060	985
OB	2023	149	2023-11-14	1031	1000-1200	0.0752836	3.84	137.100	90
OB	2023	150	2023-11-14	1034	1000-1200	0.0816069	3.78	158.820	79
OB	2023	151	2023-11-15	1264	1200-1400	0.0746881	3.62	177.480	112
OB	2023	152	2023-11-15	1337	1200-1400	0.0700389	3.58	61.020	45
OB	2023	153	2023-11-15	1129	1000-1200	0.0717528	3.70	73.498	42
OB	2023	154	2023-11-15	1455	1400-1500	0.0591344	3.54	85.710	50
OB	2023	155	2023-11-16	1301	1200-1400	0.0638177	3.60	101.780	65
OB	2023	156	2023-11-16	1344	1200-1400	0.0742066	3.52	313.220	208
OB	2023	157	2023-11-16	1132	1000-1200	0.0732540	3.80	430.540	294
OB	2023	158	2023-11-16	927	800-1000	0.0817802	3.73	139.160	111
OB	2023	159	2023-11-16	1044	1000-1200	0.0751844	3.65	71.980	55
OB	2023	160	2023-11-16	1281	1200-1400	0.0863709	3.67	236.640	175
OB	2023	161	2023-11-16	1110	1000-1200	0.0674374	3.69	98.840	61
OB	2023	162	2023-11-17	488	400-600	0.0744318	3.52	158.140	136
OB	2023	163	2023-11-17	912	800-1000	0.0743005	3.85	283.790	164
OB	2023	164	2023-11-17	779	600-800	0.0832213	3.98	316.100	200
OB	2023	165	2023-11-17	630	600-800	0.0777981	2.90	332.540	266
OB	2023	166	2023-11-17	483	400-600	0.0763808	2.56	215.590	243
OB	2023	167	2023-11-17	319	200-400	0.0789672	1.98	67.680	117
OB	2023	168	2023-11-17	242	200-400	0.0708066	0.74	8.040	13
OB	2023	169	2023-11-17	242	200-400	0.0720349	0.62	0.000	0
OB	2023	170	2023-11-18	238	200-400	0.0720349	0.28	0.000	0
OB	2023	171	2023-11-18	250	200-400	0.0720349	0.16	0.000	0
OB	2023	172	2023-11-18	223	200-400	0.0720349	-0.54	0.000	0
OB	2024	080	2024-10-29	463	400-600	0.0772851	1.38	54.900	80

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2024	081	2024-10-29	514	400-600	0.0718558	1.39	38.080	77
0B	2024	082	2024-10-29	561	400-600	0.0682788	1.40	40.540	60
0B	2024	083	2024-10-29	572	400-600	0.0771687	1.55	72.460	100
0B	2024	084	2024-10-30	516	400-600	0.0773680	1.38	48.420	69
0B	2024	085	2024-10-30	406	400-600	0.0737215	1.14	36.995	135
0B	2024	086	2024-10-30	425	400-600	0.0683891	1.46	16.280	32
0B	2024	087	2024-10-30	417	400-600	0.0681728	1.73	49.040	73
0B	2024	088	2024-10-30	341	200-400	0.0675353	1.65	41.121	66
0B	2024	089	2024-10-30	691	600-800	0.0786862	2.92	154.360	132
0B	2024	090	2024-11-03	782	600-800	0.0708328		108.900	84
0B	2024	091	2024-11-03	347	200-400	0.0757774		12.175	31
0B	2024	092	2024-11-04	332	200-400	0.0709594		17.960	38
0B	2024	093	2024-11-04	328	200-400	0.0733806		3.400	6
0B	2024	094	2024-11-04	356	200-400	0.0727960		29.880	66
0B	2024	095	2024-11-04	344	200-400	0.0702800		35.760	86
0B	2024	096	2024-11-04	349	200-400	0.0721095		35.320	57
0B	2024	097	2024-11-04	316	200-400	0.0666797		7.040	32
0B	2024	098	2024-11-04	263	200-400	0.0650464		0.730	6
0B	2024	099	2024-11-04	351	200-400	0.0671170		20.962	66
0B	2024	101	2024-11-05	339	200-400	0.0715494		15.100	89
0B	2024	102	2024-11-05	363	200-400	0.0672852		23.120	112
0B	2024	103	2024-11-05	312	200-400	0.0697761	0.94	18.620	55
0B	2024	104	2024-11-05	234	200-400	0.0682592		0.000	0
0B	2024	105	2024-11-05	252	200-400	0.0664113		0.338	2
0B	2024	106	2024-11-05	251	200-400	0.0622870		0.002	1
0B	2024	107	2024-11-05	228	200-400	0.0682592	-1.00	0.000	0
0B	2024	108	2024-11-05	245	200-400	0.0682592	-0.51	0.000	0
0B	2024	109	2024-11-05	262	200-400	0.0682592	-0.34	0.000	0
0B	2024	110	2024-11-05	263	200-400	0.0699801	-0.13	0.001	1
0B	2024	111	2024-11-05	262	200-400	0.0682592	-0.04	0.000	0
0B	2024	112	2024-11-05	278	200-400	0.0709749	0.01	0.001	1

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
OB	2024	113	2024-11-06	239	200-400	0.0668369	-0.80	0.002	1
OB	2024	114	2024-11-06	291	200-400	0.0682592	0.37	0.000	0
OB	2024	115	2024-11-06	298	200-400	0.0682592	0.48	0.000	0
OB	2024	116	2024-11-06	308	200-400	0.0682592	0.84	0.000	0
OB	2024	117	2024-11-06	210	200-400	0.0682592	0.19	0.000	0
OB	2024	118	2024-11-06	353	200-400	0.0695125	1.34	8.204	45
OB	2024	119	2024-11-06	276	200-400	0.0703254	1.09	0.292	9
OB	2024	120	2024-11-06	328	200-400	0.0639729	1.32	6.414	29
OB	2024	121	2024-11-06	302	200-400	0.0663163	1.36	2.406	15
OB	2024	122	2024-11-07	868	800-1000	0.0712004	3.95	159.340	120
OB	2024	124	2024-11-07	544	400-600	0.0710713		258.000	185
OB	2024	125	2024-11-07	1049	1000-1200	0.0766662	3.58	449.970	320
OB	2024	126	2024-11-07	648	600-800	0.0672042	2.77	113.650	75
OB	2024	127	2024-11-07	646	600-800	0.0775694	2.58	118.250	94
OB	2024	128	2024-11-08	695	600-800	0.0714512	3.36	196.140	120
OB	2024	129	2024-11-08	419	400-600	0.0631753	2.34	122.340	99
OB	2024	130	2024-11-08	301	200-400	0.0611801	1.10	4.276	14
OB	2024	131	2024-11-08	267	200-400	0.0644700	1.34	1.200	2
OB	2024	132	2024-11-08	260	200-400	0.0719564	1.15	0.001	1
OB	2024	133	2024-11-08	263	200-400	0.0648759	1.26	0.004	1
OB	2024	134	2024-11-08	293	200-400	0.0707271	1.46	3.930	30
OB	2024	135	2024-11-08	381	200-400	0.0610068	2.60	69.038	157
OB	2024	136	2024-11-08	258	200-400	0.0627962	1.27	14.341	31
OB	2024	137	2024-11-08	322	200-400	0.0702921	1.90	15.690	33
OB	2024	138	2024-11-08	294	200-400	0.0670156	1.57	11.115	30
OB	2024	139	2024-11-09	355	200-400	0.0728362	2.57	39.760	94
OB	2024	140	2024-11-09	406	400-600	0.0628496	3.65	37.585	44
OB	2024	141	2024-11-09	344	200-400	0.0592105	2.40	27.600	48
OB	2024	142	2024-11-09	630	600-800	0.0763843	3.16	318.920	158
OB	2024	143	2024-11-09	925	800-1000	0.0655122	3.91	475.800	204
OB	2024	144	2024-11-09	911	800-1000	0.0739435	3.94	148.320	88

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
OB	2024	145	2024-11-09	846	800-1000	0.0687644	4.02	158.280	93
OB	2024	146	2024-11-09	858	800-1000	0.0764052	3.96	252.980	119
OB	2024	147	2024-11-10	982	800-1000	0.0753525	3.62	125.880	97
OB	2024	148	2024-11-10	1445	1400-1500	0.0680916	3.47	162.880	115
OB	2024	149	2024-11-10	1440	1400-1500	0.0683934	3.47	92.000	56
OB	2024	150	2024-11-10	1097	1000-1200	0.0808647	3.53	84.640	54
OB	2024	151	2024-11-10	907	800-1000	0.0722343	3.68	82.440	62
OB	2024	152	2024-11-10	1090	1000-1200	0.0699053	3.66	158.076	129
OB	2024	153	2024-11-10	1030	1000-1200	0.0733821	3.70	109.900	73
OB	2024	154	2024-11-11	1105	1000-1200	0.0738739	3.73	122.380	98
OB	2024	155	2024-11-11	1080	1000-1200	0.0785978	3.77	867.840	163
OB	2024	156	2024-11-11	1146	1000-1200	0.0719940	3.68	63.660	48
OB	2024	157	2024-11-11	1342	1200-1400	0.0680661	3.56	105.700	81
OB	2024	158	2024-11-11	1285	1200-1400	0.0733175	3.64	68.980	47
OB	2024	159	2024-11-11	1262	1200-1400	0.0724572	3.60	69.900	56
OB	2024	160	2024-11-11	1240	1200-1400	0.0756505	3.61	26.545	25
OB	2024	161	2024-11-11	1296	1200-1400	0.0701798	3.59	97.183	65
OB	2024	162	2024-11-12	535	400-600	0.0622875	4.09	287.240	122
OB	2024	163	2024-11-12	650	600-800	0.0715760	3.59	316.040	284
OB	2024	164	2024-11-12	633	600-800	0.0664523	3.99	191.600	108
OB	2024	165	2024-11-12	926	800-1000	0.0654654	3.90	392.480	197
OB	2024	166	2024-11-12	862	800-1000	0.0693406	3.92	279.810	204
OB	2024	167	2024-11-12	490	400-600	0.0652744	3.80	86.380	59
OB	2024	168	2024-11-12	818	800-1000	0.0739074	3.55	347.100	295
OB	2024	169	2024-11-13	565	400-600	0.0691010	4.07	314.480	188
OB	2024	170	2024-11-13	431	400-600	0.0669976	4.29	487.580	284
OB	2024	171	2024-11-13	425	400-600	0.0630509	3.84	193.970	161
OB	2024	172	2024-11-13	237	200-400	0.0648146	0.23	2.220	4
OB	2024	173	2024-11-13	238	200-400	0.0648292	0.25	0.004	1
OB	2024	174	2024-11-13	234	200-400	0.0876730	0.13	0.022	6
OB	2024	175	2024-11-13	224	200-400	0.0652047	-0.47	0.004	1

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2024	176	2024-11-13	244	200-400	0.0816281	0.33	0.044	8
0B	2024	177	2024-11-14	228	200-400	0.0682592	0.41	0.000	0
0B	2024	178	2024-11-14	246	200-400	0.0735420	0.52	0.050	6
0B	2024	179	2024-11-14	245	200-400	0.0490792	0.36	0.002	1
0B	2024	180	2024-11-14	233	200-400	0.0682592	0.22	0.000	0
0B	2024	181	2024-11-14	292	200-400	0.0685811	1.82	4.940	14
0B	2025	079	2025-11-01	468	400-600	0.0709764	1.55	94.880	331
0B	2025	081	2025-11-05	414	400-600	0.0727519		798.200	380
0B	2025	082	2025-11-05	771	600-800	0.0810220		276.670	255
0B	2025	083	2025-11-05	535	400-600	0.0766185		244.620	100
0B	2025	084	2025-11-05	656	600-800	0.0846519		460.160	154
0B	2025	085	2025-11-05	1072	1000-1200	0.0775584	3.85	345.540	168
0B	2025	086	2025-11-06	1260	1200-1400	0.0829419	3.69	133.620	91
0B	2025	087	2025-11-06	1028	1000-1200	0.0864993	3.91	120.330	68
0B	2025	088	2025-11-06	1084	1000-1200	0.0787239	3.86	65.630	43
0B	2025	089	2025-11-06	1243	1200-1400	0.0730963	3.82	264.440	200
0B	2025	090	2025-11-06	1382	1200-1400	0.0851892	3.73	144.495	97
0B	2025	091	2025-11-06	1090	1000-1200	0.0730052	3.84	165.360	99
0B	2025	092	2025-11-07	953	800-1000	0.0786368	3.88	184.580	131
0B	2025	093	2025-11-07	1341	1200-1400	0.0845239	3.76	183.040	135
0B	2025	094	2025-11-07	1159	1000-1200	0.0703548	3.81	269.630	219
0B	2025	095	2025-11-07	993	800-1000	0.0832626	3.87	143.320	97
0B	2025	096	2025-11-07	850	800-1000	0.0554682	3.88	64.180	31
0B	2025	097	2025-11-07	788	600-800	0.0784466	3.88	255.460	161
0B	2025	098	2025-11-08	1084	1200-1400	0.0785886	3.76	219.780	162
0B	2025	099	2025-11-08	1471	1400-1500	0.0774441	3.59	237.510	139
0B	2025	100	2025-11-08	1466	1400-1500	0.0774441	3.54	159.680	119
0B	2025	101	2025-11-08	1330	1200-1400	0.0853905	3.73	378.720	290
0B	2025	102	2025-11-09	1081	1000-1200	0.0760398	3.78	331.740	262
0B	2025	103	2025-11-09	950	800-1000	0.0857797	3.97	86.970	65
0B	2025	104	2025-11-09	823	800-1000	0.0826108	3.94	248.220	222

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
OB	2025	105	2025-11-09	905	800-1000	0.0821938	3.91	270.760	184
OB	2025	106	2025-11-09	744	600-800	0.0887983	3.75	226.840	184
OB	2025	107	2025-11-09	668	600-800	0.0840795	3.27	237.000	161
OB	2025	108	2025-11-09	581	400-600	0.0805389	2.37	323.300	219
OB	2025	109	2025-11-09	653	600-800	0.0761713	3.72	165.700	107
OB	2025	110	2025-11-10	658	600-800	0.0821949	2.89	206.850	137
OB	2025	111	2025-11-10	724	600-800	0.0821949	3.65	215.214	158
OB	2025	112	2025-11-10	842	800-1000	0.0785754	3.91	122.280	76
OB	2025	113	2025-11-10	890	800-1000	0.0759640	3.87	203.760	126
OB	2025	114	2025-11-10	1054	1000-1200	0.0861306	3.77	118.040	79
OB	2025	115	2025-11-10	441	400-600	0.0759411	2.45	1641.320	947
OB	2025	116	2025-11-10	500	400-600	0.0706889	3.36	1542.120	809
OB	2025	117	2025-11-10	855	800-1000	0.0879147	3.99	1335.520	722
OB	2025	118	2025-11-19	379	200-400	0.0668193	3.27	3788.420	1851
OB	2025	119	2025-11-11	432	400-600	0.0694451	4.16	446.820	213
OB	2025	120	2025-11-11	421	400-600	0.0861438	3.45	191.520	131
OB	2025	121	2025-11-11	312	200-400	0.0734586	1.36	69.560	109
OB	2025	122	2025-11-11	256	200-400	0.0781762	0.27	1.240	11
OB	2025	123	2025-11-11	266	200-400	0.0715406	0.27	0.472	6
OB	2025	124	2025-11-11	213	200-400	0.0738563	-0.33	0.022	5
OB	2025	125	2025-11-14	293	200-400	0.0747831	2.12	31.500	53
OB	2025	126	2025-11-14	261	200-400	0.0735493	0.24	4.320	19
OB	2025	127	2025-11-14	270	200-400	0.0722555	0.51	0.100	24
OB	2025	128	2025-11-14	288	200-400	0.0812811	1.17	0.138	24
OB	2025	129	2025-11-14	264	200-400	0.0793352	0.63	0.094	15
OB	2025	130	2025-11-14	222	200-400	0.0773946	-0.06	0.004	2
OB	2025	131	2025-11-15	243	200-400	0.0785402	0.00	0.000	0
OB	2025	132	2025-11-19	322	200-400	0.0853240	1.21	28.980	65
OB	2025	133	2025-11-19	351	200-400	0.0859177	1.00	15.060	37
OB	2025	134	2025-11-15	382	200-400	0.0862980	1.23	15.360	44
OB	2025	135	2025-11-15	316	200-400	0.0814164	1.20	8.680	44

Survey Area	Year	Set	Date	Mean Depth (m)	Depth Stratum (m)	Swept Area (sq km)	Temperature (C)	Weight (kg)	Number
0B	2025	136	2025-11-15	300	200-400	0.0648357	0.26	2.620	10
0B	2025	137	2025-11-15	322	200-400	0.0829391	0.22	0.018	1
0B	2025	138	2025-11-15	390	200-400	0.0779638	1.17	47.560	317
0B	2025	139	2025-11-15	418	400-600	0.0794241	1.41	38.460	186
0B	2025	140	2025-11-16	500	400-600	0.0866330	1.61	29.700	117
0B	2025	141	2025-11-16	591	400-600	0.0833376	1.50	34.430	68
0B	2025	142	2025-11-16	561	400-600	0.0861935	1.63	36.620	47
0B	2025	143	2025-11-16	492	400-600	0.0826560	1.59	35.960	92
0B	2025	144	2025-11-16	462	400-600	0.0837166	1.57	18.120	29
0B	2025	145	2025-11-17	469	400-600	0.0874975	1.63	12.640	30
0B	2025	146	2025-11-17	435	400-600	0.0889486	1.60	16.260	39
0B	2025	147	2025-11-17	328	200-400	0.0817459	1.23	6.720	18
0B	2025	148	2025-11-17	353	200-400	0.0835236	1.15	11.532	41
0B	2025	149	2025-11-17	366	200-400	0.0894072	1.33	30.200	69
0B	2025	150	2025-11-17	358	200-400	0.0860632	1.42	14.196	90

Colophon

This version of the document was generated on 2026-06-08 13:31:03.295867 using the R markdown template for SCR documents from [NAFOdown](#).

The computational environment that was used to generate this version is as follows:

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#> - Session info -----
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#> os           Windows 11 x64 (build 22631)
#> system       x86_64, mingw32
#> ui           RTerm
#> language     (EN)
#> collate      English_United States.utf8
#> ctype        English_United States.utf8
#> tz           America/Chicago
#> date         2026-06-08
#> pandoc       3.6.3 @ C:/Program Files/RStudio/resources/app/bin/quarto
#> quarto       NA @ C:\\PROGRA~1\\RStudio\\RESOUR~1\\app\\bin\\quarto\\bin\\quarto.exe
#>
#> - Packages -----
#> package      * version date (UTC) lib source
#> dplyr         * 1.2.1   2026-04-03 [1] CRAN (R 4.5.3)
#> flextable    * 0.9.12  2026-06-02 [1] CRAN (R 4.5.3)
#> ggh4x        * 0.3.1   2025-05-30 [1] CRAN (R 4.5.3)
#> ggplot2      * 4.0.3   2026-04-22 [1] CRAN (R 4.5.3)
#> ggribges     * 0.5.7   2025-08-27 [1] CRAN (R 4.5.3)
#> lattice      * 0.22-7  2025-04-02 [2] CRAN (R 4.5.2)
#> NAFOdown     * 0.0.2   2026-05-04 [1] Github (nafc-assess/NAFOdown@d1
9370e)
#> tidyr        * 1.3.2   2025-12-19 [1] CRAN (R 4.5.3)
#>
#> [1] C:/Users/hedgesk/AppData/Local/R/win-library/4.5
#> [2] C:/Program Files/R/R-4.5.2/library
#> * — Packages attached to the search path.
#>
#> -----
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